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Teachers' Life-cycle from Initial Teacher Education to Experienced Professional

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Teachers' Life-cycle from Initial Teacher Education to Experienced Professional

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Introduction: Research and Academic Practices through Teachers' Life-Cycle

The 36th ATEE Annual conference hosted by the University of Latvia was focused on the development of the quality of teachers' professional growth through different stages of their life-cycle. The investigations and academic practices are conceptualized in the proceedings as two interweaved processes making the core of the teachers' professional growth during their professional lifespan.

The conference sought to define and explain the essential features of the teachers' life-cycle by addressing the theories and academic practices, and also the various forms that teachers' professional activities may take.
The Academic Committee of the conference considered a wide range of creative responses to this idea. Theoretical approaches of the investigations, the findings, the academic practices which either support the theoretical statements or develop them further are aimed at highlighting the best ways of teachers' professional success.

Changes in educational communities change teachers' life-cycle and the balance between self-conducted and assisted learning at each stage of their professional growth. The intent throughout the conference and these proceedings is to knit together the theme in ways that encourage a holistic understanding of teachers' life-cycle in theories and different practices in Europe and also in a broader context.

Those presenting at the conference have covered the many-sided investigations conducted by ATEE Research and development centres, the findings had also been addressed during the multiple con-current sessions and selected for the proceedings.

We can view the life-cycle across time, as well as multiple aspects which characterise the teachers' professional activities. Therefore the Academic Committee have clustered the papers into eight logical groups. Thus, in line with the conference general theme, several areas are addressed in the proceedings:

Teachers' Personal Qualities and Competences

The articles cover the dynamic of the professional identity through stages of the life-cycle teachers; the essential qualitative changes at a particular stage which could underpin the best ways of assistance by educators and mentoring.

The four papers included in this section provide the issues discussed during the conference and the on-going debates related to understanding of teachers' competences through their life-cycle from the pre-diploma studies to an experienced professional, career-long and career-wide education. They draw on qualitative, quantitative and mixed methods. The researches have been conducted in different countries, in different kinds of higher education institutions, and they explore different experiences of orientations to teachers' identity, competences, and their appearances. The articles have a common feature – they seek for better ways of teacher education for the 21st Century learners.

Learning at Work Places and in Communities

Learning strategies and competences at different stages of teachers' pre-service and in-service development, assisted and self-conducted learning, values and perspectives of formal, in-formal, and non-formal learning in teachers' life-cycle have been addressed in the presentations and articles selected for this section. They deal with the investigation of relevant curricula for teachers' pre- and post-diploma studies, learning from exemplary teachers, models and programmes which open to the students and teachers the complexity of teaching-learning as a unique and creative process, make theories meaningful for practice and practices meaningful to acquire theories and educate effective teachers for today's learners.

The articles deal with what and how students and teachers can learn from their experienced and effective colleagues, as well as teachers' further learning at working places, challenges of university and school culture, collegiality and partnership in doing and learning, learning by leading and/or leading by learning. The questions address particular stages of organized assistance of teachers' and educators' further learning at their working places changing novice and experienced teachers' practice and building networks within and beyond the educational community.

Initial Teacher Education and the Views of the Students

Research and articles deal with theoretical regularities discovered by investigations as well as practical solutions and suggestions based on different experiences of the initial teacher education. The educational practices are traditionally understood to encompass three main components in varying degrees: theoretical studies, school practice and inquiry. The latter covers the scope from scholarly examination of documents to theoretical and empirical research, as well as the inquiry-based teaching-learning.

The Academic Committee sought a wide range of creative responses to this idea; these included pedagogical practice as a means of the career development, mentoring, becoming the change agents, academic climate, peer review process, relations between teachers' work and wider out-of-school communities, discourse, and effect of the students' experiences in the teachers' pre-diploma period.

Teachers' Learning and Competence Building

The articles included in this chapter bear a focus on the studies of teachers' learning and competence building, systematic development of conceptual knowledge, pre-service teachers' reflective practice, as well as provide an analytic framework through which the relative impact of each stage can be examined, understood, and accommodated.

The narrative approach is based on interpretation of pedagogical knowledge taking into the consideration on the integrity of a pedagogical process.

The investigations bring together entrepreneurship in teachers' professional education and perspectives on learning, as well as learning about learning; they highlight the effects of relationships and interactions on the teachers' professional development and transition towards the students' independence during the studies and school practice.

Likewise, the importance of the learning about learning the school-based professional development calls attention to the complex interplay of meaning, efficacy and identity development during the teachers' competence building and further development.

European and Global Perspectives

Fundamental changes in teacher education in many European countries in the closing years of the 20th century and discussions of the quality teacher education of the 21st century have initiated challenging debates on the future of teachers' profession and teacher education which highlight topical problems of research in teachers' pre-service and further education in the global context: the articles continue closing the gaps between several stages of teachers in making and teacher educators' further professional development. The increasing autonomy of universities and schools, growing access to information and mobility challenge re-visiting of theories and practices of tertiary teaching-learning to support self-conducted learning at all levels of teachers' development from the first university year till an experienced professional in the context of the global processes.

The articles address two related problems: the universities' ranking and prestige of the programmes offered for the teacher education at the universities; and the analysis of the OECD policies and proposals guided by market practices for teachers which are changing the nature of their work.

Perspectives of the Countries

Another important theme in common across the articles included in this section is an exploration of the country perspectives and the ways in which teachers can feel competent in their roles to provide their learners the best possible opportunities of learning and personal development. The presented studies invite us to consider the ways in which the prior experience of teachers who enter the tertiary programmes from professional practice may be marginalised or drawn upon. The reports on the national wide practices in different countries on coping with the problems in teacher education and their further professional development, as well as their work to some extent mirror each other and highlight common dilemmas and experiences in the educational programmes.

Whilst we chose to group the papers gathered here by their focus on the countries' experiences and perspectives, we also recognise the ways in which understandings of the teachers' professional development are enriched by taking into account a range of interlocking issues across these countries. These issues include the importance of the teachers' experience construction through several stages of their professional development, the opportunities and challenges of cooperation, the acquisition of necessary competences, by considering also the country and institutional differences, and the demanding expectations of their professional careers.

Teachers of the Vocational Education

The research and the articles in this section go beyond the 'how' of the teachers' professional activities in the vocational schools to consider their responsibility and teaching practices, the 'why' of their engagement in further learning and the professional development. They also highlight some common for all teachers' problems and essentialities, which are introduced and discussed in the previous chapters but from the perspective of the teachers of vocational education. The problems addressed and investigations demonstrate that teachers in this field of education experience common difficulties, as well as their specific ones determined by the specific character of the vocational education. The teachers there need assistance and the articles emphasise the importance of the research in the vocational teachers' professional development.

Information Technologies in Teachers' Education and Work

In looking at the experiences of the educators and teachers related to the usage of the information technologies in education as represented in the papers in this section, we are reminded that the prior experiences of teachers and their educators, the institutional context, and subjects' specialism all influence individual academic practices even if they do not determine these practices. The four articles serve well to some solutions of the problems of improving teacher education by using a considerable scale survey to explore how individual usage of the ICT in teachers' and educators' practices may be linked to specific prior activities challenged by the school or university subjects, as well as the learners' needs.

The research draws us back to the purpose and meaning of the technologies in education in preparing individuals for work in schools and universities to be well-prepared with the key skills necessary to develop sound teaching practices.

Irēna Žogla

Content

TEACHERS' PERSONAL QUALITIES AND COMPETENCES

Professional Identity of Teachers and Teacher Educators in a Changing Reality[1]

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Abstract

Professional identity is part of self- identity and presents an answer to the question "who am I, or what am I as a professional?". Various factors contribute to the construction of professional identity of teachers and teacher educators, including the context of teaching, the experiences as a teacher and the personal biography (Beijaard, Verlop & Vermunt 2000). The presentation focuses on the relations between the processes of constructing professional identity in teaching and the processes that characterize a changing reality, in an era of crisis and educational changes. Teacher education institutions and schools are continuously challenged by reforms and educational changes which are aimed at improving teaching quality and at elevating the social status of the teaching profession. Four studies that have been carried out through a research network at the Mofet Institute serve as the database for this presentation. The analysis looks at these studies from the perspective of constructing professional identity in teaching, and examines the interrelations between these processes and the advancement or hindrance of the implementation of changes and reforms in education. The model of Marcia regarding adolescents' personal styles in the construction of self-identity (1980, 2008) has advised our interpretations of the interrelations between processes of constructing professional identity and the demands of educational changes. We have identified four tensions that teachers face in periods of a changing reality: (1) knowing vs. continuing to learn (2) educating vs. teaching a content area (3) taking part in a democratic-participatory discourse vs. hierarchical-managerial discourse (4) a culture of control vs. a culture of empowerment. Reforms and changes can create a sense of ambiguity and self-doubt, but they can also enhance growth via the development of quality sources that promote collaborative re-examination of issues involved in the construction of professional identity that is being challenged by external reforms. We propose the concept of "inquiry dialogue", which scrutinizes the complexity inherent in teaching and facilitates the creation of "professional identity in motion" – an identity that is aware of its complexities and continues to grow. Policy makers in education should base any proposed changes on processes that engage teachers and teacher educators as their professional identity plays a vital role in the implementation of any educational change.

Constructing an identity is a process by which the person integrates among his/her values, status, roles, competencies and experiences to create a coherent image of self. Teachers (including teacher

[1] This paper is partially based on a research done in collaboration with Dr. Rama Klavir

educators) construct their professional identity via interactions with self and others, including students and colleagues, and the constructed identity has an impact on their job satisfaction and determines their attitudes toward educational changes and reforms. My main argument is that in order to advance or impede the implementation of educational changes, one needs to consider the congruence between the proposed changes and the professional identity of those asked to implement the changes.

The paper includes three parts:

1. Professional identity in teaching: the concept and factors influencing its construction.
2. Professional identity in teaching in a changing reality: tensions that teachers and teacher educators face.
3. Insights into the construction of professional identity in teaching – the inquiry dialogue.

Keywords: professional identity, teachers, teacher educators, changing reality

Professional identity in teaching: the concept and factors influencing its construction

According to Mead (1934) and Erikson (1968), self identity is a developing concept which changes over time and is nurtured by the interactions one experiences throughout life. Although the self may be recognized by the outsider as a subjective and hypothetical construct, the person himself experiences the self as real. Self-identity is continuously reconstructed through social interactions and intra and inter-personal negotiations, as the self interprets who he is and how others identify him in any given context. Self-identity is closely related to self-esteem, so the person can feel challenged or threatened when confronted by changes that may influence his perceived self-identity.

Part of the self-identity is the professional identity, which refers to the question: "Who am I, or what am I as a professional person?" In the past 15 years, various studies have tackled issues regarding the professional identity of teachers, including its characteristics, components and development (Bloom 1988; Huberman 1993; Komf, Bond, Dworet & Boak 1996; Beijaard 1995; Beijaard, Verloop & Vermunt 2000; Beijaard, Meijer, & Verloop 2004; Tickle 2000; Reynolds 1996; Zembylas 2003; Gee 2000-2001). Summing up these studies, I claim that the teachers' perceptions of their professional identities have an influence on their sense of self-determination, including their sense of autonomy, competency and relatedness. The professional identity determines the paths the teachers choose for their professional development and it impacts their attitudes towards educational changes and reforms. Most of the research about professional identity of teachers stresses that teachers acquire a sense of continuity and life-story that frames their everyday experiences and represents the core of their professional self-identity "Who am I as a teacher?" However, the professional identity is

not a static entity. It represents a dynamic, non-linear and non-stable process, through which the teacher confirms his identity or negotiates its ongoing re-construction (Zembylas 2003).
Various factors influence the process of constructing professional identity in teaching, including the teaching context, which represents the culture of the professional community (perceptions, norms, expectations, and values); previous experiences as a teacher (which impact the teacher's sense of professional efficacy); and personal biography, including previous encounters as a student. I would like to add a fourth factor, namely *the time context.* In times of external or internal upheaval, professional identity is challenged, or may even be required to go through dramatic changes. It is a decision-making period, in which the person's values and choices are being re-evaluated. The time context includes periods of educational changes and reforms, and it can serve as a platform for reconstruction of professional identity in teaching.

Professional identity in teaching in a changing reality: tensions faced by teachers and teacher educators

Changes in educational policy and proposed reforms can confront teachers and teacher educators with a sense of professional identity crisis, which affects their commitment to teaching and may hinder their motivation, sense of self efficacy, feelings of self satisfaction & professional pride, and their sense of internal coherence (Day, Elliot & Kington 2005). As the discrepancy between self and others' perceptions increases, so does the friction within the professional identity of teachers (Beijaard, Meijer, & Verloop 2004; Coldron &Smith 1999).
When a new policy contradicts the professional identity of teachers, it is likely to create a sense of agitation and crisis. Sachs (Sachs 2001) depicts the crisis that faces the professional identity of teachers in Australia, when she describes the two types of discourse emerging in the Australian teaching context: the democratic discourse and the managerial discourse. These two types emphasize different facets of the teaching profession (collaborative and dialogue centered vs. competitive and external evaluation), and can create conflicts between different sub-identities of teachers.
When a proposed reform (representing the managerial discourse) was in conflict with the teachers' values, they resisted the reform and even acted to impede its implementation. Negative effects of a centralized administrative policy were also reported by Vulliamy et al. (1997). They compared teachers in Britain, where the education system is characterized by a managerial discourse, and teachers in Finland, where teaching encompasses democratic dialogue. The discourse differences can explain the elevated feelings of satisfaction and a sense of professional pride and partnership among teachers in Finland, compared to those found among teachers in the UK. Day, Elliot & Kington (2005) reached similar conclusions in their study of teachers in Australia and England. The teachers in these countries felt that they

had not gained enough respect and trust within the existing administrative culture, and therefore were unable to develop a professional identity that relied on their values and attitudes.

We can use James Marcia's theory of identity achievement as a framework for understanding processes of teachers' identity construction in times of crisis (Marcia 1966, 1980, 2008). Marcia's main assertion is that one's sense of identity is determined largely by the choices and commitments made regarding certain personal and social traits. He argues that crisis and commitment are two distinct parts that form an adolescent's identity. Crisis refers to a decision-making period, a time of upheaval when one's values and choices are being reevaluated. Commitment refers to the end outcome of a crisis and represents a commitment made to a certain role or value in different life domains. The model considers the extent to which one has made certain choices, and displays a commitment to those choices. Marcia's model consists of four Identity Statuses of identity development (Identity Diffusion, Identity, Identity Moratorium and Identity Achievement). Identity Achievement represents the status which an adolescent has attained after an identity crisis, and that led him to make a commitment to the sense of identity that he or she has chosen.

Although Marcia refers to identity formation of adolescents, we can extend the model to the construction process of the professional identity of teachers & teacher educators, once confronting changes and educational reforms. Studies suggest that professional identity is influenced by changes and also determines the willingness to adapt to and cope with changes (Beijaard, Verloop & Vermunt 2000; Knowles 1992; Kompf, Bond, Dworet & Boak 1996). O'Connor's (2008) study was carried out in an era of implementing teaching standards in Australia. The reform was consistent with the discourse of the policy-makers but contradicted the values that underlined the identity of the teachers, which was centered on emotional caring and relatedness. This reform faced negative reactions from the teachers. O' Sullivan (2002) focuses on the role of emotions in promoting reforms and suggests that teachers tend to promote changes perceived by them as relevant, and oppose those that are in incongruence with their values and practice. Another study is reported by Robinson & McMillan, (2006) regarding teacher educators. It illustrates how a change, proposed by the dean of a South African college, was not realized and was met with resistance as it did not take into account the professional identity of the teacher educators. The dean of the college proposed to include research as a component in their job requirements. The proposal was accompanied by a renewed definition of the structure of their workload, and also assigned each teacher educator also some research time. This reform did not coincide with the professional identity of those teacher educators, and they preferred to use the allocated research time to expand their traditional teaching activities and to extend their contact with the students rather than to commit themselves to research.

During the years of 2005-2009, a research network operated within the MOFET Institute in Israel. The network includes 20 researchers from various colleges and universities across Israel, divided into five teams. Its aim was to broaden the evidence base of quality teacher education in Israel and to make an impact on the policy-makers' decisions. The research dealt with "The factors and processes that shape (and need to shape) teacher education in Israel", and it studied various current and historical aspects of the curriculum, beliefs and values in the Israeli teacher education system. It operated following a proposed educational reform in Israel and its teams studied issues connected to the professional identity of teachers and teacher educators in times of change. The following insights are based on the following five studies within this research network:

1. Teacher education and professional development – lifelong learning (Drora Kfir, and team).
2. Evaluation as a means in the hands of teachers or in the hands of the system? (Miri Levin-Rozalis, and team).
3. Colleges of education facing a reform: three case studies (Irit Kupferberg, and team)
4. Who is the ideal teacher, according to state committees/documents? (Doron Nederland, and team).
5. Teachers' professional identity during times of reforms & changes (Lea Kozminsky and Rama Klavir).

Part three – Insights into the construction of professional identity in teaching – The inquiry dialogue

Changes in the educational reality invite teachers to re-examine their professional identity and their answers to questions such as: "Who am I?" and "What are my roles as a teacher?" This examination may introduce tensions between the components of their professional identity, tensions that present gaps between opposing values, or between values and practice. While reviewing the research done by the research network teams at the MOFET Institute, we have identified four tensions related to teacher educators' professional identity during times of a changing reality due to a proposed educational reform: (1) knowing vs. continuing to learn (2) educating vs. teaching a content area (3) taking part in a democratic-participatory discourse vs. hierarchical-managerial discourse (4) a culture of control vs. a culture of empowerment.

1. *Knowing vs. continuing to learning* - This represents the tension between the beliefs that prospective teachers should be equipped with, coherent knowledge and skills that enable them to cope with school challenges vs. the beliefs that learning to function in uncertain situations should be the core of teacher preparation and once

they accumulate experiences and reflect upon them as teachers, these reflections will become the source for their continuous learning. (Kfir and her colleagues)

2. *Educating vs. teaching a content area* - Professional identity in teaching is a complex identity, and its characteristics are also reflected in various ideologies, expressed in various reforms. This tension refers to the recommended foci of teacher education: Should teacher education emphasize caring, communicative skills and response to diversity, or should it focus on deepening the academic content knowledge – disciplinary knowledge and academic curiosity? (as reflected in the tension between humanization vs. academization). (Nederland and his colleagues)
3. *Democratic - participatory discourse vs. hierarchical - managerial discourse* - In democratic discourse, the teacher educators shape their identity and define their roles through an open dialogue and an ongoing partnership with colleagues, parents and students. In the hierarchical-managerial discourse (brought into education from the business world), standards set by policy makers shape the educational discourse and threaten the professional identity of teacher educators who value democratic discourse. The threat is often accompanied by feelings of fear, helplessness and even feelings of existential threat. (Kupferburg and her colleagues).
4. *Culture of control vs. culture of* **-**The new reform emphasized the evaluative function in the teachers' role. This emphasis was perceived by the teacher educators as manifesting control and opposing their perception of "humanization" in teaching. It created feelings of unease, uncertainty and self-doubt. They resisted the reform and the teacher educators did not make any effort to allocate time to discuss "standard based teaching". (Levin - Rozalis and her Colleagues)

Changes and educational reforms may represent new components of the professional identity of teachers and confirm or contradict their values, goals and practices. When proposed changes are consistent with the professional identity of teachers, they may adopt them and initiate activities to advance them. A desire to maintain a balance within their professional identity is a natural move, and therefore, when changes contradict their professional identity, teacher educators will resist the implementation of the reform within their practice. This is when the *"inquiry dialogue"* should take place. Collaborative planning, study groups, peer mentoring and self-studies will make the difference. Negotiating the new roles in various collaborative inquiry dialogues can assist the re-construction of professional identity. The inquiry dialogue allows for critical discussion on professional identity in teaching and on the role of teachers in creating educational change, both as individuals and as a group. These dialogues can lead towards **"**Identity Achievement**"** in the terms of Marcia (Marcia, 2008), and help to resolve the tensions between self and others, between teacher educators and policy makers.

The "inquiry dialogue" leads to the re-examination of the professional identity and results in one of several different insights:

1. There are no contradictions between the proposed reform and my values; therefore I am willing to adopt it.
2. There are contradictions, but they are on the periphery of my professional identity. Minor changes in my identity and in the reform can allow the reconstruction of my professional identity, and hence let me accept the reform and promote it.
3. Major contradictions are identified and I cannot accept the reform. I should engage in collaborative moves and dialogues with peers and policy makers to either reconstruct my professional identity in teaching, or to change the proposed reform.

The "inquiry dialogue" scrutinizes the complexity inherent in teaching and facilitates the creation of "professional identity in motion" – an identity that is aware of its complexities and continues to grow. And for policy makers: they must base any proposed changes on processes that engage teachers and teacher educators as partners in the reformulation of the change. The establishment of the research network in the Mofet Institute and its ongoing activities demonstrate one possible direction to encourage teacher educators to explore, learn and think together, towards the re-construction of their professional identity.

References

Beijaard, D. 1995. Teachers' prior experiences and actual perceptions of professional identity. *Teachers and Teaching: Theory and Practice,* 1 (2): 281-294.

Beijaard, D., Meijer, P.C. & Verloop, N. 2004. Reconsidering research on teachers' professional identity. *Teaching and Teacher Education*, 20 (2): 107-128.

Beijaard, D., Verloop, N., & Vermunt, J.D. 2000. Teachers' perceptions of professional identity: an exploratory study from a personal knowledge perspective. *Teaching and Teacher Education,* 16: 749-764.

Bloom, D. 1988. The role of higher education in fostering the personal development of teachers. In *Teacher education and the world of work: New economic, social and professional imperatives for the twenty-first century*, eds. H. Hooghoff., & A.M. van der Dussen, 59–71. National Institute for Curriculum Development, Enschede.

Coldron, J. & Smith, R. 1999. Active location in teachers' construction of their professional identities. *Journal of Curriculum Studies*, *31* (6): 711-726.

Day, C., Elliot, B., & Kington, A. 2005. Reform, standards and teacher identity: Challenges of sustaining commitment. *Teaching and Teacher Education,* 21(5): 563-567.

Erikson, E.H. 1968. *Identity: Youth and Crisis.* NewYork: Norton.

Gee, J.P. 2000-2001. Identity as an analytic lens for research in education. In: *Review of research in education,* 25, ed. W. G. Secada, 99-125. American Educational Research Association, Washington, DC.

Huberman, M. 1993. *The Lives of Teachers*, London: Cassell.

Knowles, J.G. 1992. Models for understanding pre-service and beginning teachers biographies. In *Studying Teachers' Lives*, ed. I.F.Goodson, 99-152. London: Routledge.

Kompf, M. Bond, W.R. Dworet, D. & Boak, T. 1996. *Changing research and practice: Teachers' professionalism ,identity and knowledge*. London: Falmer Press.

Marcia, J. E. 1966. Development and validation of ego identity status. *Journal of Personality and Social Psychology,* 3: 551-558.

Marcia, J. E. 1980. Identity in adolescence. In *Handbook of Adolescent psychology*, ed. J. Adelson, 159-187. New-York: Wiley.

Marcia, J. E., & Fraser, S. 2008, February. Identity, psychological development and counseling. Paper presented at the National Conference for School Counselors: Construction of identity and multiple identities in a changing era. Haifa: Haifa University, Israel.

Mead, G. H. 1934. *Mind, Self and Society*. Chicago: University of Chicago Press.

O'Connor, K. E. 2008. "You choose to care": teachers, emotions and professional identity. *Teaching and Teacher education,* 24: 117-126.

O'Sullivan, M. 2002. Reform implementation and the realities within which teachers work: A Namibian case study. *Compare,* 32 (2): 219-237.

Reynolds, C. 1996. Cultural scripts for teachers: Identities and their relation to workplace landscapes. In *Changing research and practice: Teachers' professionalism, identities and knowledge*, eds. M. Kompf., W. R. Bond, D. Dworet & R. T. Boak, 69–77. Falmer Press, London.

Robinson, M., & McMillan, W. 2006. Who teaches the teachers? Identity, discourse and policy in teacher education. *Teaching and Teacher education,* 22: 327-336

Sachs, J. 2001. Teacher professional identity: competing discourses, competing outcomes. *Journal of Educational Policy*, 16 (2): 149-161.

Tickle, L. 1999. Teacher self-appraisal and appraisal of self. In *The role of self in teacher development*, eds. R.P.Lipka., & T.M. Brinthaupt, 121–141. State University of New York Press, New York.

Vulliamy, G., Kimonen, E., Nevalainen, R. & Webb, R. 1997. Teacher identity and curriculum change: A comparative case-study analysis of small schools in England and Finland. *Comparative Education*, 33 (1): 97-115.

Zembylas, M. 2003. Emotions and teacher identity: A poststructural perspective. *Teachers and Teaching: Theory and Practice,* 9(3): 213-238.

What Competences Does the Inclusive Teacher Need?

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Abstract

How can all teachers be prepared through their initial teacher education to work inclusively? What teacher competences are needed in a school for all? With reference to the European project *Teacher Education for Inclusion* these are questions to be explored in this paper. One part of the project's answer to the questions is to suggest a set of competences for the inclusive teacher which should be taught during initial teacher education.
Keywords: profile of competences; inclusive teacher education

Introduction

> *Anne is a student in grade 8 attending her neighbourhood school in Lillehammer, a small town in Norway. She cannot walk, neither talk much, having substantial and complex learning and social difficulties. Most of her lessons take place with special staff in a small room next to the classroom of her peers. Sometimes one or a few other students join her in the small room, and sometimes Anne takes part with the others, especially in the swimming lessons - which she very much enjoys - or in the breaks. Teachers and other professionals in and out of school and parents collaborate intensively to make this work. The school principal says: "My hope is that Anne, after she has left school, when meeting peers in town, they will stop and ask how she is. If that happens, we have achieved a lot. The alternative had been to send her out of the local area, and nobody would have known her" (Munthe-Kaas 2004, 10)*[1].

Anne's story is about inclusive education in practice. According to the Salamanca statement "Schools should accommodate **all children** regardless of their physical, intellectual, social, emotional, linguistic or other conditions" (UNESCO 1994). In Anne's case the Convention on the Rights of Persons with Disabilities *applies too: "Persons with disabilities can access an inclusive, quality and free primary education and secondary education on an equal basis with others in the communities in which they live" (UN 2006). Inclusion in education comprises*

[1] See also Nes (2010).

*every learner, most of them in less need of adaptation of the learning environment than Anne, but everyone different and unique. However, i*n many places regular schools do not accommodate all children, or they do not do it satisfactorily. Exclusion *from* education as well as exclusion *within* education takes place. In order to move inclusion in education forward, the role of the teachers is crucial, as stated by UNESCO (2008) and the International Conference on Education: "Inclusive Education: The Way of the Future".

To influence future teachers' capacity to work inclusively, teacher education has to be addressed. That is why the 'European Agency for Development in Special Needs Education' (2011a) in 2009 launched a project called *Teacher Education for Inclusion* (TE4I), realising that *all* teachers – not only a few specialists - need to be prepared for inclusion. According to the European Agency, to know what competences it takes to teach inclusively would be an important framework in the preparation for inclusive classrooms.

In an inclusive school there should be access to expertise in and outside the classroom to teach diverse students, for instance learners with impairments or with a minority linguistic and cultural background. Referring to UNESCO Open File (2003a) Persson (2007) suggests that *a few* teachers in the inclusive school need highly specialized competency, *many* teachers (at least one per school) need more skills in order to be able to give advice to colleagues, but *all* teachers need to have an understanding of inclusive practices. And it is *all* we are talking about here. In the TE4I project priority is given to the initial teacher education for all teachers, seen as the starting point of a lifelong learning process for teachers. Experts and policy makers from 25 European countries attempt to draw a picture of the kind of teachers needed for the 21st century and to a profile of competences for these teachers. Some of their suggestions will be discussed below, after briefly looking into how inclusive education can be understood.

What is inclusive Education?

Often, the understandings of inclusive education are linked to the characteristics of the children, i.e. their shortcomings, and how to integrate the 'special ones' in class, typically those categorised as having special educational needs like Anne (Ainscow, et al. 2006). But inclusive education does not mean to put the different ones into niches in a mainstream education which remains largely unchanged. Developing inclusive education means transforming the learning environment to respond to the diversity of those who are there. An exercise suggested by Booth (2008) illustrates this: suggest what should appear in the middle column below – it is neither traditionally 'mainstream' nor traditionally 'special'.

Table1. Beyond Mainstream and Special Education.

MAINSTREAM	INCLUSIVE	SPECIAL
• allow to fail	?	• intervene and label
• ignore differences	?	• exaggerate differences
• reject problems	?	• invent problems
• fail to give help	?	• make helpless
• blame the learner	?	• blame the learner

(Booth 2008)

UNESCO is among the voices advocating a system-oriented and non-categorical view of inclusion. The main question to ask is: *Is the school inclusive?* not: *Is she or he included*?

> *Rather than being a marginal theme on how some learners can be integrated in the mainstream education, inclusive education is an approach that looks into how to transform education systems in order to respond to the diversity of learners. (UNESCO 2003b, 7)*

> *Inclusive education is an ongoing process aimed at offering quality education for all while respecting diversity and the different needs and abilities, characteristics and learning expectations of the students and communities, eliminating all forms of discrimination. (UNESCO 2008)*

Inclusion has to be seen as a process, not as a state for a person. Having said this, it is of course relevant to ask on an individual level how the learners and their carers feel about participation and learning in the school. Information about this will support the school's efforts to develop inclusively, meaning the process of increasing learning and participation for all. If we listen to the authors of the Index for Inclusion, moving towards inclusion means developing first of all the cultures and values of the school inclusively, as well as the policies and practices (Booth and Ainscow 2011).

The main focus of this article is the inclusive *teacher* and his or her qualities. The role of teachers is often seen vital in order for the school to change and develop (Elbaz-Luwisch 2005, Kelchtermans & Ballett 2002, OECD 2005).Peterson and Hittie (2010, iv) suggest that the inclusive teachers should be able to ask themselves," How can we teach so that children with dramatically different abilities, personality styles, cultures, and languages learn well together?" Not a small task!

Core Values for a Profile of Competences for the inclusive Teacher

The term 'competence' is not necessarily a clear and neutral term to describe the qualities of teaching. According to Biesta (2011) there is a tension in the competence discourse between on the one hand a behavouristic approach that emphasises 'doing, performing, achieving, observing, measuring and, ultimately, control', and on the other hand an 'integrative' approach that emphasizes 'knowledge, skills, understanding, values, purpose and, ultimately, teacher agency'[2]. Being able to do things is not enough, teachers need to exert professional judgment to decide what ought to be done. Their teaching should rest on values and ideals, not only on what works (Biesta 2009).

In compliance with Biesta's view a profile of competences of an inclusive teacher should rest on certain values. The four core values identified by the TE4I project are:

1. Valuing learner diversity – learner difference is considered as a resource and an asset to education;
2. Supporting all learners - teachers have high expectations for all learners' achievements;
3. Working with others - collaboration and teamwork are essential approaches for all teachers;
4. Continuing personal professional development - teaching is a learning activity and teachers taking responsibility for their own lifelong learning.

In each of these areas the competences of the teacher are described. The two first values - valuing diversity and supporting all learners - will be discussed and concretised a bit more in the following:

1. *"Valuing learner diversity - learner difference is considered as a resource and an asset to education"*

Two main fields of study for the teacher in the TE4I project when valuing diversity is concerned, are conceptions of inclusive education and views of learner difference. Let us consider for a moment the words 'diversity' and 'difference'. First 'difference':

> *While understanding differences between learners has been a central interest of research and practice in special needs education, the emphasis on studying human differences has perpetuated a belief that human differences are predictive of difficulties in learning.* (Florian and Rouse 2009, 596)

[2] Here from 'Policy approaches to defining and describing teacher competences'. Report of a Peer Learning Activity in Naas, Ireland, 2-6 October 2011. Education and Training 2020 Programme, European Commission.

To contrast this deficit view of difference, a group of teachers demonstrate in the book 'Learning without limits' how teaching free from determinist beliefs about ability may succeed (Hart, et al. 2004).

With Europe's increasingly multicultural population 'diversity' has become a crucial word in education. In addition to The European Agency several other European and international organizations are paying attention to diversity these days. But what is meant by the word is the subject of diverse interpretations too; various lists of 'diversities' appear in the reports. Let us look at one understanding, presented by the Council of Europe's project 'Policies and practices for teaching sociocultural diversity' (Council of Europe 2009). They propose the following list of relevant 'diversities':

- Cultural diversity.
- Linguistic diversity.
- Religious diversity.
- Gender.
- Disability.
- Sexual orientation.

The OECD project 'Teacher Education for Diversity' (OECD 2010) focuses on migration and cultural diversity only, admitting that:

> *Although measures specifically targeting gender equality, anti-homophobia, the inclusion of students from disadvantaged social backgrounds or those with disabilities have different aims than the types of diversity policies (in this project), these diversity dimensions must also be considered in the schooling of migrants.(OECD 2010, 47).*

The concept diversity as understood in TE4I is not restricted to ethnic plurality or anything else, but refers to all kinds of differences and similarities between people. Discussing 'which diversities' is not the point in inclusive teacher education; that means drawing attention away from the main task: develop education inclusively for all learners.

2. *"Supporting all learners -teachers have high expectations for all learners' achievements".*

This is the second value on which a profile of teacher competences should be built, according to TE4I. It means that future teachers should be able to promote the academic and social learning of all learners as well as possess knowledge of effective teaching approaches in heterogeneous classes. We know from research that teachers unconsciously may adapt their expectations about student achievements to the information they have about their background (Hart, et al. 2004). Bias in learning outcome may follow and inequality in

educational opportunity persists, relating to for instance social class, gender or ethnicity. In *Learning without limits* Hart and colleagues were inspired by the following words by Stephen Jay Goulds:

> *We pass through this world but once. Few tragedies can be more extensive than the stunting of life, few injustices deeper than the denial of an opportunity to strive or even to hope by a limit imposed from without but falsely identified as lying within.* (Gould 1981, 29)

Having high expectations and supporting academic and social learning for all then is the main heading of the number two area of values for an inclusive teacher. Which attitudes, knowledge and skills will support these aims? The TE4I project suggests the following (European Agency 2011b):

Supporting all learners: *Attitudes* every teacher should have:

- Good teachers are teachers of all learners.
- Teachers must accept responsibility for facilitating the learning of all learners.
- The learning process is essentially the same for all learners.
- Learners' abilities are not fixed.
- Learning subjects & 'learning to learn' skills are equally important.
- Learning difficulties require modification of curricula and teaching approaches.

Supporting all learners: *Knowledge* every teacher should have:

- Theories on approaches to learning and models of teaching.
- Positive behaviour management approaches.
- Barriers to learning and their implications for teaching.
- Development of basic skills and how to teach and assess them.
- Formative assessment. Personalised learning.
- Differentiation of content, process, product.
- How to develop an IEP.
- How the use of ICT can support inclusive education.

Supporting all learners: *Skills* every teacher should have.

- Classroom management skills.
- Working with individual learners as well as heterogenous groups.
- Differentiating methods, content and outcomes for learning.
- Including parents/carers to personalise learning and target setting.
- Facilitating co-operative learning.
- Varying methods in a systematic way.

- Assessing for learning.
- Drawing on a range of communication skills.

The long list of attitudes, knowledge and skills above is included to show how the TE4I project materials are built up, and to prompt discussion: to what extent is the list adequate to a given educational setting? The competences needed may have to be adjusted according to time and place and should be discussed continuously. In the case of Anne with a lot of people involved, a set of competences clearly needed for the teachers was that of collaboration with parents and other professionals. This is another of the areas where attitudes, knowledge and skills are outlined in TE4I in a similar way as the ones for supporting learning, soon to be available on the project's website. Space does not allow further discussion of these proposals here, but hopefully readers will continue the conversation.

Final Comments

The inclusive teacher is a crucial piece in the jig-saw that adds up to inclusive education. But the inclusive teacher is not the only piece in the puzzle. Addressing only the teachers and their competences does not suffice if the schools they are working in exclude children. It is well known that reforms of classrooms without corresponding reform in whole-school and wider practices are not likely to succeed (Slavin 1996). Cultures and policies as well as practices have to be addressed (Booth and Aisncow 2011).In the case of Anne the principal and the local educational authorities had a principled approach to inclusion, a view which was shared by the staff, students and carers. To piece together the full picture of the inclusive education process a systemic approach is also needed to transform school and society to include all – and to encourage teaching so that dramatically different children can learn well together, as put by Peterson and Hittie (2010). The TE4I project offers descriptions of the competences needed to be able to carry out this teaching.

References

Ainscow, M., T. Booth, & A. Dyson. 2006. *Improving schools, developing inclusion.* London: Routledge.

Biesta, Gert. 2011. Disciplines and theory in the academic study of education: A Comparative Analysis of the Anglo-American and Continental Construction of the Field. *Pedagogy, Culture and Society* Vol. 19, N° 2.

Biesta, G. 2009. Values and ideals in teachers' professional judgement. In *Changing Teacher Professionalism*, ed. S. Gewirtz et al., 184-193. London: Routledge.

Booth, T. 2008. Inclusion today. International perspectives. Guest lecture at Hedmark University College, November 24th.

Booth, Tony, and Mel Ainscow. 2011. *Index for Inclusion. Developing Learning and participation in Schools.* (3rd. ed.). Bristol: Centre for Studies on Inclusive Education (CSIE).

Council of Europe. 2009. *Policies and Practices for teaching Sociocultural Diversity*. Council of Europe Publishing.

European Agency for Development in Special Needs Education.2011a.Teacher Education for Inclusion across Europe – Challenges and Opportunities. http://www.european-agency.org/agency-projects/teacher-education-for-inclusion/teacher-education-web-files/TE4I-Synthesis-Report-EN.pdf

European Agency for Development in Special Needs Education.2011b. A profile of inclusive Teachers. Document in progress, Teacher Education for Inclusion. http://www.european-agency.org/agency-projects/teacher-education-for-inclusion/teacher-education-for-inclusion

Florian, L. and M. Rouse. 2009.The inclusive practice project in Scotland: Teacher education for inclusive education. *Teacher and Teacher Education*, vol. 25, issue 4: 594-601.

Gould, S.J. 1981. *The Mismeasure of Man.* New York: Norton.

Hart, Susan, Annabelle Dixon, Mary Jane Drummond, and Donald McIntyre. 2004. *Learning without Limits.* Open University Press.

Munthe-Kaas, B. 2004. *Slipp flere til!: fem gode eksempler på inkludering av elever med funksjonsnedsettelser på ungdomsskoletrinnet*. [Oslo]: Handikappede barns foreldreforening 2004.

Nes, K. 2010. The first decade of the 21st century: A backlash for inclusion in Norwegian schools? *ZeitschriftfürInklusion – online.net*., no 2, ISSN 1862-5088. http://www.inklusion-online.net/index.php/inklusion/issue/view/10

OECD (Organisation for Economic Co-operation and Development). 2005. *Teachers Matter: Attracting, Developing and Retaining Effective Teachers.* Paris: OECD.

OECD. 2010. *Educating Teachers for Diversity.* Meeting the Challenge. Centre for Educational Research and Innovation (CERI). OECD Publishing.

Persson, B. 2007. Specialpedagogik i Sverige. Guest lecture at Hedmark University College, January 27th.

Peterson, J Michael and Mishael Marie Hittie. 2010. *Inclusive teaching: the journey towards effective schools for all learners*. Boston: Pearson.

Slavin, R. 1996. *Education for all*. Abingdon: Swetsan Zeitlinger.

UNESCO.1994. *Framework for Action on Special Needs Education*. Salamanca. http://unesdoc.unesco.org/images/0009/000984/098427eo.pdf

UNESCO.2003a. Open File on Inclusive Education. *Support Materials for Managers and Administrators.* http://unesdoc.unesco.org/images/0013/001321/132164e.pdf

UNESCO.2003b. *Overcoming Exclusion through Inclusive Approaches in Education. A Challenge and a Vision. Conceptual paper for the Education Sector*. Paris: UNESCO.

UNESCO. 2008. *Inclusive Education: The Way of the Future.*48th International Conference on Education, Geneva.

UN (United Nations). 2006. Convention on the Rights of Persons with Disabilities.

Nature and Nurture: an Analysis of Mathematical Identity of Distinct Cohorts of Prospective Teachers

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Abstract

Research on teachers' beliefs about and attitudes to mathematics, their philosophies of mathematics education, and more generally their mathematical identity is valuable because these factors influence teachers' classroom practice. Such work illuminates difficulties emerging when teachers' conceptions of mathematics do not match the philosophy enshrined in the curricula they are required to implement. This paper reports on research done in these areas with prospective teachers in Ireland. It summarises studies carried out with student-teachers preparing to qualify for primary teaching; it then describes an extension of this work to university mathematics undergraduates who have expressed interest in mathematics education. The focus is on two themes that are of particular relevance to prospective teachers and to faithful curriculum implementation: the students' views of the nature of mathematics, and their perceptions of the role played by key Figures (notably teachers) in the formation of their mathematical identity.

Keywords: mathematical identity, philosophy of mathematics education, prospective teachers

Introduction

In the past quarter of a century, much research has focused on teachers' beliefs about and attitudes to mathematics and on their philosophies of mathematics education. Interest has centred in particular on how these factors influence teachers' classroom practice. It is thus important to examine the beliefs, attitudes and philosophies of prospective teachers of mathematics, with a view to establishing the likely predispositions they would bring into mathematics classrooms and helping them gain insights into their predispositions (Lerman, et al. 2009). For teacher education, work in the area of *mathematical identity* can be seen as crucial especially with regard to prospective teachers whose conceptions of mathematics do not match the philosophy enshrined in curricula they will be required to implement.

A study entitled 'The Mathematical Identity of Student Teachers' (MIST), carried out in the island of Ireland in 2009, investigated the mathematical identity of students who were studying to qualify as primary teachers and were specialising in mathematics. Participants came from two colleges of education, one in Belfast (Northern Ireland) and the other in Dublin (Republic of Ireland). The analysis revealed a number of themes of interest; some have been reported at previous ATEE conferences (Eaton & OReilly 2010a; Eaton & OReilly 2010b). Work at another college providing primary teacher education in the Dublin area addressed somewhat similar issues. All students – not just those with a special interest in mathematics – were asked to write 'mathematical autobiographies', outlining their attitudes to the subject during their schooldays and emphasising critical incidents in their own learning. Again, the findings from these and other reflective writings undertaken by the students have been reported at ATEE conferences (Oldham 1997; Oldham & Close 2006).

The present study builds on both approaches, extending the work to a different group: university mathematics undergraduates with an interest in mathematics education. The participants were students in the third or fourth year of their Bachelor's degree programme at a university in Dublin; they took one elective module on Mathematics Education and a second elective module that involved them acting as mathematics classroom assistants in second-level schools (for students typically in the age range 12-18). Using a protocol based on the work done in MIST, the students were asked to write mathematical autobiographies. These were analysed using the categories emerging from the MIST research, facilitating comparisons in particular between the mathematical identities of these students and of the primary student-teachers specialising in mathematics. In this paper, the focus is on two themes: the students' views of the nature of mathematics (especially with regard to consonance or otherwise with the constructivist and problem-solving approach emphasised in current curricula) and the role played by key Figures (notably teachers and family members) in nurturing the students' mathematical identity.

Theoretical framework

Two distinct but related areas of study contribute to the framework used in this paper. They are the philosophy of mathematics education and the concept of identity.

Philosophy of mathematics education

The relationship between philosophy and pedagogy developed as a field of study – philosophy of mathematics education – in the 1980s through the work of writers such as Cooney, Ernest, Lerman and Thompson; the work of this period is summarised by Thompson (1992). Using Lerman's terminology, Thompson (1992) refers to 'absolutist' versus 'fallibilist'

views: absolutist views, according to which mathematics is pre-existing and unchanging, essentially true, and subject to discovery rather than human construction or invention; and fallibilist views, according to which mathematics is created by the activity of mathematicians, and is always open to critique and re-evaluation, and hence devoid of certainty. Ernest (1985) designates the corresponding philosophies of mathematics education as 'Platonist' and 'problem solving' respectively. The descriptions do not refer explicitly to conceptions of mathematics that emphasise abstraction, consistency, and patterns or relationships, perhaps with the mathematics being arbitrary rather than true, as in 'modern mathematics'; however, these are absolutist in spirit, and can best be classified as broadly Platonist (Oldham 2010). Ernest also describes a third philosophy, 'instrumentalist', according to which mathematics is a bag of tricks, a collection of ways of obtaining results via the application of rules rather than reasons. This again is absolutist in character, but is far removed from the Platonist position. Instrumentalism can be seen as encompassing views held by teachers or students who are unaware of the coherence of mathematical knowledge – thus, who are unable to make connections between different mathematical topics and to apply their knowledge and skills to solution of unfamiliar problems. A more positive interpretation might refer to teachers or learners who have a strong interest in applications of mathematics and who see the subject as providing powerful tools (rather than a bag of tricks) for the solution of real-life problems.

As various forms of constructivism became prominent in mathematics education literature, and as problem-solving approaches were given a high profile in significant documents, there was a tendency in the literature to endorse philosophies of mathematics education that prioritised fallibilist over absolutist conceptions. Thompson's (1992) summary notes that as early as 1986, Tymoczko asserted that the problem-solving philosophy was the only defensible one for teachers. Prediger, Vigiani-Bicudo and Ernest (2008, 442) point out that from the 1990s, "a simplistic opposition appeared between 'the absolutist view' on mathematics and 'the fallibilist' one, and these were also too directly connected with 'transmission practices' versus 'constructivist practices' in classrooms." By tarring all absolutists with the same brush, such arguments perhaps undervalued the work of Platonist teachers who perceived mathematics as a body of knowledge, abstract and unchanging, but who taught it – or facilitated its learning – in a dynamic and engaging manner. However, within the last decade, a more nuanced view has emerged. For example, in a major overview of relevant research, Hiebert and Grouws (2007) argue that different approaches may facilitate different learning goals, without necessarily rejecting one approach at the expense of another.

Mathematical identity

The study of different kinds of identity is another area that has developed in recent years (Wenger 1998). Mathematical identity is considered as the multi-faceted relationship that an individual has with mathematics, including knowledge, experiences and perceptions of oneself and others (Grootenboer, Smith & Lowrie 2006). Understanding teachers' mathematical identity is of importance because, like espoused philosophy of mathematics education, it is likely to have a major impact on their teaching behaviour (Ernest 1988; Ball 1988; Hill 2000).

Writing about negotiating identities for mathematics teaching in the context of the professional development of serving (rather than prospective or preservice) teachers, Gresalfi and Cobb (2011) highlight conceptualisations of identity in the literature, including: "(a) individual teachers' beliefs about themselves…, (b) the stories teachers tell about themselves …" (p. 273). *Mutatis mutandis*, these are relevant here.

Relevant work in Ireland

In the aforementioned MIST project, the research used narrative as a tool to access the students' mathematical identity. The narrative material was gathered in two stages. First, students were asked to respond to a questionnaire with open-ended prompts, allowing respondents to tell their mathematical stories fluently and without undue constraints. The second stage involved convening focus groups, one in each institution, to elicit further narrative development (Eaton & OReilly 2009). Analysis of these narratives led to the identification of the following main themes:

- Harnessing student teachers' mathematical identity
- The role played by key Figures in the formation of mathematical identity
- Ways of working in mathematics
- How learning in mathematics compares with learning in other subjects
- The nature of mathematics
- 'Right' and 'wrong' in mathematics
- Mathematics as a rewarding subject.

As noted earlier, work at another primary teacher education college in the Dublin area addressed somewhat similar issues (Kelly & Oldham 1992; Oldham 1997; Oldham & Close 2006). In this case, over a period of some twenty years, all undergraduate students – not just those with a special interest in mathematics – were required to reflect on and discuss what they liked and disliked about mathematics, and to outline their view of the nature of the

subject. Typically, the students were asked to reflect individually, and then to share their reflections in small groups, before some synthesis was made in a plenary session; moreover, as part of their assessment, the students were required to write mathematical autobiographies, outlining their attitudes to the subject during their schooldays and emphasising critical incidents in their own learning. Likewise, all students doing a postgraduate diploma course in primary teaching at the college were required to write mathematical autobiographies, and also to undertake other exercises in reflective writing. The autobiographies often referred to key Figures in the students' experience of mathematics. Papers using the data have emphasised the students' views on the nature of mathematics (see especially Oldham 1997).

The study that is the main focus of this paper draws on both strands of research. Its methodology and findings are outlined and then discussed below.

Methodology

Subjects of the study

The subjects of the present study were third or fourth year undergraduate students in an honors mathematics programme at a university in Dublin who elected to take two modules on mathematics education (one in each semester) as part of their work in the academic year 2010-2011. The two modules are designated hereafter as the 'Mathematics Education module' and the 'Classroom Experience module'. The Mathematics Education module addressed theoretical and practical aspects of the subject, focusing particularly on current debates about curriculum, teaching and learning. Participation was a prerequisite for taking the Classroom Experience module, for which the students were placed in second-level schools and acted as classroom assistants for three classes per week. On the assumption that enrolment for the School Experience module constituted at least an expression of interest in mathematics teaching, the students who took that module are designated in the study as 'prospective teachers'.

Data collection and analysis

The mathematical identity of these students was investigated using a protocol drawing on the two approaches described above. The exercise on which the investigation was based was part of the work for the Mathematics Education module, and constituted an assignment accounting for a small part (five per cent) of the module assessment. The students were initially asked, during a lecture, to reflect on and discuss their likes and dislikes with regard to mathematics and to identify its nature; they worked first individually and then in groups if they

wished, after which there was an opportunity for students to make contributions in a plenary session. The assignment was given out subsequently. It entailed writing a mathematical autobiography, the specifications for which are shown in Figure. 1 in the form given to the students; they draw directly on the MIST protocol (Eaton & OReilly 2009).

Mathematical autobiography

Think about your total experience of mathematics. Write about the dominant features that come to mind.

[Take about 10 – 15 minutes]

Now think carefully about all stages of your mathematical journey from primary school (or earlier) to university mathematics. Consider:

- Why you chose to study mathematics at third level.
- Influential people.
- Critical incidents or events.
- Your feelings or attitudes to mathematics.
- How mathematics compares to other subjects.
- Mathematical content / topics.

With these and other thoughts in mind, describe some further features of your relationship with mathematics over time.

[Writing time for this section might be about an hour; aim to write 1000-1500 words (typed double-spaced)]

[Taken from Eaton & OReilly (2008-2010) with a view to facilitating research comparisons with intending primary teachers specialising in mathematics]

Figure 1. Specifications for the mathematical autobiography assignment

As indicated by the final paragraph of the specifications, and to comply with ethics requirements, the students were informed that their work might be used for research purposes. They raised no objections.

Of the 39 students taking the Mathematics Education module, 29 were initially placed in schools for the Classroom Experience module. The essays of these 29 students were analysed. Rather than seeking patterns, threads and themes (Clandinin & Connolly 2000) *ab initio*, as had been done for the MIST study, the coding procedure on this occasion focused on identifying occurrences of the main themes that had emerged from MIST and judging whether or not these themes were relevant and exhaustive for the different cohort of students.

Coding was carried out as follows. As the essays were read, a key phrase from each distinguishable item (typically a few sentences), together with its MIST theme codes and

information to identify both the essay and the location within the essay, were entered into an Excel spreadsheet. First, six of the essays were read and coded by two of the authors; the results were then examined in order to check the authors' initial impressions of the adequacy of the themes and also the consistency of their coding. Some clarifications were made to the description of the themes, and the remaining essays were coded, again with some being read by two authors for a further check on consistency. Overall, one author coded 19 essays and the other coded 20, with ten being considered by both authors. Comparison of the results revealed broadly similar patterns of coding by the two authors, any substantial differences being reconciled through further discussion. The filtering facility of the spreadsheet was then used in order to focus on different themes. The first and third authors' familiarity with the MIST data enabled comparisons and contrasts to be made between the MIST and the new cohorts of students.

A general account of the application of the MIST themes to the new cohort of students is given elsewhere (Eaton, Oldham & OReilly 2011). The themes of relevance for this paper are those on *the nature of mathematics* and on *the role played by key Figures in the formation of mathematical identity*, the focus for the latter being in particular on the role of teachers and family members who nurtured – or failed to nurture – the students' emerging mathematical identities.

Results

The MIST themes proved appropriate for consideration of the current data, with the themes on the nature of mathematics and the role played by key Figures in the formation of mathematical identity being among those most frequently addressed in the essays (Eaton, Oldham & OReilly 2011). Results are described for each of these in turn. The main findings are illustrated by quotations from the students' essays; other findings are mentioned for completeness, but constraints of space preclude incorporation of further quotations.

The nature of mathematics

Collectively, the students' responses painted a picture of their views of mathematics as immensely powerful through its abstractness, precision, inherent logic and yet applicability to many aspects of the real world. The 'picture' metaphor is used here to reflect the occurrence in many essays of words with visual associations: art, pattern, beauty and so forth. Some students indicated that they loved mathematics for these aspects, whereas others had struggled with the abstraction and rigour, perhaps finding themselves at ease in their university programme only as the emphasis on applications increased. The main focus

here is on evidence of the students' espousal of the philosophies of mathematics education described above.

Absolutist and broadly Platonist views – traditionally Platonist or echoing 'modern mathematics' – were endorsed by many students. The following quotations are chosen (from a plethora of examples) to capture the types of description and analogy that were identified. One student even quoted Plato explicitly:

> *[Mathematics] is a world of abstract and logical reasoning…. 'The highest form of pure thought is in mathematics' – Plato…. I take preference [in] definition and clarity as opposed to a more subjective viewpoint. [Student 5]*

> *[Mathematics] seems quite unique in its unchanging exactness. Always [dependent] on the axioms you begin with, the resultant logic is shown to be solid, with no room for discussion. [Student 26]*

> *I like to think that mathematics is a language just like Spanish or French or Arabic. You learn the symbols and the axioms in school and you then have the tools to build up the language little by little. If I was asked for a short definition of what mathematics is I would have to say 'rigorous proof'. And this is what attracts me to the subject, the fact that there is a right answer. [Student 7]*

> *[Whenever] one has an idea, rendering it mathematically is akin to exposing an object to a high autumn wind: it is stripped of all needless embellishment…. Mathematics is spare and rigorous and it has a cold, gaunt beauty…. [The] one feature common to all mathematics is precise ordered thought. [Student 16]*

Instances of fallibilist views were much harder to find. The following quotation captures the sense of mathematics as dynamic and changing, but does not explicitly address the refutations as well as the proofs that can be part of the development.

> *The great men and women through the ages have added their knowledge and contributed to the ever growing, ever increasing, ever rolling ball that is Mathematics…. Mathematics is alive and ever changing. New developments are always ongoing, new theorems proved, new statements conjectured. [Student 2]*

However, students did discuss the problem-solving nature of the subject. One may have been endorsing problem-solving as opposed to Platonist conceptions in writing:

> *I was able to enjoy mathematics more for the problem solving nature of the subject rather than its total understanding. [Student 18]*

Alternatively, he may have been revealing an instrumentalist tendency (with 'problem solving' referring to working out challenging but standard exercises rather than tackling unfamiliar work); this and other references in his essay could apply to either possibility. More clearly instrumentalist personal views were endorsed by a few students, in particular by some who did not care for the abstract nature of the college courses. The first student quoted below differentiates his personal preference ("'real' sums with 'real' answers") from the conception that he recognises as dominant in his college mathematics courses. By contrast, the second quotation is from a student who is identifying but *rejecting* the apparently instrumentalist emphasis of the mathematics classes in his school.

> *I developed an intense impatience with the preciseness of the subject; I longed for a return to the more computational maths I knew and loved. [Student 1]*

> *I started to hate the way that maths was taught, with, what I considered far too much emphasis on just doing questions. It was obvious to me that no amount of sums could guarantee a correct answer in the next, unless, one had a clear understanding of that particular area of maths…. [Student 20]*

Other students displayed an understanding of mathematics that combined different elements, and notably that recognised the power of the subject with regard to applications.

The role played by key Figures in nurturing mathematical identity

By far the most frequently cited influences on the prospective teachers were their own teachers, beginning in primary school:

> *He really ignited the love of mathematics that I developed in his classroom, mostly in sixth class [11-12 year olds] where he unveiled the secret of algebra. He really had a passion for maths. Sometimes he would write an algebra problem on the blackboard and say "the first person up to my desk with the right answer will win 50p"…. I made a lot of money out of those algebra problems! [Student 7]*

Teachers' love of mathematics was often mentioned in glowing terms, such as in the case of a secondary school teacher:

> *He constantly showed a great effort to making us understand Maths. When it was exam year, he was the only teacher I had who consistently stayed after school … to give us extra revision. I think it was his love of maths… I liked the most. His style of teaching was brilliant. It was slow, vocal, easy to understand and it created an environment where it was easy to ask questions. [Student 15]*

It was often at school that the foundation for students' own working methodology for mathematics was laid.

> *He always said that 'maths is a doing subject', and that you needed to [practise] questions and challenge yourself to really understand and learn maths. That lesson, I feel, can still be applied to mathematics at University level. Everyday I learn new theorems and if I didn't [practise] questions I don't think I would fully understand the theory. [Student 6]*

Many students emphasised enthusiasm as a crucial characteristic of the good mathematics teacher:

> *I think for me, I really respond to enthusiasm in a teacher. I think it stirs students to think enthusiastically of the subject themselves, even just the portrayal of a positive attitude towards their given subject makes all the difference to the student I think. [Student 21]*

Students frequently provided narrative accounts of critical events or episodes in their mathematical journey, positive or negative, as in the following examples.

> *One day he set us a homework assignment to prove some inequality (I think it was $2^k \geq k^2$ for $k > 4$)…. When I got home I spent about two or maybe three hours trying to prove it and finally got it out.… My first ever difficult (to me at least) proof! Mr. B … photocopied my proof along with his proof and then gave it out to the class for future reference…. On the top of the page it said "Ruth's Proof". I'm pretty sure this is the day when I decided I would like to do maths at third level to some degree. [Student 22]*

I believe Ms X's method of teaching was bad, there was no consistency to her explaining and everything was written in shorthand and was barely legible.... I started [private lessons] with Ms T…. Within a couple of months and a lot of coaxing from [Ms T] I finally started attempting questions and slowly gained some of my confidence back. She had so much patience, a positive attitude and a really genuine love for maths…. She strongly influenced me to continue in maths. [Student 14]

Starting into [eleventh grade] I was introduced to the other side of mathematical education. Our new teacher read directly from the book and presumed students moronic for not knowing that the equation of a circle is "(x – h)^2 + (y – k)^2 = r^2". Everything was to be rote learnt and rewritten in an exam, understanding the theory behind the problems was unnecessary. In my final year of secondary school I was once again under the tutelage of Mrs. H and I was able to understand and enjoy the Maths I was studying. [Student 8]

The latter two examples reflect the fact that some students had experienced poor teaching, in particular instrumentalist teaching devoid of focus on understanding. In each case, an inspiring teacher was required to draw the student back to understanding and enjoying mathematics.

Students' narratives relating to parents and other family members as key Figures influencing their mathematical identities, although not at all as common as those relating to teachers, were nonetheless plentiful. Themes arising included the nature of family members' work especially when it related to mathematics of some sort. Referring to his father, himself a mathematics graduate, one student wrote:

Although he never actively encouraged interest in the subject in me, he was always there to help with homework or to answer any questions I had, and I feel this idea in the home that maths was 'acceptable' prevented me from developing any of the hang-ups or fears other children seem to have about the subject. [Student 1]

This student also captures the benefits of a domestic environment that is supportive of mathematics. There were also some instances of sibling rivalry relating to mathematics. Other key Figures included university lecturers and peers, both at school and university. These are reported in Eaton, Oldham and OReilly (2011).

Discussion

The prospective teachers' essays provide a rich source of data, to which the quotations selected above can do only partial justice. These students have reflected deeply on their mathematical lives, identifying in many cases a passion for the subject and the debts they owe to people who have helped them on their journeys so far.

With regard to their understanding of the nature of mathematics, they show a high level of insight into the absolutist and broadly Platonist conception of mathematics that sees the subject as abstract, coherent, precise and rigorous, with an emphasis on proof. Many take great delight in this conception; some have discovered that Platonist mathematics is not to their liking, and – apologetically? – recognise their more instrumentalist or application-focused preferences. The fallibilist position is scarcely represented. Overall, the narratives can be compared and contrasted with those by student-teachers in the other Irish studies, cited earlier. Contrasts can be noted especially with the first year student-teachers, as described in the study by Kelly and Oldham (1992); those students (younger and non-specialist mathematically) tended to endorse instrumentalist conceptions and to show little understanding of Platonist visions. The MIST student-teachers' conceptions are more like those of the present group in this respect.

Many students in the present group expressed enormous gratitude to those who inspired them to develop their commitment to mathematics, especially their teachers and, to a lesser extent, parents, other family members and peers. However, they articulate unambiguously a significant number of experiences of poor teaching, in particular teaching devoid of any development of understanding. There is strong testimony that significant inspiration and effort is required to recover from poor teaching, on the part both of the students themselves and of (subsequent) teachers. Overall, the positive appraisals of good teachers in these mathematical autobiographies had much in common with the traits of good teachers arising in the focus groups of the MIST study. The MIST students also referred to a similar range of key Figures who nurtured their mathematical identity; however, they chose to contrast to a greater extent the evolution of their perception of mathematics across levels of education in accordance with how it was taught at each level.

A comment can be made here on the study design. The essays on which the analysis is based were written near the start of the Mathematics Education module, prior to any formal consideration of philosophies of mathematics education. Thus, students' espoused philosophies have been inferred from their writing. Care had to be taken in interpreting expressions such as 'logical' and 'problem solving'; these may refer respectively to Platonist or problem-solving conceptions, but, in the experience of the authors, are used by some students to mean respectively 'procedural' and 'doing exercises', reflecting instrumentalist views. In selecting the quotations above, the contexts from which they were drawn were taken into account. If the essays had been written later – after completion of both modules –

the students could have been asked to identify their preferred philosophies; they could also have offered further insights into the influence of teachers, based on those with whom they worked in their classrooms.

Conclusion

The study examined views on the nature of mathematics, and on the role of key Figures in nurturing mathematical identity, held by a cohort of mathematics undergraduates who chose to take a module in which they spent three lessons per week as classroom assistants in second-level schools. The students' autobiographical essays, written prior to their classroom experience, show that many of them endorse views on mathematics, and on teaching and learning mathematics, that are rather appropriate for prospective teachers: they indicate that these students would aim to teach for understanding and with passion. However, the students might be less well prepared by their own philosophies to implement faithfully curricula that focus on exploration and problem-solving, rather than (or as well as) truth and rigour. Given the focus of current curricula, such findings, if typical, emphasise the challenge facing teacher educators, even when working with mathematically well-qualified students. The forthcoming MINT (Mathematical Identity using Narrative as Tool) study, considered by Eaton, Oldham and OReilly (2011), offers an opportunity to explore some of the issues further.

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References

Ball, D. 1988. Unlearning to Teach Mathematics. *For the Learning of Mathematics* 10, no. 2: 10-16.

Clandinin, D., & M. Connolly. 2000. Narrative enquiry: experience and story in qualitative research. San Francisco: Wiley.

Eaton, P., and M. OReilly. 2009. Who am I, and how did I get here? Exploring the Mathematical Identity of Student Teachers. In *Proceedings of 3rd National Conference on Research in Mathematics Education: MEI3*, ed. D. Corcoran, T. Dooley, S. Close and R. Ward, 228-237. Dublin: St. Patrick's College.

Eaton, P., and M. OReilly. 2010a. What other people think and why it matters? An investigation of key influences on mathematical identity. In *ATEE 2009 Annual Conference Proceedings*, ed. M. Montané and J. Salazar, 290-298. Brussels: ATEE.

Eaton, P., and M. OReilly. 2010b. What is mathematics and why do we study it? The views of student teachers. Paper presented at the 35th Annual ATEE Conference, Budapest, 26-30 August 2010.

Eaton, P., E. Oldham and M. OReilly. 2011. Looking back to look forward: The mathematical identity of prospective mathematics teachers. In *Proceedings of 4th National Conference on Research in Mathematics Education: MEI4*, ed. T. Dooley, D. Corcoran and M. Ryan, 155-167. Dublin: St. Patrick's College.

Ernest, P. 1985. The philosophy of mathematics and mathematics education. *International Journal for Mathematical Education in Science and Technology* 16, no. 5: 603-612.

Ernest, P. 1988. The Attitudes and Practices of Student Teachers of Primary School Mathematics. In *Proceedings of 12th International Conference on the Psychology of Mathematics Education, Hungary, Vol. 1*, ed. A. Borbas, 288-295. Veszprem: OOK.

Gresalfi, M., and P. Cobb. 2011. Negotiating identities for mathematics teaching in the context of professional development. *Journal for Research in Mathematics Education* 42, no. 3: 270-304.

Grootenboer, P. J., T. Smith and T. Lowrie. 2006. Researching identity in mathematics education: The lay of the land. In *Identities, cultures and learning spaces*: *Proceedings of the 29th annual conference of MERGA, Vol. 2*, ed. P. Grootenboer, R. Zevenbergen, and M. Chinnappan, 612-615. Canberra: MERGA.

Hiebert, J., and D. Grouws. 2007. The effects of classroom mathematics teaching on students' learning. In *Second handbook of research on mathematics teaching and learning*, ed. F. Lester, 371-404. Charlotte, NC: Information Age Publishing.

Hill, L. 2000. Theory, practice and reflection: A pre-service mathematics education programme. *Teachers and Teaching: Theory and Practice* 6, no. 1: 23-39.

Kelly, L., and E. Oldham. 1992. Images of mathematics among teachers: Perceptions, beliefs and attitudes of primary teachers and student-teachers in the Republic of Ireland. Paper presented at the 7th International Congress on Mathematical Education, Quebec, 17-23 August 1992.

Lerman, S., S. A. Amato, N. Bednarz, M. M. M. S. David, V. Durand-Guerrier, P. Gadanis, G. Huckstep, P. C. Moreira, F. Morselli, N. Movshovitz-Hadar et al. 2009. Studying student teachers' voices and their beliefs and attitudes. In *The Professional Education and Development of Teachers of Mathematics*. 15th ICMI Study, ed. R. Even and D. Ball, 73-82. New York: Springer.

Oldham, E. 1997. Encountering mathematical thinking: Reactions and reflections of a group of student-teachers. In *Partnership and cooperation: 21st Annual Conference of the Association for Teacher Education in Europe (ATEE), Glasgow, September 1996*, ed. J. McCall and R. Mackay, 88-102. Glasgow: University of Strathclyde Faculty of Education.

Oldham, E. 2010. Balancing support, challenge and responsibility in professional development: the views and experiences of participants in a mathematics curriculum innovation project in the Republic of Ireland. Paper presented at the 35th Annual ATEE Conference, Budapest, 26-30 August 2010.

Oldham, E., and S. Close. 2006. Solving problems in Irish mathematics education: an examination of two problem-based mathematics courses for pre-service teachers. In *Teachers and their Educators - Standards for Development; Proceedings of the 30th Annual Conference ATEE, Amsterdam 22-26 October 2005*, ed. J. Beelen, M. Snoek, A. Swennan, J. de Valk, S. Visser and Y. Wulder, 383-387. Amsterdam: HvA.

Prediger, S., M. Vigiani-Bicudo and P. Ernest. 2008. DG4: Philosophy of Mathematics Education. In *ICME-10 Proceedings: Proceedings of the 10th International Congress on Mathematical Education, 4-11 July, 2004*, ed. M. Niss, 438-42. Roskilde, Denmark: IMFUFA, Department of Science, Systems and Models, Roskilde University.

Thompson, A. 1992. Teachers' Beliefs and Conceptions: A synthesis of the research. In *Handbook of Research on Mathematics Teaching and Learning*, ed. D. Grouws, 127-146. New York: Macmillan.

Wenger, E. 1998. *Communities of Practice: Learning, meaning and identity*. Cambridge: Cambridge University Press.

Finnish State-funded Continuing Professional Development System for Education Personnel

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Abstract

This article describes the recent activities in Finland in the field of continuing professional development (CPD) of teachers. A special focus is on the national “knowledge boosting programme” called "OSAAVA", which was launched in 2010. The programme is intended for educational staff at all education levels, except higher education. The aim of the programme is to activate educational institutions (education providers) to take greater responsibility and proactive approach of their own staff development activities with the help of networked activities and co-operation. A total of 76 networks focusing on continuing professional development were launched nationwide in 2010 and their number has since then increased to 120.

In recent years the Finnish government has taken particular interest in a career-long and career- wide professional development of Finnish teachers. In this article we analyse the current CPD challenges facing Finnish education personnel. We emphasize the importance of the concept of lifelong learning in the continuing professional development of Finnish teachers and other education personnel. Education policy and financing should support this development as widely as possible. One way to look at the effectiveness of CPD is to recognize the “critical” periods during a teacher’s career and to target special support into these phases.

Also some general characteristics of the Finnish education system, teacher education and (government) state funding for continuing professional development of teachers are discussed.

Keywords: professional development of teachers, lifelong learning, national education systems, funding of continuing education, educational personnel, local and regional networking, OSAAVA

Objectives of the Paper

In recent years the Finnish government has taken particular interest in a career-long and career- wide professional development of Finnish teachers (approximately 80.000 in total). Both, employer and the government support teachers' professional development in the different phases of their careers. From 2007 to 2011 the government had a special focus to promote inclusion in professional development for the whole education personnel. In 2011 the government spent 21 million Euros (direct funding) for teachers´ continuing education (excluding related substitute and travelling costs).

The purpose of this paper is to describe in more detail the recent activities in Finland in the field of continuing professional development (CPD) of teachers. First we describe in short some characteristics of the Finnish education system and teacher education, in order to give some background information for focusing the government-funded CPD system (especially a knowledge boosting programme named "OSAAVA", launched in 2010), and to analyse the current CPD challenges facing Finnish education personnel.

Finnish Education System and Teacher Education

For several decades education has been an important policy area for government in Finland. Education system is continuously facing new reforms and societal challenges. Education is considered a valued and an important resource to a small country of only approximately 5.4 million inhabitants. Compared to developments in many other countries in Europe, Finland is an exception in a sense that the teaching profession remains very attractive and the teacher education programmes receive far more applications than there are actual study places.

Finnish Education System

Finnish education system in general is built around three levels of education. Primary level is based on a nine-year comprehensive school, with mandatory attendance. It begins the year the pupil turns seven (or occasionally six) and ends at the age of 15 or 16. It is provided free-of-charge for the entire age group. In 2009, there were a total of 540.000 pupils in grades 1-9 (ISECD 1 and 2) of basic education (Statistics Finland 2010).

Secondary education consists of a dual system, which has separate schools for general education preparing students for tertiary education and vocational education and training (vocational qualifications as well as further and specialist qualifications). There were a total of 112.000 students at general upper secondary schools and 165.000 students on upper secondary vocational programmes (Statistics Finland 2010).

In the tertiary education there are two parallel sectors: universities and polytechnics. The number of students in the universities is 168.500 and in the polytechnics 146.700 (Vipunen).
Furthermore, adult education is provided at all levels of education, with about 1.6 million annual participants. Accordingly, pre-primary education, basic education and upper secondary education and training form a coherent learning pathway that supports a person's growth, development and well-being from childhood to seniority.
All children are guaranteed opportunities for study and self-development according to their abilities, irrespective of their place of residence, language or financial status. All pupils are entitled to competent and high-quality education and guidance and to a safe learning environment and well-being. Students' opportunity to progress from one level of education to the next is safeguarded by legislation. All students continue to take the same curriculum until the end of 9th grade.
Both general and vocational (upper) secondary certificates provide eligibility for further studies in universities and polytechnics. The qualifications of each level are governed by acts of Parliament. This assures harmonised qualifications and their quality, and guarantees students' rights.
Universities, which are academic or artistic institutions, focus on research and education based on research. They confer Bachelor's, Master's, licentiate and doctoral degrees. Polytechnics offer work-related education in response to labour market needs in the region. They, too, offer both Bachelor's and Master's degrees.
The flexible education system and basic educational security make for equity and consistency in results.
Finland’s priorities for maintaining well-functioning educational system also in the future are:

- Having an up-to-date national and locally modified school level curriculum for all schools. New reform to be in place by 2016.
- Expecting good results from all students (equal opportunities) and providing extra teaching resources to get those results.
- Giving well-educated teachers flexibility and freedom to teach and work.

It should be remembered, however, that during the past few years there has been a financial pressure to close down schools due to a decreasing number of pupils in some areas, and several hundred schools have already been closed. At the moment education is still provided in approximately 3.400 schools but it is likely that this trend will continue.

Teacher education

Teacher education (for teachers of primary and secondary schools) was transferred to the universities as early as 1971. The purpose of this change was to unify elementary and secondary school education into a single entity, and to develop an academically high standard (Master's degree) for prospective students. A fairly strict core curriculum was set by the Ministry of Education. It unified the teacher education in universities and raised common standards. In the 1990s in the context of the "first wave" of general decentralization of governance, the universities were given more freedom to profile their programmes and take into account the local needs and the university's own strategic objectives (see Tella 1996).

Today, all prospective teachers have to complete a Master's degree (300 ECTS). Primary teachers, called also class teachers, have Education Science as their major subject. In Finland, due to the high number of applicants, only one in eight applying for a degree in education will actually be accepted (Jakku-Sihvonen & Niemi 2006).

Subject teachers major in the actual subject that they teach. The secondary school teachers, called also subject teachers, complete a major in their academic teaching subjects (such as Biology, languages, Math and sciences) and a minor (60 ECTS) in Pedagogy. The educational studies of subject teachers have been completed either as a one-year block or concurrently with their academic studies in their major field (Jakku-Sihvonen & Niemi 2006).

Teachers of vocational studies in vocational education and training (VET) in turn too, take pedagogical studies after first completing a Master's degree (or equivalent) in the relevant vocational field. Pedagogic studies (60 ECTS) that qualify them for teaching profession are offered both in the universities and in the teacher training colleges at Polytechnics.

Special needs teachers as well as guidance and student counselors specialize after having completed their teacher education (Master's degree). The studies take an additional 1-2 years to complete (60 ECTS).

In higher education teachers are generally required to have a post-graduate research degree. In polytechnics, also pedagogic studies (60 ECTS) are required.

After receiving a Master's degree in Education, Finnish teachers are given considerable liberty in their own work to organize their teaching and learning in terms of working methods and selection of educational materials they wish to use to reach the aims stated in the national and school/institute level curricula for instance. One element to note is that there is no national inspectorate system or strict nation-wide assessment in place to monitor closely student progress or teachers' work (Jakku-Sihvonen & Niemi 2006).

Participation of Finnish teachers in continuing professional development

Data collection

Approximately every three years Statistics Finland collects national data about Finnish teachers. As the education system is decentralised, the majority of the data focus on the number of qualified teachers in education institutions. Information is provided for the Ministry of Education and Culture for anticipating quantitatively teacher education needs for the next five to ten years.

Participation in continuing professional development

Questions regarding the participation of teachers in continuing professional development (CPD) had been included in these national data retrievals in the last two instances in 2008 and in 2010. The last one included data from the calendar year 2009 which showed that in comprehensive and general upper secondary education 77 % of teachers participated in CPD during the previous school year. In vocational education the figure was 80 % and in liberal adult education only 55 %. As an average national figure it can be concluded that about a fifth (23 %) did not participate in any form of CPD in 2009. On the other hand, those who did participate, spent approximately 6.3 days (1 day = min. 6 hours) in CPD. Regionally, the most active participation rate was found in the Eastern Finland region and the least active in Lapland in the north. Characteristic to Lapland are sparsely populated areas, great distances, number of small schools and physical availability of CPD. Generally speaking, there are regional differences in terms of the availability and participation in CPD also between rural and urban municipalities within the regions in addition to differences between regions.

Having described this, it is important to note that there is currently no specific legislation governing the continuing professional development of Finnish teachers, as the actual requirements and obligations to participate in CPD are partly defined in various statutes and partly in collective labour agreements. In other words, teachers must participate in CPD between one and five days per year, according to the respective statutes and labour agreements, and they can do so with full salary benefits. It is up to the employers to make a final decision which programmes and forms of education can be accepted as CPD but this decision should be based on mutual discussions between teachers and employers (rectors or other representatives of the respective education provider) in the work place.

State-funded continuing professional development (CPD) system of education personnel

Approximately 50.000 Finnish teachers, rectors and other education personnel participated in state-funded CPD in 2011, the funds for which were disseminated by central and regional authorities for this purpose. The state-funded CPD supports the local and institutional implementation of educational reforms and programmes. It ensures continuing training related to the reforms and current policy issues for all teaching staff.

Administration

The national decision-making and coordination of state-funded CPD is the responsibility of the Ministry of Education and Culture. In addition, the Finnish National Board of Education works with the Ministry to develop content and methods for national CPD programmes and is responsible for the major part of the financial re-allocation for programmes. These programmes are mainly organised by continuing education providers and other training organisations. Each of the six Finnish Regional State Administrative Agencies (formerly state provincial offices) have Education and Culture personnel who arrange short-term in-service training informing about the current and upcoming educational policy issues and promote regional co-operation between the schools and institutions.

Also, the Ministry of Education and Culture has appointed an *Advisory Board for Professional Development of Education Personnel* in January 2008. The Board advises the Ministry in coordination of national CPD policies, monitors the effectiveness of the current CPD models and promotes collaboration between the many stakeholders.

The composition of the Board includes all the relevant stakeholders, including the Trade Union of Teachers in Finland, employers' organisations, research institutes, regional and local authorities, education providers, rectors' associations and the teacher student union. As a result of this structure, policy recommendations concerning CPD can be openly and constructively formulated, to be then used by the Ministry as a reference and evidence in its own policy decisions.

Among the Board's duties is the anticipation of changes in the learning needs of teaching staff, following up on the status of CPD and its development needs, and following CPD developments in other countries. The Board can also propose initiatives for the development of CPD, to be considered in the decision-making of the Ministry of Education and Culture.

Funding system and national objectives

In recent years, in contrast to many other countries, the government has increased quite significantly its financial support for teachers' continuing professional development. Eligible participants (beneficiaries) for this are education personnel (school leaders, teachers and other education personnel, such as school assistants, study guidance counselors etc.) in pre-primary, primary, general upper secondary, vocational and adult education as well as personnel in non-formal/liberal adult education.
For the financial year 2010 the total amount of state-funded CPD was raised to over 21 million Euros from the previous one of 11 million Euros. The same level has been maintained also for 2011 and 2012. The state budget of 2012 has allocated this sum to promote education policy objectives and reforms as follows:

1) 4.800.000 EUR for general and non-formal adult education (precise funding allocation decided by the National Board of Education):

   National objectives:

- diversification of teaching and learning, promoting subject and thematic skills, and new learning environments, flexible learning in general education;
- support for links between pre-school education and basic education;
- development of pedagogies in general upper secondary education;
- development of cultural diversity, human rights and teaching of foreign languages;
- new models to improve safety in schools;
- development of adult pedagogies and eLearning models in liberal adult education;
- pedagogical leadership in non-formal adult education.

2) 2.500.000 EUR for vocational and adult education (precise funding allocation decided by the National Board of Education):

   National objectives:

- support of the development of the vocational qualification system;
- strengthening of teachers' collaboration with the working life and development of learning in working life (environments);
- special measures to support study arrangements;
- recognition and validation of prior learning;
- development of student assessment skills.

3) 590.000 EUR for continuing education organised in the regions (funding for the Regional State Administrative Agencies for organising short-term in-service training for education personnel):

National objectives:

- themes related to legal protection, well-being and security of pupils;
- development of regional co-operation and multi-professional collaboration;
- dissemination of information related to the national education policy and regional cooperation.

4) 3.009.000 EUR for continuing education of teachers and related professions at all levels of education *(precise funding allocation decided by the National Board of Education):*

National objectives:

- promotion of governmental policy programmes and objectives (Government Programme);
- promotion of the pedagogical use of information and communication technologies;
- development of pedagogical leadership in education institutions;
- Nordic cooperation: green thinking and well-being.

5) 1.500.000 EUR for SPECIMA programme aimed at education personnel with immigrant background *(funding decisions by the Ministry of Education and Culture):*

National objectives:

- promoting education which increases the qualifications of teaching staff with immigrant background; strengthening of official language skills (Finnish and/or Swedish).

6) 158.000 EUR funding for the Advisory Board for Professional Development of Education Personnel, and for development of CPD follow-up activities.

7) 10.000.000 EUR for OSAAVA programme *(funding decisions made by the Ministry of Education and Culture, the National Board of Education and the Regional State Administrative Agencies):*

National objectives:

- implementation of the OSAAVA programme (more information in the next chapter);
- Also, costs related to the evaluation of OECD's Teaching and Learning International Survey 2013 (TALIS) programme are included *TOTAL of 22.557.000 EUR.*

The implementation of state-funded CPD is carried out by universities' continuing education centres, education providers (mainly municipalities), private education companies, rectors' and teachers' organisations and registered associations within the field of non-formal and formal adult education.

New OSAAVA programme as a tool for re-designing Finland's current continuing professional development models

A new national, fixed-term (2010-2016) programme called "OSAAVA" (~"CAPABLE") started in 2010. The programme supports Finnish education providers to systematically and continually develop the skills and competences of their teaching and other education staff according to the locally-identified professional or organizational needs.

The background of the programme is quite interesting. In 2008, in accordance with the then Government Programme, the Ministry of Education and Culture appointed a working group to prepare legislation leading to requirement for education providers to ensure that their personnel receive and attend regularly in CPD.

The working group proposed several changes in legislation which would have obligated education providers to systematically ensure that the teaching staff participates annually and "sufficiently" in continuing education organized for them.

It was later decided that the proposed legislation will not be introduced for the Parliament (mainly due to the costs of such legislation in a financially tight situation). However, the working group also proposed that a new fixed-term national programme be set up, to improve the effectiveness and quality of teachers' professional development practices by enhancing educational needs, more formal, up-to-date and bottom-up generated provision of in-service training services. Accordingly, the programme was launched by the Ministry in the beginning of 2010.

Aims, objectives and target groups

The basic objective of OSAAVA is to activate educational institutions to take greater responsibility of their own staff development activities. Staff development systems in place should be embedded into normal routines of schools and networks. The other objective is to renew current professional development activities, as it has been seen that only some of learning takes place in external or institutional settings.

The programme is intended for all education levels except higher education. The special target groups were defined with the help of national statistics on active participation in in-service training, in schools. The following groups were seen as target groups for the programme during its first years:

- school leaders (rectors, potential rectors, heads of municipal education administrations),
- teaching staff over 55 years of age, and
- the persons who have not participated at all or infrequently in CPD in recent years.

School leaders were identified as key persons to realise the development potential in schools, specific teacher groups were identified to have neutral or negative attitude for self-development or limited possibilities to participate in CPD, organized elsewhere (long distance).

The programme focuses on developing both *individuals* and *work communities* (institutions, municipal education offices), and on exchanging and utilising good CPD practices. The newly modified services and professional development models are intended gradually to be incorporated into more formal and continuously improved structures, supported by the employer.

In the development of individuals, the training of school leaders and mentoring of new teachers are clearly prioritised. In the development of work communities, on the other hand, the current priority is to support the networking of educational institutions as well as to create models and action plans to support competence development.

Work communities (networks of schools) are also supported through OSAAVA when they organise CPD to embed quality assurance systems in place (especially in basic and secondary education), promote teachers' general well-being at work and the use of information and communication technologies (ICT) in personnel training. Funding can also be received for the assessment of the competence needs of the staff as well as for drawing up CPD and development plans for institutions.

At the end of the programme period we are expecting to have witnessed a significant improvement in the effectiveness of CPD through improved regional and local provision in addition to an increased number (over 10.000 persons annually) of participants.

OSAAVA supports the general task of employers (e.g. municipalities) to take full responsibility for providing professional development for their school personnel. It also provides a versatile framework for designing strategic personnel training guidance models, thus giving possibilities for regional or thematic networking and arranging opportunities to use innovative learning models, especially the use of ICT, to support the flexible delivery of the training programmes. It is interesting to note in this respect, that according to an OECD survey (2004), the pedagogical use of ICT in education still concentrates on sporadic and mechanical information retrieval from the internet (copy - paste without hardly any active information processing). The use of ICT in the teachers' own flexible CPD arrangements is still rare. Accordingly, one of the aims for the OSAAVA programme was to activate this area, as well. It is our opinion that use of ICT in personal learning and teaching processes also

motivates teachers when they realise that ICT can actually be quite useful for their own professional expertise.
The dominant paradigm for professional development of teachers has for many years been, at least in Finland, to concentrate on traditional CPD models. However, the idea behind OSAAVA is thus to empower teachers themselves to think, plan and execute their own CPD that better meets their own personal needs but also those of their employers.
In spite of the increased state funding for teachers' CPD it is important to note that there are also several other potential sources of funding for professional development which teachers and education personnel can utilise. To name a few; European Social Fund or Lifelong Learning Programme, the Finnish Centre for International Mobility (CIMO), the Nordic Council of Ministers and by education employers themselves.

Results so far

As OSAAVA has been in existence only since 2010, it is too early to make detailed conclusions from the actual realisation yet but certainly some general conclusions can already be discussed. A total of 76 education networks were launched nationwide in 2010 and their number has since then increased to 120. From the start, the received applications have contained five times more funding proposals than it was possible to grant within the budgetary limitations. It is stated in the funding conditions that the schemes must collect both quantitative and qualitative data from the participation of education, to be then collected by the Regional State Administrative Agencies for later utilisation by the Ministry of Education and Culture and the Advisory Board for Professional Development of Education Personnel.
The preliminary results show that most schemes spent some time in the actual planning stage prior to implementation. On the one hand this was understandable as some funding recipients were quite new in this kind of networking of several education providers per scheme. On the other hand, it can be asked whether time was lost in over-organising of the schemes at the same time.
Attitudes toward the programme have generally been very positive, varying from "finally our own expertise is valued", "thanks to the programme, we are 'allowed' or more precisely overcoming our mental barriers to collaborate across organisational or municipality borders", "we can finally develop our work from our own needs and use tools and potential that exist in our own organisations" to "this is something that benefits us all!".
The schemes were quite open in describing their starting difficulties so we would hope that similar trend in reporting will also continue in the future. The Regional State Administration Agencies will organise annual meetings within their respective region to familiarise the networks' coordinators about the specific follow-up requirements. So far, the systemic view is

warmly appreciated. From the start the programme has given a shared framework, platform and language to achieve the well-articulated aims.

Conclusions

We have already emphasized the importance of the concept of lifelong learning in the continuing professional development of Finnish teachers and other education personnel. Education policy and financing should support this development as widely as possible. Considering the issues discussed above it may be possible to think of a person's career as a continuum which is based on a strong initial education, to be followed by efficient CPD in the beginning of the career (induction phase) and subsequent CPD, with stronger emphasis during some career stages, until the retirement age.

One way to look at the effectiveness of CPD is to divide it into several so-called "critical" periods during a teacher's career. The first one of these may occur when a new teacher graduates from the university and begins his/her career in a school. It is not uncommon for new teachers to experience the actual school work as challenging or even surprising. The application of CPD during this period (the so-called induction phase) through mentoring or other personal support will reduce the possibilities that the person might move on to other fields of work. A solid base for career-long CPD must be created already in the beginning of teaching career.

When a teacher has been in working life for several years s/he may start thinking about career advancement as a rector, for instance. The Ministry of Education and Culture has accordingly channelled funding (through the OSAAVA programme and other means) to teachers who may consider school leadership as their next career step. This task is urgent also in a sense that hundreds of school rectors will retire in the next few years and their replacements will be needed.

When a person has already been in working life for many (maybe 15-20) years, s/he knows the field well and the actual knowledge base is well-established. In this situation there may be a possibility that the work becomes routine and thus decreases the person's motivation toward work. Tutoring younger teachers could be one way to utilise the more experienced teacher's knowledge in an efficient way and transfer it to benefit the entire workplace.

When a teacher comes closer to retirement it is important to ensure that updating one's skills and knowledge is not forgotten, in other words, the need for CPD remains.

On a personal level, however, the contents and forms of CPD can vary considerably depending on the person's job requirements, personal motivation, current skills, subject content and the interests of his/her employers. This line of thinking is necessary not least because of the rapid changes in the society which transform the actual knowledge bases and learning environments on a frequent basis. CPD is also seen as an essential tool in enabling

and encouraging teachers to remain longer in working life. This can be considered one of the central underlying reasons for the increased state CPD funding.

The purpose of the rather substantial state support for teachers' CPD is eventually to advance the well-being and competitiveness of the Finnish society through high-quality education. This can be achieved through utilising as widely as possible the various possibilities of the information society in CPD, and taking into account and reducing the current regional variations in the provision and availability of CPD.

Compared perhaps to some other countries Finland has been able to increase its input in teachers' CPD in spite of the current challenging global financial environment. It is thus fair to expect that regional and local CPD networks established, with the help of state funding will remain active – and in existence – even when the this additional funding will end in about five year time. After all, at the end of the day, it is the education providers who are to ensure that their teaching staffs retain the high quality in their work and, thus, guarantee that the Finnish pupils' current high learning results, internationally speaking, will be maintained.

References

European Commission. 2010. *Developing coherent and system-wide induction programmes for beginning teachers: a handbook for policymakers.* Staff Working Document SEC. 538 final. European Commission Directorate-General for Education and Culture.

Jakku-Sihvonen, Ritva and Niemi, Hannele (eds.). 2006. Research-Based Teacher Education in Finland. Finnish Educational Research Association.

Kumpulainen Timo (ed.). 2010. *Teacher statistics 2010* (in Finnish, Opettajat Suomessa 2010). Statistics Finland. National Board of Education.

Ministry of Education. 2007. *Development of Government Funded In-service Training for Teachers.* (In Finnish, Valtion rahoittaman opetustoimen henkilöstökoulutuksen kehittäminen) Working Group Report, p.45.

Ministry of Education. 2009. *Ensuring professional development of Teachers.* (In Finnish, Opetustoimen henkilöstön ammatillisen osaamisen varmistaminen (Osaava). Working Group Report, p.16.

Ministry of Education. 1997. *Joy of Learning. National strategy for lifelong learning.* (in Finnish: Oppimisen ilo, Kansallinen elinikäisen oppimisen strategia) 1997:14

Organisation for Economic Co-operation and Development (OECD). 2004. *Information Technology Outlook 2004.* OECD.

Tella, Seppo (ed.). 1996. *Teacher Education in Finland—Present and Future Trends and Challenges.* University of Helsinki.

Vipunen. *Statistical database of the Finnish educational sector* (to be later available in English).

LEARNING AT WORK PLACES AND IN COMMUNITIES

Rethinking Selection and Professional Development for Teachers/Leaders by Learning from Exemplary Teachers

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Abstract

Drawing on data from 81 secondary school teachers across the US, the author argues that being a learner is a requisite for becoming a good teacher, and that in the 21st century, being an avid learner and a good teacher are requisites for becoming good leaders. Taking the position that continuing professional development has paid less attention to the holistic development of the teacher as a person than to teaching as an activity, the author also argues that what exemplary teachers seek to develop or refine in themselves and in their students may provide a sound blueprint for the development of teachers, teacher leaders, and formal school leaders. The paper closes with some policy implications for teacher preparation as well as for the selection and professional development of practicing teachers and leaders.

Keywords: professional development; teacher leadership; leadership development; exemplary teachers

Introduction

Human beings around the world live in widely diverse settings, yet the human condition binds us together. We share the same needs to survive and fulfill aspirations; we share the same emotions and desires to communicate and socialize with others; we share attitudes like curiosity and hope. And regardless of our circumstances and where we live, we all learn and we all teach and we all lead throughout our lives, whether that occurs within a family circle or in more formal settings. Some members of the human family become professional teachers, and some become exemplary or 'outstanding' teachers. But what is it that makes some teachers 'stand out' among their peers?

The concept of excellence has intrigued philosophers for millennia and is often associated with an individual's character. For instance, in the continuing quest to understand 'good' teachers, Hare argued that multiple "excellences" such as empathy, humility, and open-mindedness are necessary to becoming a good teacher (1993, vi). Although agreement on

criteria for good teachers has remained elusive, Jackson noted that “it is likely that in every school system there could be found at least a handful of teachers who would be called outstanding by almost any standard” (1968/1990, 115). Since then, researchers have found exemplary teachers at all levels (e.g., Van Schaack & Glick 1982) and in all kinds of schools—from well-to-do schools to “the most out-of-the-way schools in the most impoverished areas” (Hargreaves & Shirley 2009, 87).

Whatever term is used to describe these teachers—whether it is outstanding, excellent, or accomplished—does not mean that exemplary teachers represent perfection, but that they can serve as an example from which others can learn (Berliner 1986). Understanding exemplary teachers represents a way “to inform the present, to underline what we must attend to, and to help in locating what obstructs the realization of the ideal…The informing of the real by the ideal focuses the work to be done to lessen the distance between the two” (Cuffaro 1995, 100).

I want to be clear that I am making a distinction between ‘teacher’ and ‘teaching’ although they are often used almost interchangeably. In this keynote, I am focusing on the ‘teacher’ as a person rather than on ‘teaching’ as an activity or as techniques. My emphasis on the person is the reverse of what usually occurs in practice (e.g., Kelchtermans 2009; Malm 2009).

Essentially, I will argue that for everyone, being a learner is a requisite for becoming a good teacher, and that in the 21st century, being an avid learner *and* a good teacher are requisites for becoming a good leader. In education, I see career-long professional development as both professional and personal development, both formal and informal learning. I do not see professional development for teachers and leaders as a new or different kind of learning, but rather as a life-long extension of development begun in primary and secondary schools. I will argue that what exemplary teachers seek to develop or refine in themselves and in their students may provide a sound blueprint for the development of teachers, teacher leaders, and formal school leaders (principals or heads of schools).

Methods

Data are drawn from my study of secondary school teachers designed to capture what ‘exemplary teacher’ means. In the US, secondary students generally range from age 13 to 18. The research involved 81 teachers who were identified as exemplary teachers by local groups of their peers in 31 school systems across the US. Local groups comprised teachers who had regular opportunities to visit classrooms or work closely with teachers in their local region (e.g., staff developers, specialists, regional laboratory personnel, and school-university liaison personnel). Identified participants included academic, vocational, and special education teachers.

Data collection began with a survey soliciting professional information such as length of experience, subject specialism(s), professional memberships, and the like. Each participant then engaged in a semi-structured, three-hour interview designed to probe the participants' perceptions and extend existing understandings of exemplary teachers (pseudonyms used throughout). Other data included artefacts such as student work, course syllabi, curricular materials the teachers had created, videos and materials teachers had made for presentations or TV as professional development for colleagues, and student evaluations solicited by the participants.

Interviews were tape recorded and transcribed. Using the constant comparative method of analysis, related codes were integrated into sub-categories and categories which were woven into five propositions. Data were then searched for commonalities and differences as well as for illustrative quotes. Although limitations of self-reporting are well known, researchers "cannot understand human actions without understanding the meaning that participants attribute to those actions—their thoughts, feelings, beliefs, values, and assumptive worlds" (Marshall & Rossman 1999, 57). Additionally, limitations of time and the size of the study did not permit the additional layer of student identification sometimes used in small studies.

Being a Learner: Becoming an Exemplary Teacher

Pathways toward becoming an exemplary teacher were neither straightforward nor simple for this sample. Although I did not include specific questions about becoming a teacher, the participants themselves provided considerable unsolicited data.

Almost a third (32%) of the 81 teachers came from a family with one or more teachers, many of whom served as role models for the participants. One spoke of a grandmother who "always had a pleasant way about her, a loving way. And it…was genuine…That, I think, has always been in the back of my mind as the ideal" (Amy, maths). The youngest teacher in the sample (aged 25), she had spent many happy hours in her mother's classroom as a child. Later, she said, "when I was in college, I substituted [taught as a substitute teacher] when I came home. And so, during my planning periods, I could go watch Mom."

Six (7%) 'always knew' they wanted to be a teacher, but 9 (11%) had chosen a non-teaching career (doctors, lawyers, nurse, court stenographer, fashion designer), only changing their mind partway through college. Another group of 24 (30%) had pursued a totally different full-time career prior to becoming a teacher (in medicine, business and industry, professional administration, the military and Coast Guard, National Parks Service, engineering, accounting, research). Of those who had intended to have a non-teaching career or actually did, many made the switch to teaching after accidentally getting an opportunity to teach in a non-school setting and discovering they were good at it. For instance, one who planned to

become a lawyer, "ended up tutoring a lot of the people in my college math courses…I had a real aptitude for it so I went into education and math. And I would have never, *ever* thought that I would become a teacher" (Meryl, maths).

It was schoolteachers who emerged as the most significant influence on the participants' decision to become teachers, most often when they were teenagers. Thirty (37%) mentioned that they teach the same discipline or age level as a beloved teacher (same discipline, 11%; same level, 7%; same discipline *and* level, an additional 19%). The desire to emulate admired teachers, to capture their inspirational essence, their *being*, was noted in many ways:

> *When I got to high school, I had probably the most influential teachers I've ever had. [They] were my science teachers and I really enjoyed them. I was kind of like "I think I want to study this" because of the way they were. (Gerry, science)*

> *It was their being. And they taught me things about the world and living that if I could bring that kind of learning—those kinds of experiences and that kind of intensity and enthusiasm—to anybody, I would be more than gratified; I would be ecstatic. (Andrew, maths)*

Recognition that teachers have "a tremendous impact" (Hillary, English) on students has left these teachers with a respectful understanding of their daily influence to inspire and attract the next generation of teachers (see Weick & Quinn's [1999] logic of attraction; also Combs 1982). As one said, "You're one individual, and it *will* have a consequence, be it good or be it bad, you know, so it might as well be good" (Bobbie Jean, history). Negative influences also left deep imprints on the participants' thinking and behaviors. One exemplary teacher, recalling "certain instances that were negative" for him as a student, concluded that teachers

> *have such a strong impact on students—what we say, what we do. In our minds, it can be so insignificant that we don't even think twice, but it has an impact to affect people in such a way that they remember it all their life. That's amazing to me…It's a powerful thing, good and bad. (David, special ed.)*

By whatever path these teachers entered the profession, their transition was often difficult. Despite the teachers' many horror stories about class sizes, students, and assignments they had been given as a novice teacher, many felt they owed their career to wonderful mentors. As one said, "[My mentor] was a pivotal place where I formed my values about teaching…She saw me drowning and reached a hand to me…I wouldn't even be a teacher if it wasn't for this woman" (Amber, English). That exemplary teacher went on to teach student

teachers at a university, mentor novice teachers in her school, and train mentor teachers in the district, a common pattern among this sample.

When I asked the teachers about their development of ethics and interpersonal skills, typical answers were "It wasn't from any course work" (Beth, science) or "Most people [with strong interpersonal skills] do it well and ably because it's a part of them, not because they've been instructed. They've learned by trial and error" (Glynis, English). In fact, of the professional sources of learning these teachers mentioned most often, 'trial and error' was at the top of the list (also Lortie, 1975). The sources included (in this order):

- experimental or accidental use (trial and error);
- in-depth professional development over an extended period of time (e.g., institutes, conferences, university courses, and reading);
- learning from or with colleagues (e.g., team teachers, mentors, principals, a scientific community, professional organizations, or a university community);
- religion or philosophy (usually personal inquiry);
- reflection. (Collinson, in press – a).

The exemplary teachers simply assume that a career-long pursuit of academic and pedagogical knowledge is a necessity for doing one's best. But what they have specifically sought is the development of self-knowledge, knowledge of others, knowledge of how they influence others and in turn are influenced by others, and ways to change themselves—ways to change their thinking and behaviors in order to do their best and get the best out of students. To that end, the teachers learn as much as possible from students, parents, and colleagues—but particularly from working with colleagues and observing them teach. Sometimes learning from colleagues means "using *some* of them as role models and using others of them as 'I don't want to do it this way'…So I'd say maybe positive and negative role models, and somewhere, deciding where I belong" (Paula, maths/science).

In their pursuit to understand self and others, what the experienced teachers found particularly helpful were psychology or philosophy courses as well as extensive training in special needs and gifted-and-talented education. Many teachers also valued professional development that helps improve human relations such as in-depth courses and training in counseling, communication, conflict resolution, cooperative learning, and collegial coaching (Collinson, in press – b).

As for reflection, the teachers consider it a necessity for becoming exemplary (also see Kelchtermans 2009; Korthagen 2004). As one participant said,

> *I think teaching is the most creative, complex act that we do—if you're good at it…There is an art and a science to teaching. And…as Berliner says in his [article] where he talks about the novice all the way up through the expert, many teachers never reach that expert level because that expert level goes beyond anything that you can read or learn. It's something that comes from within you. And it takes a lot of reflection.* (Colleen, science)[1]

When we think of reflective practitioners, we likely envision reflection as analysis and action based on past experiences, feelings, or thoughts (e.g., Dewey, 1933/1960). The exemplary teachers do reflect on past experiences, but because they appraise realities of life and believe that they can use their own effort to shape the future, they also use their intellect and imagination to envision future possibilities (see Gardner, 1990; Walker, 2006). In other words, they are simultaneously retrospective and prospective.[2] That is, these teachers learn from the past while constantly looking for new learning opportunities that can positively affect the future for themselves and their students. Scholars such as Walker (2006) and Gardner (1990) have linked this ability to the development of hope, humility, and relationships. Both authors have argued that good leaders develop this mature view of life. The same ability is also associated with exemplary teachers (e.g., Collinson, Killeavy, & Stephenson 2000).

Being an Exemplary Teacher

What, then, have we learned about exemplary teachers? Studies over the last two decades (e.g., Collinson 1994; Williams 2001) have confirmed what early researchers consistently discovered about exemplary teachers: they are "continual learners" (e.g., Easterly 1983) demonstrating "a deep concern for professional development" in an endless quest to become better teachers and help students learn (Van Schaack & Glick 1982, 33). They also exhibit self-knowledge and an ethic of care that enable them "to grow and to relate to other people in more productive, richer ways" (Mertz 1987, 30; Agne 1999; Combs 1982; Lipka & Brinthaupt 1999). This knowledge base, as well as my earlier study of exemplary primary school teachers (Collinson 1994), provided a foundation for my investigation of exemplary secondary school teachers. Five deeply interrelated and complex propositions emerged from the data. They incorporate what the teachers see as essential learning for life for both themselves and their students.

Proposition 1.

The exemplary teachers see their role as shaping students' thinking and lives. They use themselves as an instrument and their subject matter as a vehicle to help students learn for life: learning how to learn, learning about themselves, learning how to work with and care for others, and learning how to find meaning or enjoyment in life.

Proposition 2.

The teachers focus on connections to create conditions that promote the development of the whole person: intellectual, social-emotional, and ethical development. Connections to life experiences, personal interests, and the human condition (relevance); connections among domains of knowledge; connections to one's inner self; and connections between oneself and community (from the classroom to the global community) help form the identity of and nurture possibilities for each student.

Proposition 3.

The teachers help students learn the values of care/compassion/love (of which respect is a subset), honesty/integrity, and humility, along with the attitudes of curiosity, open-mindedness, hope (optimism, perseverance), and doing one's best.

Proposition 4.

The teachers promote students' freedom to be (their development as unique individuals), their freedom to become autonomous thinkers, and their freedom of choice.

Proposition 5.

Because freedom and responsibility represent two sides of the same coin, the teachers help students learn responsibility: responsibility to others, intellectual responsibility, and responsibility for choices they make.

In sum, these teachers focus on a future-oriented picture of what they believe will afford all students the fullest possible opportunities to learn, become better persons, and contribute to and enjoy life as adults. They want students to be "learning more than just bookwork" (David, special ed.).

> *They're going to have to know some of the other things that help them to relate to other people and be trusted by other people and…be followed by other people or work with other people…I believe that success in life for our students is not going to be just that they understand the quadratic formula. More important is that they know how to think logically and that they have some of those other skills and characteristics that will help them be successful in life and make our society a better society. (Nate, maths)*

Application to classroom practice

So how do these interrelated and complex propositions translate into classroom practice? I discovered that the exemplary teachers use the same major *processes* within their classrooms although the specific techniques they choose are limited only by their creativity. The three processes include modeling, relationships, and communication. It is not coincidental that modeling, healthy relationships, and communication skills are also associated with good leaders (e.g., Day & Leithwood 2007; Gardner 1990; Rosenholtz 1989; Senge 1996; Weick & Quinn 1999).

First, the teachers believe that they are powerful role models who are shaping lives. They are determined that their one chance to influence the intellectual, social-emotional, and ethical life of a student will have good consequences. As one teacher put it,

> *Being exemplary is…always being there for kids, helping kids grow, making kids be the best they can be…without scaring them away…[It] comes because of an inner commitment to being the best that you can be and requiring that to happen with kids as well. (Shirley, German/Russian)*

For these teachers, 'exemplary' is "not anything that's preached. It's just a way of being…It's just who you are" (Faye, English). "It's a way of thinking. It's a way of behaving" (Ardyth, science/maths). "You're a role model. And so I think it's important to sit down and decide, 'Now, what do I really want these kids to learn from me as a person? And what am I exhibiting?'" (Lisa, Latin/Greek). "You have your values, your ideals of what's going to be, and so you model how you want them…It's just always that [I'm asking myself,] 'Am I reinforcing this type of behavior?'" (Fiona, library).

Setting conditions so that students can do their best while learning about themselves and the human condition then becomes a priority.

> *You better be working on the things that are important in life…Kids realize what is really important in life. It's not how much you can repeat back to [the teacher]. It's that you know where to find knowledge—you know where to find out what you want to know so that you can do something—[and] that you're a good person, that you're a giving person and that you do something to make the world a better place. And that's what I really try to get into the kids' heads—that you know where to go to look for something that you want to find out, that I've taught you how to find out what you need to know in life…And once they get that sense of self, they'll be okay. (Charlotte, special ed.)*

Second, the teachers focus on human relationships. They use the teacher-student relationship inside and outside the classroom to learn how to best help students and to create a classroom community in which their development can thrive (also see Dewey 1897/1964; Heath 1994; Jarrett 1991). For these teachers, bringing out the best in students means using themselves as role models along with every tool and skill they have in order to get to know each student. They consider individual relationships and communication vital to learning. As one teacher explained, "The teaching/learning cycle goes on between human beings with the subject [matter] as the vehicle…But [it] really goes on person to person…The more that you know about a student, the more pathways you open up to connect with them," first as a person, then as a learner (Kara, science). The reverse also occurs: "When they can see you as a different person, *as* a person, then their image of you changes: that you're not this torture person; you're actually there to help them out" (Todd, science/maths). In this way, relationships (interpersonal learning) act "partially as a means to accomplish the academics" or intellectual learning (Nate, maths). The teachers seem to share Heath's conclusion that both interpersonal and intellectual development prepare the way "for the maturation of values and self [in that] relationships provide the crucible out of which develop not only conscience and ethics but also self-attitudes and identities" (1994, 176; also Combs 1982; Dewey 1933/1960).

Within the classroom, the teachers—from vocational to special needs to academic teachers—use collective inquiry groups with students as a means of fostering students' self-knowledge and student-student relationships. They often refer to collective inquiry as "learning by doing" (Evelyn, science) or as projects, collaborative research, solving problems, or real-life application of intended learning. Inquiry is typically regarded as an individual intellectual pursuit that helps students pose questions, collect and analyze data, solve problems, generate new ideas or actions, promote curiosity, learn intellectual responsibility, and learn how to provide and weigh reasoning and evidence (e.g., Dewey 1933/1960). But collective inquiry also allows these teachers to discover students' thinking and strengths and to help students practice skills of decision-making, interpersonal relations, communication, conflict resolution, and group processing. The teachers specifically address those skills, sometimes individually, sometimes with a small group, sometimes with the whole class. They also use inquiry to stimulate interdisciplinary connections that can broaden students' perspectives, make topics relevant, and potentially help students find meaning and enjoyment in life.

Third, the teachers all provide time and opportunities to help students learn to communicate well. Most require presentations by *all* students, usually group presentations to the class as a culmination of their collective inquiry. They seem to intuit that "relationships are inherently communicative" (Dachler 1992, 173), that communication is vital to establishing trust (e.g.,

Tschannen-Moran & Hoy 2000), and that communication skills will influence students' future opportunities throughout life. To that end, the teachers help students learn about verbal and non-verbal communication, including dialogue, listening, the power of words, body language, the presentation of self, writing for various audiences, and above all, giving and receiving feedback in supportive ways—feedback to and from each other and the teacher. Feedback supported with evidence helps students learn about their own strengths and limitations and what they know or don't know (humility). Helpful feedback can also deepen relationships with others (e.g., Schein 2009).

Many of the teachers specifically offer opportunities for students to teach, sometimes to a group of peers, sometimes to the whole class, or to younger students. As one said,

> *I teach teaching [to them]…because at some time or another, they're going to be required to teach, and that may be a limiting factor. Because they'll go to work somewhere, and…they may be a good worker, but they'll never move up because they can't work with people, they can't teach people. So I have them teach. (Arturo, electronics)*

Being a Learner and Teacher: Becoming a Leader

Almost a century ago, Mary Parker Follett recognized that being a learner is a requisite for becoming a good leader (Graham 2003). Barth referred to good leaders as "head learners" (1990, 46), and the exemplary teachers surely serve as examples. They have cultivated a disposition to learn from everything and everyone. As one exemplary teacher said,

> *I always go in with the idea that my students are going to teach me at least as much as I teach them, about something. I mean, it may not necessarily be Latin, but they teach me a lot about life, and about their outlook on life. (Lisa, Latin/Greek)*

Another talked about her network of teacher colleagues who "all have been recognized for something as being leaders in their field." She referred to them as "professional junkies" who continue learning. "It's not so much that they're trying to keep themselves from being bored, [but because] they are students. Forever" (Jennifer, art).

In addition to good leaders being avid lifelong learners (e.g., Bennis 2009), they are also recognized as good teachers (Gardner 1990). "'Leader as teacher'…is about fostering learning for everyone" (Senge 1990, 356) or "having shown you the ways to learn everything you need to know" (Bennis 2009, 105). Like good teachers in classrooms, Follett noted that good leaders in organizations help others see the big picture, understand webs of relationships, find meaning, and work collaboratively in ways that enable and are satisfying to

others (Graham 2003; also Gardner 1990; Kelley 1992). In effect, everyone is a teacher or leader periodically throughout life—parents as children's first teachers, carpenters or plumbers who teach their apprentices, secretaries who initiate newly hired personnel, doctors who teach interns, and military officers who constantly teach their subordinates. Whether roles are informal or formal, leadership may emerge from any member of any group at any time (Senge 1996).

The exemplary teachers were heavily engaged in leadership as they pioneered changes to improve student learning. Many had piloted school-wide innovations such as interdisciplinary curricula, new assessments, new schedules, and school-to-work programs. Many had also written grants or worked with external organizations to secure resources for a given innovation. Because of their expertise as learners and teachers, they served on many school, regional, state, or national policy committees where they were able to influence decisions and then model and teach colleagues how to implement the changes (also see Rosenholtz 1989; Senge 1996). Additionally, many provided staff development for colleagues, presented at conferences, or wrote books and instructional materials (Collinson, in press - b).

Many of the exemplary teachers directly influenced selection and development by volunteering to teach education courses at local universities, introducing mentor programs to their school system, serving as mentors, training mentors, or providing specific leadership training for colleagues. Some also served on hiring teams to recruit and select novice teachers and principals.

All of these opportunities to exercise leadership helped the teachers learn even more: "I've done numerous presentations [and] state conferences" said one teacher, "and I wish more people could do it because they would see [that] it makes you evaluate your own actions" (Kristin, English). But honest self-evaluation requires dispositions to be open-minded, to solicit feedback, to reflect, to take risks, and to be willing to change oneself before trying to help others (also see Kelchtermans 2009; Weick & Quinn 1999). Thus learning and leading appear to be mutually reinforcing in the same way that intellectual and attitudinal learning are mutually reinforcing (Dewey 1933/1960).

So What?

Until recently, teacher preparation and continuing professional development seem to have focused mostly on *teaching* as techniques instead of on the holistic development of the *teacher* as a person. Yet scholars from various disciplines have argued that "the achievement of personality means nothing less than optimum development of the whole individual human being" (Jarrett 1991, 97) and that personal dispositions "are not only relevant but, in fact, stand at the core of becoming a teacher" and being able to help others

(Lortie 1975, 79; Combs 1982; Combs, Avila, & Purkey 1971; Goodson 1992; Malm 2009). Researchers and educators have not only paid little attention to the holistic development of teachers—to the interface of the personal and the professional—but most professional development for teachers emphasizes content knowledge and techniques "at the expense of what it means to 'be'" (Malm 2009, 87; also see Korthagen 2004; Tickle 1999).

My propositions—what the exemplary teachers appear to consider the ideal for *all* students—are somewhat similar to what scholars referred to as 'the four pillars of education' in the well-known United Nations document on learning: learning to know, learning to do, learning to live together, and learning to be (Delors, et al. 1996). Here, I have focused mostly on the last pillar, learning to be, because it gets so little attention. Even the authors of the U.N. document put learning to be at the end.

The exemplary teachers, however, *started* with the question 'Who do I want to be as a role model for students?' and then set out to try to become that person, constantly refining their knowledge, skills, and attitudes in a lifelong pursuit to narrow the gap between the real and the ideal. Those who decided to become a teacher thanks to a beloved role model had the advantage of retrospective and prospective thinking about the person they wanted to become years before their formal teacher education began. Those with prior careers had years of practice as learners, teachers, and leaders before their formal teacher preparation began. That kind of self-knowledge appears to be of major importance to understanding "who I am in how I teach" (Kelchtermans 2009, 259; also Lipka & Brinthaupt 1999).

The exemplary teachers also believe that knowing students is vital to helping students learn (see Schein 2009). If applicable to teacher preparation, educators would need to have deep knowledge and understanding of student teachers in order to provide differentiated opportunities in a continuation of holistic development begun by primary and secondary school teachers. As for career-long professional development, we can only imagine what it might look like if it emphasized what these exemplary teachers strive to do: keeping an unwavering focus on improving learning, doing their best and getting the best out of students, creating opportunities for inquiry into relevant and challenging issues, providing for extensive practice in communication, taking time to make interdisciplinary connections, modeling how to give and receive helpful feedback, and creating opportunities for students to demonstrate their strengths and develop collaborative leadership skills that help themselves and others learn who they are. It is likely that if more primary and secondary school students had such a background, society would have a deep talent pool of candidates capable of becoming future exemplary teachers and leaders (see Gardner 1990; also Bennis 2009).

Imagining such a change might lead us to question current policy decisions. For instance, why would we not insist on selecting as principals only those who are continuous learners and exemplary teachers? And if 21st century leadership involves leaders and followers regularly switching places as they share ideas and model changes (e.g., Rost 1991; Foster

1989; Weick & Quinn 1999), then surely we would select as principals those who had already demonstrated such dispositions as teachers. Similarly, at a time when emphasis on distributed leadership and collegial interdependence are increasing (e.g., Spillane, Halverson, & Diamond, 2001), we might ask why professional development for principals continues to be separated from that for teachers. We might also ask why leadership development and leadership opportunities are not part of all teachers' career-long learning to provide a deep talent pool of leaders. These and many other questions still need to be examined, but perhaps learning from exemplary teachers can provide a blueprint to help us rethink the selection and professional development of teachers and leaders in schools and then find ways to narrow the distance between the real and the ideal.

Endnotes

1. This teacher may have been referring to wisdom or authenticity, qualities many of the teachers talked about although they struggled with vocabulary to discuss these attributes (see Arlin 1999 and Starratt 2007 for an elaboration of wisdom and authenticity respectively).
2. I am indebted to Walker (2006) for this insight and vocabulary.

Author's Notes

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References

Agne, K. J. 1999. Caring: The way of the master teacher. In *The role of self in teacher development,* eds. R. P. Lipka & T. M. Brinthaupt, 165-188. Albany, NY: State University of New York Press.

Arlin, P. K. 1999. The wise teacher: A developmental model of teaching. *Theory Into Practice,* 38 (1), 12-17.

Barth, R. S. 1990. *Improving schools from within: Teachers, parents, and principals can make the difference*. San Francisco, CA: Jossey-Bass.

Bennis, W. 2009. *On becoming a leader*. New York: Basic Books.

Berliner, D. 1986. In pursuit of the expert pedagogue. *Educational Researcher,* 15 (7), 5-13.

Collinson, V. 1994. *Teachers as learners: Exemplary teachers' perceptions of personal and professional renewal*. San Francisco: Austin & Winfield.

Collinson, V. (in press – a). Sources of teachers' values and attitudes. *Teacher Development*.

Collinson, V. (in press – b). Leading by learning, learning by leading. *Professional Development.*

Collinson, V., Killeavy, M., & Stephenson, H. J. 2000. Hope as a factor in teachers' thinking and classroom practice. In *Educational Research in Europe Yearbook 2000,* eds. C. Day & D. van Veen, 21-35. Leuven-Apeldoorn, The Netherlands: Garant.

Combs, A. W. 1982. *A personal approach to teaching: Beliefs that make a difference*. Boston: Allyn & Bacon.

Combs, A. W., Avila, D. L., & Purkey, W. W. 1971. *Helping relationships: Basic concepts for the helping professions*. Boston: Allyn & Bacon.

Cuffaro, H. K. 1995. *Experimenting with the world: John Dewey and the early childhood classroom*. New York: Teachers College Press.

Dachler, H. P. 1992. Management and leadership as relational phenomena. In *Social representations and the social bases of knowledge,* eds. M. von Cranach, W. Doise, & G. Mugny, 169-178. Lewiston, NY: Hogrefe & Huber.

Day, C., & Leithwood, K. (Eds.). 2007. *Successful principal leadership in times of change: An international perspective*. Dordrecht, The Netherlands: Springer.

Delors, J. and the International Commission on Education for the Twenty-First Century. 1996. *Learning: The treasure within*. Paris, France: United Nations Educational, Scientific, and Cultural Organization (UNESCO).

Dewey, J. 1960. *How we think: A restatement of the relation of reflective thinking to the educative process*. Lexington, MA: D. C. Heath. (Original work published 1933)

Dewey, J. 1964. Ethical principles underlying education. In R. D. Archambault (Ed.), *John Dewey on Education: Selected writings* (pp. 108-38). New York: Random House. (Original work published 1897).

Easterly, J. 1983 (October). *Perceptions of outstanding elementary teachers about themselves and their profession* (Tech. Rep. No. 1). Rochester, MI: Oakland University, The School of Human and Educational Services.

Foster, W. 1989. Toward a critical practice of leadership. In *Critical perspectives on educational leadership,* ed. J. Smyth, 39-62. London: Falmer.

Gardner, J. W. 1990. *On leadership*. New York: The Free Press.

Goodson, I. (Ed.). 1992. *Studying teachers' lives*. New York: Teachers College Press.

Graham, P. (Ed.). 2003. *Mary Parker Follett: Prophet of management*. Washington, DC: Beard Books.

Hare, W. 1993. *What makes a good teacher*. London, Canada: Althouse Press.

Hargreaves, A., & Shirley, D. 2009. *The fourth way: The inspiring future for educational change*. Thousand Oaks, CA: Corwin Press.

Heath, D. H. 1994. *Schools of hope: Developing mind and character in today's youth*. San Francisco: Jossey-Bass.

Jackson, P. W. 1990. *Life in classrooms*. New York: Teachers College. (Original work published 1968).

Jarrett, J. L. 1991. *The teaching of values: Caring and appreciation*. London: Routledge.

Kelchtermans, G. 2009. Who I am in how I teach is the message: Self-understanding, vulnerability and reflection. *Teachers and Teaching,* 15 (2): 257-272.

Korthagen, F. A. J. 2004. In search of the essence of a good teacher: Towards a more holistic approach in teacher education. *Teaching and Teacher Education,* 20 (1): 77-97.

Lipka, R. P., & Brinthaupt, T. M. (Eds). 1999. *The role of self in teacher development*. Albany, NY: State University of New York Press.

Lortie, D. 1975. *Schoolteacher: A sociological study*. Chicago: University of Chicago Press.

Malm, B. 2009. Towards a new professionalism: Enhancing personal and professional development in teacher education. *Journal of Education for Teaching,* 35(1): 77-91.

Marshall, C., & Rossman, G. 1999. *Designing qualitative research*. Thousand Oaks, CA: Sage.

Mertz, R. 1987. *Teaching as learning: The personal dimensions of teacher growth*. Columbus, OH: Ohio Department of Education.

Rosenholtz, S. J. 1989. *Teachers' workplace: The social organization of schools*. New York: Longman.

Rost, J. C. 1991. *Leadership for the twenty-first century*. Westport, CT: Praeger.

Schein, E. H. 2009. *Helping: How to offer, give, and receive help*. San Francisco: Berrett-Koehler.

Senge, P. M. 1990. *The fifth discipline: The art & practice of the learning organization*. New York: Doubleday.

Senge, P. M. 1996. Leading learning organizations: The bold, the powerful, and the invisible. In *The leader of the future: New visions, strategies, and practices for the next era,* eds. F. Hesselbein, M. Goldsmith, & R. Beckhard, 41-57. San Francisco: Jossey-Bass.

Spillane, J. P., Halverson, R., & Diamond, J. B. 2001. Investigating school leadership practice: A distributed perspective. *Educational Researcher,* 30(3): 23-28.

Starratt, R. J. 2007. Leading a community of learners: Learning to be moral by engaging the morality of learning. *Educational Management Administration & Leadership,* 35(2): 165-183.

Tickle, L. 1999. Teacher self-appraisal and appraisal of self. In *The role of self in teacher development,* eds. R. P. Lipke & T. M. Brinthaupt, 121-141. Albany, NY: State University of New York Press.

Tschannen-Moran, M., & Hoy, W. K. 2000. A multidisciplinary analysis of the nature, meaning, and measurement of trust. *Review of Educational Research,* 70(4): 547-593.

Van Schaack, H., & Glick, I. D. 1982 (February). *A qualitative study of excellence in teaching and The search for excellence in teaching: An annotated bibliography*. Washington, DC: National Institute of Education, ERIC Clearinghouse on Teacher Education.

Walker, K. 2006. Fostering hope: A leader's first and last task. *Journal of Educational Administration,* 44 (6): 540-569.

Weick, K. E., & Quinn, R. E. 1999. Organizational change and development. *Annual Review of Psychology,* 50: 361-386.

Williams, J. S. 2001. *Creativity, connectedness, and the spirit of teaching: Factors that contribute to renewal and longevity of exemplary teachers*. (Doctoral dissertation, Western Carolina University). Dissertation Abstracts International, 62 (02).

Head Teachers on Evaluating Newly Qualified Teachers' Competencies: What to Focus on and How

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Abstract

A mandatory probationary year for newly qualified teachers in conjunction with teacher registration is to be introduced in Sweden from 1st July 2012 (Government Bill 2010/11:20). This reform requires newly qualified teachers to be supported by a mentor. During the probationary year, head teachers will be responsible for evaluating whether the teacher should be registered or not. This paper reports on an interview study that was conducted with nine Swedish head teachers concerning *what kind of* teacher competencies they would focus on when evaluating NQTs and *how they* would perform the evaluation.

The results show that the head teachers would primarily like to focus on the following competencies of an NQT: (a) *social interaction*, (b) *leadership and classroom management,* and (c) *mission and goal achievement*. General pedagogical skills were mostly emphasised, whereas issues like subject knowledge and pedagogical content knowledge seemed to be taken for granted.

The question of *how* the evaluation should be performed has two distinct dimensions: how to acquire information about NQTs competencies, which relates to technical issues of how information and impressions are made available for evaluation and how head teachers perceive, interpret, assess and evaluate what they see, hear and feel. As the latter, more elusive dimension involves cognitive and procedural aspects of evaluation, the head teachers involved in the study found it difficult to describe and explain.

Keywords: teacher evaluation, teacher competence, teacher registration.

Introduction and aims

A teacher's competence is regarded as a strategic matter in most countries, and the training of teachers and a discussion about what kind of competencies are needed to teach seem to be ongoing issues (Goodwin & Oyler 2008). Thus, the kind of competence or training that is needed to be allowed to teach differs from country to country, or even within countries, regions or schools.

The main route into the teaching profession is some kind of adequate formal training. However, in recent years the registration of teachers has become an additional tool for policymakers to make a demarcation between someone having the proper training and thus being allowed to teach and someone who does not and is therefore not allowed to teach. In some countries the process of becoming fully registered as a teacher is also linked to a probationary year and induction programmes, as for instance in England, Wales, Scotland and New Zealand (cf. Cameron 2007). In other countries, such as the Nordic countries of Denmark, Finland, Norway and Sweden, the matter of who is allowed to teach is regulated by legislation associated with adequate teacher training (Bjerkholt & Hedegaard 2008).

However, in May 2008 the Swedish Government's Inquiry relating to Teachers' Qualifications and Authorisation, *Registration and stricter qualifying rules* proposed that teachers should be registered and a mandatory induction programme introduced (Swedish Government Official Reports 2008:52). The proposal was accepted, with the result that registration for teachers and preschool teachers is to be introduced in Sweden on July 1st 2011. The reform stipulates that newly qualified teachers and preschool teachers should do a "probationary year" and be supported by a mentor. During this year the head teacher or preschool manager is responsible for assessing whether the teacher is to be recommended for registration or not. Head teachers are expected to perform the evaluation in relation to national standards developed by the Swedish National Agency for Education. Teachers and preschool teachers who have been working for at least one year can request registration from 1st July 2011 without the need for a probationary year.

The research questions in the study reported in this paper focus on *what kind of* teacher competencies head teachers will focus on when evaluating NQTs and *how* they will perform the evaluation. The focus is on head teachers in schools and not on preschool managers' evaluations of preschool teachers.

Evaluating teachers' competencies

The evaluation of new teachers during the induction year raises a number of questions about the evaluation practices that are created. Research shows that certain issues need to be addressed, such as the processes involved, the focus of the evaluation and its validity. In the USA, the evaluation of teachers' competencies has become a focus of research and often arises from questions concerning teacher efficiency or efforts to find reasons for linking teachers' salaries to student performance (Kimball & Milanowski 2009). However, studies also show that there are major methodological challenges in this research, particularly with regard to the validity of evaluations (Jacob & Lefgren 2006; Kimball & Milanowski 2009). For instance, in their study of how head teachers make decisions about teacher performance, Kimball and Milanowski (2009) found that head teachers interpret the criteria in different

ways. They also discovered that finding valid correlations between head teachers' assessment of teachers' performance and their pupils' performance is problematic. One explanation they give for this is that head teachers tend to rely on intuition and "gut feeling" without being aware of it (cf. Tuytens & Devos 2010). This explanation is further strengthened by the fact that the head teachers they interviewed found it difficult to describe how they performed the evaluation.

Research into evaluation in accordance with specified standards highlights the accompanying opportunities, challenges and dilemmas. For example, the risk that complex competencies and knowledge dimensions might be simplified is stressed (Delandshere & Arens 2001; Imig & Imig 2008), as well as the fact that evaluation is a complex process that is almost impossible to judge fairly (Mahony & Hextall 2000; Berliner 2005). Regardless of whether or not the criteria used in this research captured the main aspects of teachers' competencies, they did provide guidance as to which competencies are assessed and valued as important – and less important. In this context, Biesta (2009) questions whether standards really measure what is regarded as valuable competencies and wonders whether what is measurable *becomes* what we value.

The question of *what* is evaluated and how the evaluation is performed embraces a lot of sub-questions. For example, one might ask whether or not the competence profiles capture the most important competencies, and which aspects form the basis of the evaluation of the competence in *reality*? This is connected to the kind of competencies that head teachers stress as important. Thus, do certain factors have more importance than others? And if so, does that mean that certain shortcomings can be overlooked and certain failures cannot be compromised? Some of these questions will be addressed in this paper, although the main focus is on *what kind of* teacher competencies head teachers will focus on when evaluating NQTs and *how* they will perform the evaluation.

Some methodological issues

The empirical data included in this paper consists of interviews with nine head teachers. The head teachers were interviewed in the spring of 2009 on the issue of teacher registration, as it was then called in the report (SOU 2008, 52). Thus, the data is based on a hypothetical reasoning of what might happen when head teachers evaluate new teachers in the context of teacher registration. However, the discussions and concrete examples given during the interviews largely related to the kind of assessments that head teachers already do. For instance, the questions focused on the characteristics of good teachers, what head teachers should take note of in the evaluation, how they might perform it and how they were currently assessing and evaluating teachers, e.g. to determine salary levels, in the coaching of teachers or when assessing student teachers.

How long the nine head teachers had held their positions varied from 2.5 years to 18 years. On average they had 10 years of experience as head teachers. All the head teachers had previously worked in schools as teachers, one as a leisure-time teacher. Their experience as teachers varied from 5 to 26 years. Four of the head teachers were responsible for Years 7-9 and in some cases Years 6-9, three were responsible for Years 1-6 (preschool class to Year 6) and two were responsible for Years 1-9. Overall, the head teachers were responsible for around 4,000 students and 525 staff. For each head teacher the number of students varied between approximately 115 to 700 and the number of staff varied from 25 to 120.
The nine interviews lasted for an average of 42 minutes, with a variation from 31 minutes to 55 minutes. The interviews took the form of a conversation in which various topics were discussed.

Results – what is in focus and how will the evaluation be performed?

This section is organised into different themes. These themes should not be construed as exclusive categories, but rather as a way of categorising and organising the data and the analytical aspects of what the head teachers believed to be important. The first two categories – social interaction and leadership and classroom management – are to do with teachers' attitudes.

The competencies that head teachers will focus on

Social interaction

The head teachers interviewed highlighted a number of skills and talked about how teachers' skills, abilities and attitudes related to how they interacted with students, parents and colleagues. The capacity for *social interaction* was a skill that all the head teachers emphasised as the most important - especially with regard to cooperation with students. This category can be said to be based on the ability to *create, maintain and develop good relationships* with other people. Most head teachers described this characteristic and relationship building as fundamental for working in school - particularly with students but also with colleagues and parents. In this sense, the ability to socially interact is a crucial aspect of a teacher's competence. Several aspects of social interaction are highlighted in the illustrative example given below, such as establishing contact, trust and a flexible dialogue, as prerequisites for good teaching and learning:

I would probably focus on the interaction between the teacher and the group. Is there trust? Is there togetherness? Is the dialogue between them flexible and easy? That is what I feel is most important. (4)

As in the above quote, the majority of the head teachers' statements focused on social interaction with the students in order to (a) create the relational conditions for education, collaboration and learning, and (b) interact, communicate and lead efforts to promote learning in the actual teaching situation. The ability to create good relational conditions was often described in sweeping terms by the head teachers, e.g. the ability to create "a good situation with the students, "to create a climate in the classroom" or to establish "contact with students". Other examples included the ability to create "security", a "permissive environment" and "how to meet and respond". Social interaction in teaching situations was often described in terms of "speaking space", "the teacher helps students" and "how teachers talk about students" and was closely linked to the dynamics of the learning situation. Examples were also given of reasons why teachers were discharged from teaching due to a lack of social interaction skills.

... they have not seen what happens in the classroom. They question what kind of skills the students have, and what it is possible to contribute as a teacher. Their treatment of students could almost be regarded as rude or insulting. (7)

A teacher's attitude is about responding and reading the situation in an appropriate and reciprocal way. One head teacher said that he would focus on the following in an assessment:

The approach a teacher has. How a teacher responds and is responded to, as well as finding the level of the group and of individuals. So, the ability to decode this in the interaction with students and classes, like that huh. It is an incredibly important feature. So, if you do not have it, if it's not [...] then naturally it will be difficult even if the teacher is a subject expert. (3)

In the above quotation issues of approach, relationship, reciprocity and understanding are raised, which are key aspects of the category of social interaction. *Approach* may be related to teachers' ways of being and acting in situations, where teachers' abilities to demonstrate positive and inviting ways of being, acting and interacting are seen as key competencies by head teachers. To a greater extent, *relationship* and *reciprocity* relate to how teachers interact with their students – something that the head teachers referred to in terms of

"positive atmosphere", "trust between teachers and pupils", “togetherness”, "contact " and the "flexibility" of a teacher’s actions. The relationship involves multiple partners in the interaction and whether they are positive, encouraging and generous in their way of acting. What is important is the creation of a positive social interaction, i.e. a willingness to establish reciprocity. *Reciprocity* between teachers and students (likewise with colleagues, parents and the school administration) is a key aspect of the social interaction that focuses on the interdependence and responsibility of the different actors in social interaction. Reciprocity means an acknowledgement of being part of the same social interaction and a willingness to interact, negotiate the interaction and – in a positive interaction – affirm each other. This reciprocity aspect does not mean that people necessarily need to interact in a positive way. They may even be in conflict with each other. However, for a teacher, reciprocity means negotiating with the students and trying to affirm them.

Finally, *understanding* as a central aspect of social interaction means the ability to understand social interaction, its roles and functions, and to understand other people's perspectives and positions in this interaction. Some school principals provided examples of teachers who failed to be "distinct adults", and instead adopted a companion relationship with the students. This showed that they did not understand the basis of social interaction between teachers and students, where a peer relationship often leads to the teacher's authority, legitimacy, credibility and leadership being undermined. This, then, takes us to the category of leadership that is closely related to social interaction.

Leadership and classroom management

Leadership can be regarded as an aspect of social interaction, since leadership is about guiding the students’ learning and growth in a specific direction through social interaction. However, the category of *leadership and classroom management* is based on an inherent asymmetry, in that the teacher is the one who has the (most) responsibility to determine the direction, organisation and speed of the work and ensure that the set goals are achieved. Although students can and will exercise influence over the planning and implementation and the choice of such working methods and content in school, it is the teacher who has overall responsibility for the daily work and that students achieve the set goals. In this sense, and at an analytical level, teachers' leadership and classroom management represents a separate category of skills that head teachers regard as a crucial aspect of teacher competence.

In this category the head teachers’ interview responses focused mainly on (a) classroom situations and the teaching and learning that takes place there and (b) teachers’ responsibilities for all school activities and development outside the classroom.

Involvement in the work of teaching teams and the development of the school were thus regarded as positive characteristics. Several head teachers highlighted this, particularly in

relation to salary criteria, although it was expected to a higher degree from more established teachers than from new teachers. When assessing this commitment one head teacher stressed that:

> *It all boils down how much space they take, both in the teaching teams and the subject-oriented teams. (4)*

Together with the social dimension, the ability to exercise leadership and organise teaching and learning in the classroom was the category that the head teachers regarded as most central to teachers' competencies. In the majority of the head teachers' statements, leadership and the social dimension were attitudes that were in principle impossible to separate. The head teachers described the execution of leadership and the organisation of work in the classroom in several different ways. In their view, the teacher should be as able to "instruct," lead", "arouse enthusiasm", "encourage" and have "the group in his/her hand". The head teachers also emphasised the ability to plan and organise so that structure, clarity and confidence were achieved. The following quotation illustrates what they thought constituted a good teacher in teaching situations:

> *It is the ability to be clear when instructing students. To organise so that students feel comfortable. Creating situations where students can collaborate.* [...] *those things that teachers do to create confidence and pleasant surroundings. (2)*

A key aspect of managing and organising work in the classroom that all the head teachers focused on was clear leadership. Notably, a teacher's leadership has both individual and collective dimensions, i.e. it is directed towards individuals, groups of individuals and entire classes. This means that a teacher should be able to deal with various forms of social interaction. An inability to exercise leadership was described by many of the head teachers in terms of the teacher having more of a peer relationship with students, or that the teacher allowed the students to take over and rule the situation. In the cases in which head teachers were involved in dismissing a teacher, the reason given was a teacher's difficulties in acting as a distinct adult leader.

A major part of a teacher's leadership and ability to organise the work could be referred to as teaching skills. Teaching skills could also be described as something that is related to situations of planned learning. When the head teachers described aspects of the evaluation they talked about what teachers do to encourage their students, to vary their teaching, to adapt the content to the right level and how they instruct or begin and end lessons. Half of the head teachers explicitly mentioned the ability to deal with emerging challenges. This

competence was defined as the ability to perceive and deal with a "problem" in the best possible way. For example, if he was in the classroom and evaluating a new teacher, one head teacher would focus his evaluation on:

> *The interaction in the classroom between teachers and students: who does most of the talking? Is the teacher a good storyteller? Can he/she instruct students so that they get started quickly with their tasks? [...] What kind of variation is there in the classroom? How does the teacher begin the class? How do they end the lessons? Yes, many components are similar irrespective of the subject or which classroom you are in. (2)*

In the above quote the aspects mentioned relate to teachers' ability to socially interact and to lead and organise work. The head teacher's statement also reflects the dynamics of teaching that teachers have to deal with.

Mission and goal achievement

The mission – or teaching assignment – appeared to be the category that was given most attention after social interaction and leadership and classroom management. In this category, issues like how teachers *interpret, understand* and *implement* the teaching assignment were in focus, as were issues related to effectiveness, didactics and how teachers learn and develop as a teacher.

In their responses the head teachers stressed that a teacher's interpretation of the teaching assignment was important when evaluating competence. This was reflected in phrases such as teachers are "well aware of the goals", that a teacher knows what "is part of his/her mission and how to reach it" and that s/he knows "what matters". From the head teachers' point of view, interpretations of mission and policy documents were mainly about teachers having adequate skills and attitudes and understanding children, learning and teaching. In the following quote a head teacher comments on an evaluation of how lessons are planned and performed in relation to policy documents and mission:

> *This is a teacher who you see is planning in the right way and teaching to achieve the goals. He/she follows the assignments, the policy documents and all that. (3)*

The above quotation highlights the goals to be achieved. The term goal achievement was used by the head teachers to talk about important aspects of evaluation: some used the term directly and others reformulated it. Goal achievement seemed to be about teachers having the right attitude, using the appropriate methods and reaching the goals stated in the

curriculum. In indirect terms, head teachers talked primarily about goal achievement in terms of "students are happy," "involved" and "learn".

It was less common for the head teachers to explicitly talk about goal achievement in terms of very good subject knowledge. This is probably because the interviews mainly concentrated on the evaluation of teachers' competencies, where aspects other than the students' academic achievement were in the foreground. However, from the head teachers' statements about teachers' competencies it is apparent, both explicitly and implicitly, that teachers' leadership abilities, establishing relationships with students and organising learning activities are prerequisites for students' learning and striving to develop their knowledge, skills and abilities. Research shows that successful teachers are often characterised as having good relationships with their students, having high expectations of them and giving them regular feedback (e.g. Hattie 2009).

The assessment of teachers' subject knowledge was hardly touched on at all in the head teachers' statements. The most important things seemed to be a teacher's ability to establish and maintain good social relationships, be a good leader and classroom manager and achieve the set goals. In other words, when the head teachers talked about what they would evaluate the main focus was on general pedagogical competence rather than on pedagogic content knowledge. Having said that, when a few of the head teachers talked about the subjects that they had taught, some aspects of pedagogic content knowledge were in focus.

How the evaluation should be performed

The question of *how* the evaluation should be performed has two distinct dimensions. The first dimension is concerned with how to acquire information about the NQTs competence, for example through formal observations, informal observations and small talk in the daily work situation with other teachers, students and parents, or reading the various documents that teachers write. This dimension can be said to relate to technical issues of how information and impressions are made available for evaluation. The second dimension is more elusive in nature and relates to how head teachers perceive, interpret, assess and evaluate what they see, hear and feel. As this dimension involves cognitive and procedural aspects of evaluation, the head teachers involved in the study found it much more difficult to describe and explain.

The first dimension appears more clearly than the latter dimension. One reason for this could be that the study was not primarily designed to address these issues in a sufficiently subtle way. In effect the study was broader than this and partly hypothetical in nature. One possible design for a study aiming to access this dimension would be to shadow head teachers over time in their evaluations, and in doing this use methods that made what they focused on

visible and that enabled them to talk about their priorities, interpretations, judgments, considerations and values.

Aggregate of opinions and information

When the head teachers talked about what they would do when evaluating new teachers' competencies, they were very clear that they would make an aggregation of all the impressions and all the information that was made available to them. This included an evaluation over time, i.e. throughout the first year. Apart from their own observations and conversations with the teacher, the head teachers said they would consider what other colleagues, students and parents said about a new teacher. One head teacher gave the example of having access to a weekly newsletter that a teacher sent to parents via e-mail, and said that it gave a good insight into how things worked in class. Two other examples are quoted below:

> *I would do exactly as I do with other teachers. I follow them in their student welfare work and I look at their contacts with parents. How do they cooperate with parents? If problems occur around a student, how does the teacher solve them? What role do they have in the team and* for *the teaching team? We have a very strong focus on teaching teams at our school. And are they involved in the processes or do they sit quietly and let the others do the job? (4)*

> *You assimilate [information about] all kinds of interactions when you have meetings or discussions with teachers. It can be anything from discussing classes to how they talk about their teaching. How do they talk about assessment? How they talk about the students? Other people also contribute information, i.e. the school psychologist, school nurse, other features of the school, how they perceive things. [...]. I collect information here and there. (3)*

During the probationary year the mentor's main task is to support the new teacher. However, in the Government Bill it is also expected that the mentor will pass on information about the new teacher to the head teacher (Government Bill 2010/11:20). In the interviews several head teachers stressed that they would most like information from the mentor about the new teacher's progress, even if mentors did not perform any formal evaluation. One head teacher, who indicated what he did today and what he would like to do in the future stressed:

> *[...] cooperation, and I am in contact with the mentor about this. What happens along the road can be tough and we need to back that up with more support. (3)*

Although a number of the head teachers saw these talks as natural, some also identified dilemmas related to the trust between a mentor and a new teacher and what may turn out to "depend on what you are like as a person". For ethical reasons, but also to create an open and intimate relationship that benefits the new teacher's professional development, head teachers, mentors and new teachers should openly discuss ground rules, attitudes and expectations. For instance, one head teacher expected new teachers to ask questions for that reason.

> *It's important that newly graduated do not think: "If I ask for a lot of help then I might not be registered". It's rather to be seen as something positive that you have a tutor or mentor so that you can ask questions and for help. (8)*

All the head teachers interviewed thought that in an evaluation they needed first-hand information about the new teacher. Participation in lessons was regarded as an important source of information, although some difficulties with this were also discussed. Above all, it was felt to be difficult to find the time to participate, although some head teachers did not see any major problems with this and argued that it was simply a matter of prioritisation. Two of the head teachers did not have any regular routines for visiting teachers in the classroom – neither with regard to a salary review nor talking about a teacher's professional development. Among the seven other head teachers, how often they participated in the education varied from a "small extent" to attempts to visit all the teachers during the course of a school year.
Taking part in classes is about evaluating the new teacher and seeing what happens in the classroom with your own eyes, i.e. seeing what teachers do and don't do. Out of the head teachers' statements about which competencies they considered important – social interaction, leadership and classroom management and how the mission or teaching assignment is transformed into action – it is reasonable to assume that the evaluation of these competencies is conducted in real teaching situations, where the teacher interacts with students and organises and manages the teaching and the support learning.
Although the head teachers highlighted their own first-hand information about a new teacher in the classroom, they seemed to relate these impressions to a greater whole. What is observed should also be interpreted, understood and placed in the right context. Above all, the head teachers seemed to want information about how the teacher conceptualised the situation and what conclusions they drew from it. Thus, what is in focus here is a teacher's ability to analyse teaching situations and from this develop adequate strategies. One head teacher said that:

The most important thing is perhaps not what I experience in the classroom, but the conversation afterwards when I´ve been there. Discussing: "what just happened and why. Can you do anything about it or what? This was great. Would you do it differently next time? It's the conversation afterwards [that is important]. (9)

All the nine head teachers expressed that they were able to evaluate and judge both the teaching and teachers' competencies in general terms, even though this may be difficult. This approach could be summed up as claiming to have a general sense of what is good teaching. Phrases like "it's visible", "get a feel for", " intuition" or "I read it out" were used to describe this, although it seemed much more complicated for them to explain exactly what this meant and what lay behind the words. In other words, some aspects of the evaluation appear to be intuitive in nature. The following quote indicates this:

It is difficult to develop that [...] it is perhaps not difficult to identify, you feel it pretty much in the atmosphere and what a situation or a lesson looks like. So when evaluating, it is necessary to make time to attend those lessons. For it requires the presence. [...] Now it may sound weird, but I see *what is happening in a classroom and can sense what is good teaching and less good teaching from my own perspective. Of course others may value things differently and I think it will be very arbitrary. (1)*

The head teachers who prioritised taking part in the teacher's work were able to see whether there was a difference between what was said and what was actually done. For example, in an interview a teacher can talk about the importance of student influence and participation, and in classroom do nothing to invite them to participate and influence.
Although to a great extent the head teachers valued what they saw with their own eyes, they only caught a very brief glimpse of the overall activities. Thus, all the head teachers emphasised the value of conducting the evaluation over a longer time period – throughout the entire first year – so that different aspects and impressions could be considered and collated.

Discussion

The results show that the head teachers interviewed would primarily like to focus on the following skills of an NQT: (a) *social interaction* (the ability to create, maintain and develop good relationships with other people and to develop good prerequisites for teaching and learning), (b) *leadership and classroom management* (the ability to lead and organise pupils' work), and (c) *mission and goal achievement* (the ability to interpret, understand and implement the teaching mission in practice, having the right attitude and task perception) (cf.

Kelchtermans 1993). General pedagogical skills were also emphasised, whereas issues like subject knowledge and pedagogical content knowledge seemed to be taken for granted.

The question of *how* the evaluation should be performed has two distinct dimensions. The first dimension is concerned with how to go about acquiring information about NQTs, for example through formal observations, informal observations and small talk in the daily work situation, conversations with other teachers, students and parents or reading the various documents that teachers write. This dimension can be said to relate to technical issues of how information and impressions are made available for evaluation. The second dimension is more elusive in nature and relates to how head teachers perceive, interpret, assess and evaluate what they see, hear and feel. As this dimension involves cognitive and procedural aspects of evaluation, the head teachers involved in the study found it much more difficult to explain (cf. Kimball & Milanowski 2009).

The competencies in focus in the evaluation

What head teachers mainly regard as important to evaluate is to a great extent connected with teachers' *social interaction, leadership and organisational* abilities*,* as well as the effectiveness and understanding of the teaching assignment, their attitudes, approaches and the objectives to be achieved. In many respects attitude, relationship building and "classroom management" are most commonly stated as indicating a successful teacher (cf. Frelin 2010; Torff & Sessions 2005). Notably, this mainly refers to general pedagogical skills. Subject knowledge is already expected to be in place, although the results of this study show that questions may be raised as to how pedagogical content knowledge is focused on in an evaluation.

One question to ask is whether it is reasonable for teacher registration, which in itself is strictly limited to specific grades and subjects, to include some kind of evaluation of the pedagogical content knowledge? However, this may be a challenging task, partly because the head teachers themselves have limited pedagogical content knowledge and partly because many of the (natural) challenges that new teachers initially face relate to dealing with the classroom situation, structuring the activities, planning the work and becoming accustomed leaders of groups (Brock & Grady 1998; Fransson 2006; Fregerslev & Jørgensen 2000). Other questions are linked to a head teacher's ability to carry out the evaluation and his/her insight into current issues related to pedagogical content knowledge (and not when he/she was a teachers 15 years ago, if they indeed were).

Performing the evaluation

The head teachers indicate that they would like access to information from a variety of sources and situations in order to eventually make a balanced evaluation of a variety of factors. Although the evaluation can be done in the "formal situation", such as a planned lesson with conversations before and afterwards, as proposed in the reform documents (cf. SOU 2008:52), the more informal sources of information seem to be of major importance. For example, head teachers appreciate informal conversations with the teachers themselves or with their colleagues, pupils and parents in order to acquire information about the new teachers and their teaching, attitudes, responsibilities and approaches. It should be noted that this information is *what* other people choose to make available and that it is then up to the head teacher to interpret, evaluate and manage this and put it into its proper context.

For the head teachers, obtaining first-hand information and participating in lessons are considered important and things that should be given priority, even if this may sometimes be difficult. Although teachers regard head teachers' visits to their classes as important for getting feedback on their work, they conceptualise these visits as sporadic and short (Ludvigsen 2009). The results of this study are consistent with Ludwig's research, which also shows that although head teachers want to be more involved in what is going on in the lessons, their main source of information from and about teachers comes from everyday informal encounters. For example, small talk in the staff room, in the corridor or at the photocopying machine appears to be the main way that head teachers learn about what is going on in the school and the latest "current affairs and educational situations" (Ludvigsen 2009, 168; cf. Hultman 1998).

The mentor's role as informant can also be discussed, in particular as to whether or not this might influence the confidential relationship between the mentor and the new teacher. In Sweden concerns have been raised that this could affect the relationship negatively, obstruct openness and trustworthiness (Fransson & Gustafsson 2008; Aspfors, Fransson & Heikkinen 2011) and result in new teachers hiding their shortcomings to avoid losing prestige or being regarded as incompetent (cf. Dinham 1992; Rust 1994). The head teachers interviewed stressed the importance of new teachers being honest about any shortcomings and regarded this as a professional attitude. Whether mentors should take part in the evaluation of their mentees has also been discussed in a broader international perspective, although as yet without any clear results. The conclusions are that any answer to this question should relate to the prerequisites, values and objectives of the specific educational context (Fransson 2010).

In this respect it can be said that previously in Sweden mentors had no other function than to support new teachers. However, it must also be stressed that no Swedish study has addressed the matter of whether mentors informally talk to head teachers about their mentees. It is possible that such informal discussions have always taken place and have

potentially influenced whether or not the new teacher is permanently employed. On the other hand, in a system of teacher registration and evaluation of new teachers, mentors' information can be vital and can help to form an even more reliable evaluation of a teacher's competence. It can also lead to more supportive resources being made available if this is found to be necessary. However, it can lead to a teacher not being recommended for teacher registration.

The results also show that a lot of subjectivity is involved in what head teachers stress as important competencies and how they conceptualise and value these competencies. This is in line with earlier research, which stresses that such things are almost impossible to judge fairly (cf. Mahony & Hextall 2000; Berliner 2005). One key question for the future development of this Swedish reform is whether some degree of insecurity in the evaluation and judgement of a new teacher will be accepted, or whether efforts should be made to develop narrower competence profiles so that complex competencies and knowledge dimensions are simplified, as stressed by for instance Delandshere and Arens (2001) and Imig and Imig (2008).

References

Aspfors, J., Fransson, G. & Heikkinen, H.L.T. 2011. Mentoring as dialogue, collaboration and/or assessment? In *"Nothing is Permanent but Change". Transitions and Transformations in Learning and Education*, eds. P. Tynjälä, M.- L. Stenström. Elsevier.

Berliner, D.C. 2005. The near impossibility of testing for teacher quality. *Journal of Teacher Education,* 56, no. 3: 205–213.

Biesta, G. 2009. Good education in an age of measurement: on the need to reconnect with the question of purpose in education. *Educational Assessment, Evaluation and Accountability*. 21, no. 1: 33–48.

Bjerkholt, E., & Hedegaard, E. 2008. Systems Promoting New Teachers' Professional Development. In *Newly Qualified Teachers in Northern Europe – Comparative Perspectives on Promoting Professional Development, eds.* G. Fransson & C. Gustafsson, 45-75. Teacher Education: Research Publications no 4. Gävle: Gävle University Press. B

Brock, B. & Grady, M. 1998. Beginning teacher induction programs: The role of the principal. *The Clearing House*. 71, no. 3: 179–183.

Cameron, M. 2007: *Learning to teach. A literature review of induction theory and practice*. New Zealand Teacher Council.

Delandshere. G. & Arens, S.A. 2001. Representations of teaching and standards-based reform: are we closing the debate about teacher education? *Teaching and Teacher Education.* 17: 547–566.

Dinham, S. 1992: *Teacher induction: Implications of Resent Research for Educational Administrators.* Paper presented at the Annual Meeting of the Australian Council for Educational Administration. July 1992. Darwin. Australia.

Fransson, G. 2006. *Att se varandra i handling. En jämförande studie av kommunikativa arenor och yrkesblivande för nyblivna fänrikar och lärare* [To see each other in action: A comparative study of communicative conditions and the process of becoming for commissioned officers and school teachers]. Diss., The Stockholm Institute of Education.

Fransson, G. 2010. Mentors assess mentees? A overview and analyses of the mentorship role concerning newly qualified teachers. *European Journal of Teacher Education*, 33, no. 4: 371–386.

Fransson, G. & Gustafsson, C. 2008: Summary, conclusions and future perspective In *Newly Qualified Teachers in Northern Europe – Comparative Perspectives on Promoting Professional Development,* eds. G. Fransson & C. Gustafsson, 167–192. Teacher Education: Research Publications no 4. Gävle: Gävle University Press

Fregerslev, P. & Jørgensen, M. 2000. Ny lærer. Om de første to år med sytten nyuddannede lærer. [*New Teacher: The first to years with seventeen Newly Qualified Teachers*]. Århus: Århus Dag- og Aftenseminarium.

Frelin, A. 2010. *Teachers' relational practices and professionality.* Diss..Uppsala: Uppsala University.

Goodwin, A.L. & Oyler, C. 2008. Teacher educators as gatekeeper. In *Handbook of research on teacher education: enduring questions in changing contexts*. (3rd ed.), eds. M. Cochran-Smith, S. Feiman-Nemser & J.D. McIntyre, 468–489. New York: Routledge.

Government Bill, 2010/11:20 Legitimation för lärare och förskollärare. [*Registration for Teachers and Pre-School Teachers*]. The Swedish Government.

Hattie, J. 2009. *Visible learning: a synthesis of over 800 meta-analyses relating to achievement*. London: New York: Routledge.

Hultman, G. 1998. *Spindlar i känsliga nätverk.* [Spiders in Sensitive Networks]. Skapande Vetande, no. 34. Linköping: Linköping University.

Imig, D.G. & Imig, S.R. 2008. From traditional certification to competitive certification. In *Handbook of research on teacher education: enduring questions in changing contexts (3. ed.),* eds. Cochran-Smith, Marilyn, Feiman-Nemser, Sharon & McIntyre, D. John, 886–907. New York: Routledge.

Jacob, B. & Lefgren, L. 2006. When Principals Rate Teachers. The best and the worst stand out. *Education next.* 6, no. 2: 59–69.

Kelchtermans, G. 1993. Getting the story, understanding the lives: from career stories to teachers' professional development. *Teaching & Teacher Education* 9, no. 5/6: 443–456.

Kimball, S.E. & Milanowski, A. 2009. Examining Teacher Evaluation Validity and Leadership Decision Making Within a Standards-Based Evaluation System. *Educational Administration Quarterly* 45, no. 1: 34–70.

Ludvigsson, A. 2009. Samproducerat ledarskap. Hur rektorer och lärare formar ledarskap i skolans vardagsarbete. [*Co-produced leadership: The formation of leadership between school heads and teachers in everyday educational practice*]. School of Education and Communication. Dissertation Series No. 7. Jönköping University.

Mahony, P. & Hextall, I. 2000. *Reconstructing Teaching: standards, performance and accountability*. London, Routledge.

Rust, F. 1994. The first year of teaching – It´s not what they expected. *Teaching and Teacher Education* 10. no. 2: 205–217.

SOU 2008:52 *Legitimation och skärpta behörighetsregler.* [Swedish Government Official Reports 2008:52 Registration and stricter qualifying rules]. Ministry of Education and Research.

Torff, B. & Sessions, D.N. 2005. Principals' Perceptions of the Causes of Teacher Ineffectiveness. *Journal of Educational Psychology* 97. No. 4: 530–537.

Tuytens, M. & Devos, G. 2010. The influence of school leadership on teachers' perception of teacher evaluation policy. *Educational Studies* 36, no. 5: 521–536.

Exploring Teacher Engagement with Communities Beyond the Educational Community in the Teachers' Life-cycle, Focusing on Initial Teacher Education and Early to Mid-career

John Dwyfor Davies, John Ryan

Abstract

This paper explores the nature and extent of professional engagement that teachers should have with communities beyond the educational community to enable them to become more rounded and experienced professionals. It is, arguably, something that all qualified teachers' should take cognizance of at some stage in their teachers' life-cycle, but when that is, and how they can be trained and/or supported to do it is more complex than many aspects of their work within the educational community. This paper builds upon earlier work, such as, the four stage process for the life-cycle of a teacher (Ryan 1986) and life-history and career development (Sikes 1985; Ball & Goodson 1985) and it will explore the steps to professional competence (Hitching 2008). The paper also draws upon our own recent work with trainee teachers developing their understanding of professional issues beyond their immediate classroom experience, and experienced teachers engaging with their local community to support and enrich the learning experience for pupils and at the same time help to secure greater community cohesion. A significant aspect of this work involves developing an understanding of networking and building networks within and beyond the education/school community.

Keywords: teachers' life-cycle, educational community, initial teacher education, learning experience

Beginning a career

For most people entering the teaching profession initial teacher education would be seen as the First Stage of their professional life-cycle. In the UK there is a noticeable increase in the number of people gaining experience in schools, for example as teaching assistants, before embarking on an initial teacher education programme. This experience, as well as other experiences of working with children and young people, prior to any formal training, can blur the actual starting point for some people entering the profession. However, we have chosen initial teacher education as our start point in the life-cycle of a teacher, and we will begin by exploring significant challenges and barriers for trainee teachers that may prevent them from effectively involving themselves in significant aspects of professional practice, in particular, engaging with 'relevant others' beyond the school.

Initial Teacher Education

Ryan (1986), describes this stage of the life-cycle of the teacher as the 'fantasy stage' outlining how they perceive the teaching role prior to any practical teaching experience, and how this gets shaped during their training year(s) as they engage in practical teaching within a supportive training environment. This early exploration and experimentation was highlighted by Bevan (2004) in describing how PGCE trainees filter education research encountered on their training programme in a subjective and selective way to form personal interpretations in planning and delivering their lessons. In this way initial teacher education programmes provide a platform for trainee teachers to become inducted into the profession and to take their first steps within the life-cycle of a teacher. However, Ball and Goodson (1985) add a word of caution that could easily be applied to the induction of trainee teachers and new teachers into the profession:

> *New, enthusiastic workers in any occupation pose a threat to the status quo. In order to avoid being shown up and made to work harder, re-examine methods, etc. the older workers socialize the tyros into their ways and put pressure on then to conform. This happens in schools just as it does in factories.*
>
> (Ball and Goodson 1985, 39)

This is a concern that we will return to below when discussing the role of the newly qualified teacher in more detail, but before we do that we would like to further explore the nature of the work that trainee teachers engage in. Arguably, the main focus of teacher training programmes will involve providing sound experiences to prepare trainees for their future work within an educational community i.e. the school and the classroom. Although, trainees will also be 'made aware' of educational grouping beyond the school and the classroom, such as, the Local Authority and regional and national groups, we believe that they are unlikely to be in a position to engage very much with these until they are more established in the profession. There is no doubt that it is important for trainee teachers to learn to operate effectively within the school and the classroom, however, it seems less clear how significant it is for trainee teachers to engage with the local community surrounding the school, including; parents, community groups, residents and businesses. It is also less clear how much trainee teachers should be expected to engage with other professionals (such as health, social worker and justice professionals) to ensure there is a coherent multi-professional approach to working with children and young people.

As multi-agency work often involves vulnerable learners and their families, confidentiality is likely to be a very significant issue. Ensuring stick confidentiality will present a barrier to trainee teachers having an active involvement in this work during their training year. It is therefore very likely that gaining an awareness of multi-agency work is all that trainee

teachers are likely to achieve at this stage of their career, and this may be all that will be expected of them if the new Draft Standards for Teachers in the UK, issued for comment on 16th May 2011 in a pre-consultation exercise, are implemented. Interestingly these draft standards are for trainee teachers and newly qualified teachers (NQTs), currently trainee teachers have separate set of standards to qualified teachers. Within the new standards there are two specific references to working beyond the school that could provide some of the guidance and clarity, discussed above, that act as a barrier to teacher engagement with the wider community.

In the preamble of the new standards a profile of 'Good Teachers' is outlined that includes the following statement:

> *..forge positive relationships with pupils and colleagues; and work with parents, carers and the community in the best interests of their pupils* (DFE 2011, 1)

A reference to community engagement at the forefront of this document seemed to be quite significant for raising the issue of teachers' involvement in the wider community beyond the school. Later on in Section B of the document, within standard 10 'Wider professional responsibilities', there is a more detailed and direct statement about this aspect:

> *You must contribute to the wider life and well being of the school, inside and outside of the classroom, demonstrating an awareness of, and sensitivity to, relevant community contexts.* (DFE 2011, 3)

Some of the terms used within standard 10 above, such as, 'awareness of' and 'sensitivity to' are very passive terms and they do not imply, to us at least, that an active engagement with the wider community is a necessary part of what is expected of teachers. Feedback to the Department of Education from the Universities' Council for the Education of Teachers in June 2011 raised similar concerns stating:

> *However we believe that in order to achieve QTS (Qualified Teacher Status) it is not sufficient to be 'aware' of the issues. That knowledge must be evident in the professional practice of the new teacher.* (UCET 2011)

Although this may not be what is implied by the standard, we feel that the statement is weak and does little to address our concerns about clarity of the nature and extent of engagement that teachers might have with the wider community beyond the school. Whatever the expectations are we are conscious that an active engagement with the wider community is difficult for trainee teachers, not least because they will tend to work for short periods within a

placement school that has been chosen for them. Some of this can be compensated for by facilitating other activities, such as, having outside specialist speakers lecturing trainees during their time at the university. These interventions can provide opportunities for trainees to gain particular insights into the roles of non-teacher adults who are regularly involved in working with children and young people of school age. They may even be sufficient enough for trainees to gain some of the awareness and sensitivity that may be expected of them if the new standards for teachers are adopted.

Such interventions may also highlight some of the challenges of building, and engaging with, networks beyond the school, an essential element if trainees, or indeed teachers, are to actively participate in community or professional networking beyond the school. However, understanding the complexity of networking across communities and/or different professions is not something that is easily explained and/or that there is likely to be much time available for during the teacher training year(s). A number of networking models and approaches have been researched and explored over the last two decades, see for example, 'Activity Theory' and 'Knotworking' Engeström (2001); 'Communities of Practice' Lathlean, J. and le May, A. (2002) and 'Situated Learning' Lave J. & Wenger, E. (1991). Similarly the challenges of multi-agency working became a major focus for research in the early part of this century; see for example, Farmakopoulou (2002), Granville and Langton (2002), Milbourne (2003) and Tomlinson (2003). This research has provided significant insights into the challenges of building networks and engaging with multi-agency working, but it is unlikely to play a part in the development of trainee teachers during their training year(s), or perhaps as professional development for NQTs, or teachers at any stage within their career.

As trainee teachers in the UK spend approximately two thirds of their training in schools, school based mentors play a significant role in supporting them and providing appropriate professional development experiences for them. Having appropriate mentors who are knowledgeable, very experienced and supportive of trainees is therefore very important. It is not however a straight-forward professional relationship. Colley (2003), for example, in outlining the importance of the mentor – mentee relationship highlights the complexity of the relationship as the needs of a third party, in this case the university, must also be taken into account. It is, therefore, more complex than more straight-forward one-to-one mentoring as it involves three parties. Similarly, Cullimore and Simmons (2008) describe a tension in the mentoring process as mentors are being required to spend more time assessing and grading trainees leaving less time, potentially, to support, guide and action plan trainees professional development. Tedder and Lawy (2009) raise further concerns about the clarity of the mentoring role, leading us to conclude that despite training programmes providing well documented highly structured school based activities; some topics may get prioritised over others. We believe that a focus on classroom pedagogy and subject knowledge may dominate school based training activities, particularly in light of a recommendation by Her

Majesty's Inspectors (HMI, 2003) to ensure that the provision of workplace mentoring supports trainees in developing the necessary skills to teach their specialist subjects. Michael Gove, the current Minister of State for Education in the UK may strengthen this expectation as he has strong views on the importance of particular subjects. An emphasis on subject teaching has the potential to limit the scope for trainees to engage in networking beyond the classroom and the school, particularly if their mentor(s) are not themselves proactively engaged in networking activities beyond the school and/or are knowledgeable about the professional development opportunities they might provide.

Taking all of these potential barriers into consideration, engagement with external networks and networking is unlikely to be much more than surface level for most trainee teachers. If it does not happen during the training year(s), at what stage is it likely to happen, or indeed will it happen at all? We have suggested above that understanding, building and sustaining networks may never be a professional development activity for many teachers. It is difficult to know the impact of this across the profession and indeed if it is a desirable activity to involve more, or all, teachers. If the new standards maintain a direct focus on parents, carers and community contexts, even if this expectation is only awareness and understanding, then it could become a significant professional training need. In most schools it is possible to identify particular individuals and/or pockets of activity where there is much successful engagement with external organizations and networks, but certainly not all teachers and maybe not those mentoring trainee teachers. So far in looking at trainee teachers it has shown us is that there are significant barriers to enabling them to engage, in any meaningful way, with the wider community beyond the school. This view is supported by data taken from the UK annual Newly Qualified Teacher (NQT) survey, shown in Table 1 below. The figures presented in Table 1 show the percentage of trainees who selected very good or good in response to questions about how well they were prepared for different aspects of professional development during their training year.

NQT Survey Questions	*2008*	*2009*	*2010*
Preparing them to work with other professionals (e.g. Social Workers, health workers, police officers)	32%	36%	37%
Preparing them to communicate with parents and carers	54%	56%	56%
Preparing them to teach learners from minority ethnic backgrounds	39%	43%	44%

It would appear that the training year(s) is not a time when there is deep engagement in networks and networking beyond the school, therefore, we need to look beyond the training to see if engaging in external networks is something that is more likely to happen during their early career years.

Newly qualified teachers and teachers in their early to mid career

Following training the next stage of the teacher's professional life-cycle is becoming a newly qualified teacher. As a newly qualified teacher, we would them to be engrossed in inducting themselves into their first teaching post and issues beyond the classroom and the school, once again, will not feature very highly in their daily professional lives and/or development. Ryan (1986), for example, provocatively describes the first three or four years of their professional life cycle as the 'survival' stage. In doing so he conjures up a vision of the new teacher struggling to cope with the daily demands of planning and delivering many lessons, and managing classrooms and pupil behaviour. With the many other demands on their time directly associated with school matters, such as, being a tutor, taking part in extra-curricular activities, reporting and assessment practices, it is not difficult to envisage that any engagement with networks beyond the school is going to be extremely difficult for teachers not yet fully established within their own school environment. As well as having many school-based activities to take up their time, they will also be very inexperienced at liaising with parents/carers and engaging with others working in the wider community. We think it likely that many, or most, NQTs will tend to leave external engagement to more experienced staff, and in doing so default to putting any such engagement off until they are more settled into their role[1].

If engagement in external networks is limited, or non-existent, for trainee teacher and newly qualified teacher is it more likely to be taken up by teachers in their early career to mid career years? To a great extent it would seem that this will depend on individual career path choices rather than being something that is desirable and/or expected of all teachers. This may change with the new standards being introduced in the UK in the near future, but as was pointed out above the language used in the proposed standards refers to awareness and understanding rather than engagement. If teachers do indeed plan or develop their own career paths in education then it is possible that external networking may play an important part in that for some teachers. A number of educational researchers have explored how teachers construct their professional identities (see for example, Maguire 2008, Atkinson 2004; Alsup 2006). Their work has a direct relevance to our exploration of how and when engaging in external networks may play a significant part in the life-cycle of a teacher. We identify the significance of mentors and mentoring to trainee teachers above, and suggest that for newly qualified teachers, and those in their early career years, working with experienced teachers can be very important. Mentors and more experienced teachers can be very influential in shaping the professional identities and career paths for less experienced teachers. Maguire (2008) wrote:

[1] By external engagement we mean engaging in external networking activity that is much more than meeting with parents' at Parents' Evenings or at other schools functions, such as, fetes, performances and sporting events.

> *… policy discourses that position teachers' work in particular ways and set boundaries for what they are expected to do, construct dominant versions of the teacher and highlight ways in which they are expected to perform their work.* (Maguire 2008, 44)

We would argue, that in addition to the policy discourse that may shape a teacher's professional identity, what happens within their own school environment can also play an important part, and significant within that is how more experienced teachers act as role models, and mentors, to less experienced teachers. The 'boundaries for what teachers are expected to do' and the 'ways in which they are expected to perform their work', stated by Maguire above, may, for less experienced teachers, be co-constructed from working with, observing and modeling more experienced teachers and mentors. Therefore, if mentors and more experienced teachers are themselves actively involved in professional networking activities beyond the school it is possible that this may influence less experienced teachers to consider how they may also engage in such activity.

There are a number of factors for newly qualified and less experienced teachers to consider at this point. For example, are they in a strong position to fully exploit such opportunities as they will naturally be focused on establishing themselves within the classroom, and within the school? Ryan (1986, 14) describes early to mid-career as moving through a 'craft-stage' where they learn the craft of the classroom, to an 'impact-stage' where they display sound proficiency in the classroom. The reflective practitioner (see Schon 1983, Kolb 1984, Harrison 2008) that Hitching (2008, 21) describes as 'steps to competence' leading to professionals that operate in an 'unconscious competent' way in the classroom.

It is not very easy to determine when a teacher may have moved from one stage to another, if indeed they do, and it is certainly not an age related factor as different teachers will display different capabilities and competence at a range of ages. However, it is likely that there will be some element of progressing through the stages of development within the teacher's life-cycle that many have written about (see for example; Huberman 1989; Ryan 1986; Sikes 1985). Assuming that a teacher is more established and that they are in a better position to engage in networking beyond the school, in exploring future career paths will they consider how much engaging in external networks could support them in this? At the early to mid career stage career paths are often polarised into two distinct routes, each involving very different external networking opportunities. One is a subject/curriculum path, with external networks centred on Subject Associations, curriculum policy development, and collaboration with not-for-profit and commercial organisations with a particular interest in that aspect of the curriculum. The other career path is pastoral/student services focused which will involve very different networks, for example, other children's services such as Health and Social

Care, Community Work, Youth and Family services, and policy development centred on emotional, health and wellbeing and community engagement.

In conclusion, we would say that for many trainee teachers, NQTs and teachers in their early to mid-careers engaging in external networks may not be seen as a significant part of their professional role, and they will, therefore, not take a very active part in developing networking opportunities beyond the school. Some will, and often those are the teachers who go on to take on more senior leadership roles and responsibilities in schools. The hierarchical structure of school management systems means that Senior Leaders are a minority group within the workforce, and therefore the number of people likely to engage, in any deep and meaningful way, with external networks may be limited. It is important to state that this may be a self-imposed barrier, a choice by teachers to limit their involvement as something that is seen as an expectation or a requirement of Senior Managers, but not of them. Many teachers who remain at the 'chalk-face' dedicated to classroom teaching will tend to see such external activity as something that involves Senior Managers rather than themselves.

For trainee teachers, NQTs and teachers in their early years' opportunities to become involved in networks of multi-agency children's services professionals are likely to be limited, with senior managers tending to take on such a role and responsibility because of the issues of confidentiality mentioned above. Similarly, the extent that teachers can effectively engage in local, to the school, community activity is also debatable. Most teachers, for example, do not live within the communities that make up the catchment area for their school. Teachers will tend to travel in to the area to work, but they may have only surface level understanding of the local community, and therefore the day-to-day 'out of school' lives of the children that they teach. This may be particularly true where the school is based in a community that is made up of a very different social or cultural mix to the teachers who work there. It is beyond the scope of this paper to explore the positioning of teachers with regard for the communities that the young people they teach come from, but it is a topic worthy of further research.

Engaging effectively in networks beyond the school requires a much deeper understanding of networking activity than teachers at almost any stage of their career are likely to receive. There is, therefore, much potential for Continuing Professional Development in the field of Networking and building Networks based, perhaps, on the models developed by Engeström (2001); Lathlean, J. and le May, A. (2002) Lave J. & Wenger, E. (1991) outlined above. There is also much potential for Continuing Professional Development to enable teachers in their early to mid-career to understand the complexities of multi-agency approaches to effective working across children's services, perhaps building on the materials produced to support 'Every Child Matters' DfES (2004). Finally, there is a need for Continuing Professional Development for all teachers to enable them to have a greater understanding of, and to engage effective with, the communities that make up the catchment area for their

school, particularly as they move from one school to another during their careers. The latter may be a very significant issue as the communities that pupils come from could be very different from one school to another. Although there may be common issues and many similarities across schools, there may also be unique and/or specific issues that impact on children's learning associated with the school context and the local community.

References

Alsup, J. 2006. *Teacher identity discourses: negotiating personal and professional spaces.* Mahwah, NJ: Laurence Erlbaum.

Atkinson, D. 2004. Theorising how student teachers form their identities in initial teacher education. *British Educational Research Journal* 30, no. 3: 379–94.

Ball, S., and Goodson, I. 1985. Understanding Teachers: Concepts and Contexts. In *Teachers' Lives and Careers,* eds. S. Ball and I. Goodson. The Falmer Press.

Bevan, R. 2004. Filtering, Tragmenting, and Fiddling? Teachers' Life Cycles, and Phrases in Their Engagement with Research. *Teacher Development*, Vol 8, Nos 2 & 3: 525-339.

Colley, H. 2003. *Mentoring for social inclusion, a critical approach to nurturing mentor relationships.* London: Routledge.

Cullimore, S., and Simmons, J. 2008. The emerging dilemmas for mentors and mentees in the new context for training in-service teachers in the learning and skills sector. Paper presented at the BERA Annual Conference, Heriot.

Engeström, Y. 2001. Expansive learning at work: toward an activity theoretical reconceptualization. *Journal of Education and Work*, Vol 14, No 1: 133-156.

DfES, 2004. *Every Child Matters: Change for Children.* HMSO.

Farmakopoulou, N. 2002 Using an integrated theoretical framework for understanding inter-agency collaboration in the special educational needs field. *European Journal of Special Needs Education,* Vol 17, No 1: 49-60.

Granville, J., and Langton, P. 2002. Working across boundaries: systemic and psychodynamic perspectives on multi-disciplinary and inter-agency practice. *Journal of Social Work Practice,* Vol 16, No 1: 23-27.

Harrison, J. 2008. Professional Development and the Reflective Practitioner. In *Reflective Teaching and Learning*, eds. S. Dymoke and J. Harrison, Chapter 1. Sage Publications Ltd.

Hitching, J. 2008. *Professional Development in the Lifelong Learning Sector, Maintaining Your Licence to Practice*. Learning Matters Ltd.

HMI, 1762 .2003. *The initial training of further education teaching.*

Huberman, M. 1989. The Professional Life cycle of Teachers. *Teachers College Record*, 91: 122-144.

Kolb, D. 1984. *Experiential Learning: Experience as the Source of Learning and Development.* New York. Prentice Hall.

Lathlean, J. and le May, A. 2002. Communities of practice: an opportunity for interagency working. *Journal of Clinical Nursing*, Vol 11, No 3: 394-398.

Lave, J. & Wenger, E. 1991. *Situated learning: legitimate peripheral participation.* Cambridge: Cambridge University Press.

Maguire, M. 2008. 'End of term': teacher identities in a post-work context. *Pedagogy, Culture & Society*. Vol. 16, No. 1, March 2008: 43–55.

Milbourne, L. et al. 2003. Collaborative solutions or new policy problems: exploring multi-agency partnerships in education and health work. *Journal of Education Policy*, Vol 18, No 1: 19-35.

Ryan, K. 1986. *The Induction of New Teachers.* Bloomington: Phi Delta Kappa Educational Foundation.

Schon, D. A. 1983. *The Reflective Practitioner. How Professionals think in action.* New York. Basic Books.

Sikes, P. 1985. The Life Cycle of the Teacher. In *Teachers' Lives and Careers*, eds. S. Ball and F. Goodson. The Falmer Press.

Tedder, M. and Lawy, R. 2009. The Pursuit of „excellence: mentoring in further education initial teacher training in England. *Journal of Vocational Education*, Vol 6, No 4: 413-429.

Tomlinson, K. 2003. Effective Interagency Working: a review of the literature and examples from practice. Local Government Association Research Report 40. Slough: NFER.

UCET, 2011. Review of Teachers' Standards, Feedback from UCET, June 2011. Universities' Council for the Education of Teachers.

Teachers` Professional Learning and Development
A Contribution from an EU-project

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Abstract

It is advantageous for schools to be learning organizations, not only for pupils but also for teachers. In most workplaces there are both visible and invisible cultures, and this is true also in schools. These cultures can support as well as prevent teachers' professional learning. Usually teachers are unaware of hidden processes as they are a part of their own culture. To maintain the strength of work teams' and their professional learning, teachers need to be aware of what is positive and supporting for their own team and what is keeping the team back. In an EU-project, aimed to make teachers aware of their own competence and their possibilities to influence their competence development, 169 teachers in Europe made an inventory of their learning environment. As a result of the individual feedback from the project leaders, the teachers built a base for the own team's work with their professional development. A conclusion is that when teachers are given tools and time for development, they will increase their possibilities to learn at their own working place.
Keywords: teachers professional learning, professional development, tools for development, time for development, EU-project, Comenius project`s Lifelong Learning Program, "CLIMATE"

Theoretical background

As knowledge concerning pedagogical research is an important tool to develop ability to take part in changes- and developmental processes in school, student teachers ought to receive a good base in their education. This is of special importance as teachers will be working in a period of 30-40 years and during that time there will be a lot of changes concerning the school, teaching and the role of the teachers. Consequently the student teachers need to develop the ability to see what is going on in schools but also in the surrounding society and be able to critically analyse and make clear how curriculum, teaching and practice correspond to current needs and demands (Ramberg & Haugaløkken 2006).

Learning to teach is often seen as a social and cultural process, dependent on the context where it takes place (Stern, Snyder & Lit 2006). Much of the difficulties student teachers encounter in the transition from their step from being a student teacher to become a teacher can stem from their early learning and understanding of school context. Too often, they

remember their time as pupils and use their earlier experiences from yesterday's school during their practice periods (Lortie 1975; Jordell 1986). They can have at their disposal a set of strategies to solve teaching problems which are left unquestioned. It is not uncommon that these strategies are supported by the supervisors, who feel comfortable with them. But one can ask how these strategies will match the pupils of the society of tomorrow? There is also a risk that educators and supervisors will transfer what they belief as truths or axioms, without taking into account the development of the students' deep conceptual understanding.

In a study concerning student teachers` experiences of practical periods Hobson, Malderez, Tracey, Giannakaki, Pell and Tomlinson (2006) found that student teachers neither could see any theoretical influence nor did they hear their supervisors talk in theoretical terms although focus was on supporting the teacher`s role, teaching and learning.

These findings are similar to results from a Swedish study. By direction from the Swedish National Agency for Education a study concerning school teachers' engagement in school research was carried out during 2001. Totally 2 235 teachers, 62.1 per cent, from all categories of schools and levels, answered the inquiry. Researchers employed by the National Agency for Education analysed the data with certain criterions. Consequently, the results are representative for the whole population of the corresponding school forms in Sweden. It was found that teachers' participation in national research was highly uncommon and participation in international research works was extremely low. If teachers took part of research results, it was mainly through school press, magazines and reports. Since the results are generalized over the whole population and as it is plausible that the ones who answered the inquiries are individuals with an interest in research, an overestimation cannot be excluded. In that way the interest in research is practically less than what the result has shown (Ramstedt & Lindgren 2002).

Hobson, Malderez, Tracey, Giannakaki, Pell and Tomlinson (2006) suggest that more attention ought to be on how to make student teachers more involved in planning and analysing teaching. They also highlight the need of effective selection and preparation of supervisors, which can be a key issue for improving the quality of teaching. To provide rich and explicit instruction to students in teaching thinking and to help them to develop a professional identity, supervisors should clearly show that they want students to be able to do. Student teachers also need to be supported in discussing their own practise in terms of expected learning. For success and progression, supervisors need a closer relationship to teacher education.

With a positive attitude Perry and Power (2004) describe the student teachers' practical periods as "the bridge between theory, knowledge and skills gained at the university and their application in the school." (p.125). Probably, fulfilling that condition will be the expected result of teacher education. However, there exist other opinions. For example Ferguson and Brink (2004) claim that student teaching is most of all like "the dangerous swamp land" (p.63)

between theory learned in the “ivory towers” (p.63) of the university and practices that are required in school. Due to that it is necessary that teacher education as well as local teacher educators place more attention to how they can be better in preparing student teachers for their coming tasks (Ferguson and Brink 2004).

Zeichner (2002) shares Cornell’s opinion. Finding widespread evidence of disconnection between the university studies and teacher students` teaching skills, he states that even if teachers and educators ought to cooperate, they often are mutually ignorant of each other’s work as well as underlying principles. This will impact student teachers` performance and teaching and contribute to feelings of being unprepared from their studies. Due to that, it is not uncommon that student teachers can fell abandoned with their own sometimes unrealistic expectations and the reality they will meet in the classroom.

Ferguson and Brink (2004) give an enlightening illustration of the frustration student teachers can feel: “They are caught in a bind of being expected to implement methods advocated in university coursework, while also being expected to fit into the classroom, to which they are assigned.” (p.55). In addition to this well-known situation, Bleck and Kosnik (2002) state that the dependence on supervisors, as the student teachers want and need positive recommendations from them, can bound the space for developing their teaching skills. Also Hobson, Malderez, Tracey, Giannakaki, Pell and Tomlinson (2006), in a study concerning student teachers` experiences of practical periods, found that student teachers during their practice periods to a high degree are in a state of dependence in their relationships with their supervisors as well as with others in school.

Hobson, Malderez, Tracey, Giannakaki, Pell and Tomlinson (2006) also found that student teachers during their practice periods are concerned with forming their new identities, going from being a teacher student to becoming a teacher. This is a very special process as student teachers are in the position of being both teachers and learners. To feel comfortable in the teacher’s role, student teachers need support to develop their own professional identity that works for them. To make that happen, student teachers ought to be encouraged by their supervisors to examine in pedagogical terms different aspects of teaching and learning, regarding their current context. However, Edwards and Protheroe (2003) state that it is not uncommon that supervisors focus on teaching pupils instead of supporting their student teachers. That means that student teachers can be left on their own with the trial-and-error method.

Furthermore, the results from the study carried out by Hobson, Malderez, Tracey, Giannakaki, Pell and Tomlinson (2006) show that student teachers during their practical periods neither could see any theoretical influence, nor did they hear their supervisors talk in theoretical terms although focus was on supporting the teacher’s role, teaching and learning. The authors suggest that more attention ought to be on how to make student teachers more

involved in planning and analysing teaching. They also highlight the need of effective selection and preparation of supervisors.

One the way to becoming a teacher there is a process that follows stages of development. When new to a class, first of all acceptance is of importance. Due to that, student teachers have focus on themselves, their performance, how they act and their identity. If pupils will learn as an effect of their teaching is not their first goal (Conway & Clark, 2003). It is also observed that sometimes student teachers seem to lack tools for reflection and understanding of the importance of clarified goals to make their teaching successful (Orlenius & Brigsten 2006). To change focus to pupils' learning, supervisors ought to support the student teachers` analyzing and reflection as well as asking for goals with the lessons. Even if student teachers usually are reflecting persons, they are not always aware of how to connect analysing and reflection to set up goals (Søndenå & Sundli 2004; Lindgren 2006).

Scherer (2008) has found that there is a current debate in education concerning thinking skills and there are different ideas about what comes first: critical thinking or content. She has found that educators can insist that thinking skills could not be taught in isolation. If a common opinion in teacher education is that students' thinking can take place only if they have knowledge to reflect upon, it will impact and also bound the students` progress. She supports Nickerson (1987) and argues that inspiring reflection and analysing thinking is to be seen as one of the most important aims of education.

The on-going social change that is mirrored in society as well as in school, need to be focused upon in teacher education, as it influences the teacher's role as well as opinions about what supports good learning (Westbury 2003). It is obvious that there is something missing in the links between the theoretical courses and the in-service periods during teacher education. Accordingly, a relevant question is how well supervisors are involved in the theoretical courses of today, and if, and if so how, they are trained to deal with problems stemming from the changes. With low degree of individual analysis and without own adequate tools, it can be hard to support student teachers' reflection and understanding. Hargreaves (1994) states that teachers in general have deficient knowledge about how they think, how they experience their teaching, and what is motivating their choice and teaching. In his opinion as well as those of other researchers`, the current belief that supervisors will support their student teachers' scientific development can be hard to take seriously.

Brookhart (2007) highlights that clear, constructive and positive teacher feedback, which provides suitable information on the next steps to will be taken, is of importance for the possibility to reach learning targets. The aim with the feedback is to focus on the teaching as well as on the student's progress. It is also of importance to link the feedback to the students learning goals. Due to the fact that feedback can be taken very personally and generate student teachers' feelings of self-efficacy, it can be experienced as destructive as well as

motivating. Because of that it is of importance to consider how the feedback is given, both in what is explicitly said and in underlying messages.

With experienced teachers as supervisors, student teachers will have a lot to learn from their practical periods. However, it is not highlighted that teaching, classroom management and also the knowledge and beliefs that lie beneath the teaching, will vary between supervisors. Similar to other teachers, supervisors will have different competence areas as well as weaknesses, which will contribute to selected areas for the student teacher to learn from. Probably, areas where the supervisors have competence are highlighted and focused for developing talks, whereas areas where the supervisors` competence is weak are neglected. Furthermore, as professional development not can be forced, there is a need for individual activities; passive participation in teaching and discussions will not be successful (Days 1999).

It should not be forgotten that new teachers are just in the beginning of their process learning to teach. For example Flores (2001) asked for more research studies concerning support to new teachers as a key component for higher quality of teaching which would also generate more knowledge about teacher learning at the workplace.

Bubb (2007) sees the first year as a new teacher as the most determining period for a teacher's career. Due to that, to be able to develop competence and confidence, support is necessary to facilitate their success in the job of their choice. According to Feiman-Nemser (2001), new teachers are still in the beginning of the process of learning how to teach and can feel unfamiliar in the teacher's role. Thus, it is not uncommon that earlier experiences can block their thinking. Whiteout any reflection regarding if, and in that way how, their teaching will support the pupils' learning, they may run the risk of repeating old models. Although new teachers need to learn a lot about teaching, there is relatively little time for them to spend on it. Besides being in the classroom, they have, for example, to interpret the guidelines in the curriculum in order to decide what to teach. They must also look for guidance on how to teach and prepare their teaching.

Many times beginner teachers are left on their own to form their teacher role and their first experience of teaching, pupils and classroom behaviour will be of importance for their opinion of the profession. School leaders and colleagues ought to be good models as they can play a key role in providing support as well as opportunities for professional learning (Lindgren 2006).

Often the transition from being a teacher student to being a professional teacher takes place rather radically and without any concrete preparation during the educational period and without any real introduction to the new workplace. Since it cannot be reasonable to expect that a newly graduated teacher should act competently and be fully adjusted to the reality of teaching from day one, expectations from students, colleagues, parents and school

management of new teachers should be examined and problematized in an effort to try to find strategies for supporting new teachers during their introduction period (Lindgren 2003).
As this is a well-known phenomenon among more experienced teachers and school managers, it is not a good strategy to allow novice teachers to start their working life without any constructive support (Fabian & Simpson 2002; Lucas 2001). The fact that many new teachers do not stay in the profession may be due to the difficulties they have in adapting to the teacher role, which may not be congruent with the role that teacher education programs support or with the ideas about the teaching profession that the students bring with them (Wenestam 2007). In numerous international studies, it is obvious that new teachers need emotional, practical and educational support and there is still a lot to be done in this supporting process of becoming a teacher (e. g. Jordell 2002; Bubb 2007).

The EU-project CLIMATE

Teachers reduced possibilities to in-service training have been noticed in other countries than Sweden. Due to that a group of researchers from Belgian, Estonia, the Netherlands, Slovenia, Sweden and Deutschland have worked together during two years in a EU-project within the Comenius project`s Lifelong Learning Program. The project was named CLIMATE, that is a shortening of ”Contextual Learning in Management and Teaching” and it was built on a questionnaire concerning teachers` opinions about their daily work, work teams, school organization, leadership and hindrances for professional learning. Totally 169 teachers in 19 work teams participated in the project.
A starting point for the project was that schools and work teams are learning organizations not only for the pupils but also for the teachers. In most of the work teams visible as well as hidden cultures exist, which can support or provide learning processes. Often teachers are not aware of these factors. Due to that, it is necessary for teachers to ”open their eyes” for strengths and weaknesses in their own environment.
One aim with the project was to make the silent knowledge, which lives in most of the work teams, visible and

- support teachers lifelong professional
- increase the awareness of the own work team’s capacity and how it can be stimulated to be more creative
- make it possible to learn from good examples
- support existing professional learning processes

Totally 169 teachers in 19 working teams all over Europe participate in the project called CLIMATE (Contextual Learning in Management and Leadership) and From Sweden four working teams with together 36 teachers from three schools participated.

The base for the study was a questionnaire study concerning 65 items in five different parts:

- The learning process.
- Different moments in the learning environment.
- Possibilities and hindrances.
- Evaluation of the questionnaire.
- Pupils with special needs.

With the awareness that most working teams have both visual and hidden cultures that can contribute to learning processes or prevent them and that these processes often take place unconsciously, the project aimed to highlight teachers' possibilities to learn from each other. To make that happen, teachers need to pay attention to how their working team serves, according to weaknesses, strengths and patterns, and how each teacher`s competence can be used to maximize the working teams' possibility to support pupils learning.
Every researcher met their work teams twice. The first meeting involved the answering process and in the second meeting, the participating teachers received feedbacks that were given from Leiden University in the Netherlands.
Each researcher took responsibility for bringing the results back to "their" work teams. The aim with this feedback was to make the patterns and the processes visible. As a consequence of the feedback, there was a hope that the feedback should inspire the work teams to start their own developing process as the feedback aimed to highlight patterns and courses of events that had become clear from the questionnaires.
From the result it was obvious that the respondents, unintended nationality, were very unconscious of the culture in their own working team. Furthermore, an overwhelming majority of the teachers did not see the working team as a learning environment that could contribute to professional development. In other words, they had not been aware of their colleagues' different knowledge and experiences and due to that they had not seen the possibilities to learn from each other.
No advice concerning the improvements, learning and development processes were given from the researcher during the feedback; instead it was up to every team to make their own priorities. But, to facilitate the starting phase, the teams were given some suggestions for the developmental work:

- define goals nearby goal and long term goals;
- create possibilities to learn from each other;
- give space to test new insights and then talk about results;

- ask for feedback from both colleagues and school leaders;
- take time for analyse and reflection , the best result comes from working in groups;
- identify possibilities and hindrances in the working team and express different opinions regarding them;
- perform brainstorming of ideas within the working teams to get possibilities for improvement;
- make an action plan with improvement to come and future changes and get a plan for improvement;
- make an action plan for improvement and make a plan for improvement and changes and units about a written plan with improvement;
- make an agreement on who can do what and when;
- make a plan for evaluation.

When the participating work teams had received their feedback from the questionnaire results, structures and routines in their own team became obvious to them. One of the underlying goals was - the analysis should be the starting point for the working team'` professional development.

Conclusions

Usually questionnaire studies have some weaknesses, because there can be problems with how the informants have interpreted the questions. It is also possible that a questionnaire of this size can contribute to stress. But there is no reason to believe that the participants gave misleading answers, as they were guaranteed to be anonymous. Furthermore, the teachers were informed that the questionnaires should not be given back to the individuals only the work teams should receive feedback as a group.

Even if circumstances in the European countries differ, the project results show possibilities for teachers, unintended nationality, to reflect about their own conditions and learning possibilities, which will most probably stimulate lifelong learning. From the results, it was obvious that teachers' professional development is usually not prioritized in the same way as it used to be. Additionally, their own learning processes seemed to be rather unknown to the participants, perhaps depending on the fact that there exists no time for reflection during school days. Due to this fact, it is not hard to understand why the participants were surprised that their experiences could be useful for others.

When it came to hindrances for development, it was made clear that the teachers' experiences were quite similar. It was often suggested that it is harder to be a teacher today as the demands on teachers have risen, to a great deal depending on social changes. Other issues that were repeated with great frequency were that there is less money for professional

development, a lack of time for reflections, and a lack of time to share experiences with other teachers.

However, the constructive feedback the participants in the different teams received seemed to generate thinking in new ways. Hopefully teams can now break their routines and start to be more open-minded for their colleagues' experiences and knowledge, which can lead to openness and the exchange of experiences. This is of special importance as it will support teachers' lifelong learning. Probably, teachers who are aware of their own learning processes can as a result be more qualified in supporting their pupils' learning.

As it has been shown that newly qualified teachers can feel unprepared for teachers' different tasks, it is necessary that during new teachers` first time in school work teams support not only their own learning process but also involve newcomers. By sharing experiences regarding education and teaching, beginner teachers and more experienced teachers can build a platform for exchange and development. Their different experiences will have a good capacity for generating learning processes in the work teams. At the same time they will facilitate beginner teachers' professional development.

References

Bleck, C. & Kosnik, C. 2002. Components of a good practicum placement: Student teacher perceptions. *Teacher Education Quarterly,* 29 (2): 81-89.

Brookhart, S. M. 2007. Feedback that fits. *Educational Leadership, 65,* 4: 54-59.

Bubb, S. 2007. The Impact of Induction on Newly Qualified Teachers in England. Paper presented at ECER Conferenc, Ghent 18-21 September.

Carlgren, I. & Marton, F. 2000. *Lärare av i morgon.* [Teacher of tomorrow.] Stockholm: Lärarförbundets Förlag.

Conway, P. F. & & Clark, C. M. 2003. The journey inward and outward: a re-examination of Fuller´s concerns-based model of teacher development. *Teaching and Teacher Eduaction,* 19 (5): 465-482.

Days, C. 1999. *Developing Teachers. The Challenges of Lifelong Leraning.* London: Falmer Press.

Edwards, A. & Protheroe, L. 2003. Learning to see in classrooms: what are student teachers learning about teaching and learning while learning to teach in schools? *British Educational Research Journal,* 29, 2: 227-242.

Fabian, H. Simpson, A. 2002.Mentoring the experienced teacher. *Mentoring & Turoring,* 10, (2): 117-125.

Feiman-Nemser, S. 2001. From preparation to practice: Designing a continuum to streng-then and sustain teaching. *Teachers College Record,* 103: 1013-1055.

Ferguson, J. & Brink, 2004. Caught in a bind: Student teaching in acclimate of state reform.

Teacher Education Quarterly, 31(4): 55-64.

Flores, M. A. 2001. Person and Context in Becoming a New Teacher. *Journal of Education for Teaching,* 27(2):135-148.

Hargreaves, A. 1994. *Changing teachers, changing times. Teachers´ work and culture in the postmodern age*. London: Casell.

Hobson, Malderez, Tracey, Giannakaki, Pell and Tomlinson. 2006. *Review of Educational Research,* 61 (4): 505-532.

Jordell, K- Ø. 1986. Fra pulp til kateter. Om socialisering til lareryrket – en teoretisk studie. [From pupil's desk to teacher's desk. A theoretical study about teacher socialization.] (Report 4). Tromsö: Universitetet i Tromsö, Avdelning for praktisk-pedagogisk utdanning.

Jordell, K-Ø. 2002. *Processes of Becoming a Teacher: A review of reviews. Teacher Socialization, Teacher Development and Teacher Learning. National Center for Research on Teachers Learning as seen in the handbooks of the late nineties.* Report No2. University of Oslo: Institute for Educational Research.

Lindgren. U. 2003. Nya lärares upplevelser av arbetsplanering och mentorskap under ett år. Umeå universitet: Institutionen för svenska och samhällsvetenskapliga ämnen.

Lindgren, U. 2006. *På väg mot en yrkesidentitet. Mentorskap som stöd för nyblivna lärares professionaliseringsprocess.* [Towards a professional identity: Mentoring as a support for beginner teachers´ professional development]. Umea University: Department of Swedish and Social Sciences.

Lortie, D. C. 1975. *Schoolteacher. A sociological study* (Chicago, The University of Chicago Press).

Lucas F. K. 2001. The Social Construction of Mentoring Roles. *Mentoring & Tutoring,* 9 (1): 23-47.

Nickerson, R. S. 1987. Why teach thinking? In *Teaching Thinking skills,* eds. J. B. Baron & R. J. Sternberg. New York: W. H. Freeman and Company.

Orlenius, K. & Brigsten, A. 2006. Den värdefulla etiken: yrkesetik i pedagogers vardag. Stockholm: Runa Förlag.

Perry, C. M. & Power, B. M. 2004. Findings the truths in teacher preparation field experiences. *Teacher Education Quarterly,* 31(2): 125-136.

Ramberg, P. & Haugaløkken, O. K. 2006. Teoriforankring og praksisærhet i lærerutdanningen – kontroll eller autonomi? In *Framtidens lärare [Teacher of Tomorrow],* eds. J.Sjöberg & S.-E. Hansén Vasa: Abo Academy.

Ramstedt, K. & Lindgren, U. 2002. *Förskolans, fritidshemmets, skolans och vuxenutbildningens deltagande i nationella och internationella forsknings- och utvecklingsprojekt.* Stockholm: Skolverket.

Scherer, M. 2008. Teaching Students to Think. *Educational Leadership,* 65 (5): 7-11.

Stern, B., Snyder, J. & Lit, I. 2006. *Teachers for a New Era Induction Model.* Paper presented at the 2006 Annual meeting of the American Educational Research Association (AERA), (April 8).

Søndenå, K & Sundli, L. 2004. Ad pedagogum – didktisk refleksjon som dialog mellom fortid og framtid. *Tidvise Skrifter. Samfun og helse,* 46: 9-22. Stavanger: Høgskolan.

Zeichner, K. 2002. Beyond traditional structures of student teaching. *Teacher Education Quarterly,* 29 (2): 59-64.

Wenestam, C.-G. 2007. A Professional Activity. Education of Student Teachers into a Professional Role. In *A Nordic Perspective on Teacher Education in a Time of Societal Change,* ed. U. Lindgren. Umeå University: Department of Swedish and Social Sciences.

Westbury, I. 2003. Extended competence in teacher education. Which comes first, the chicken or the egg? In *Läraren och pedagogiken,* eds. J. Sjöberg, H. Andersson and O. Björkqvist. Vasa: Pedagogiska fakulteten vid Åbo Akademi.

Improving Teacher Practice with Action Learning

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Abstract

The focus of this paper is to examine one teacher educator's approach to the professional development of experienced teachers to bring about teacher change. There are several reasons to consider the need for professional development of experienced teachers. They are: 1) changing demographics in student and teacher populations, 2) educational reforms in curriculum and assessment, and 3) research findings that continue to inform teaching and learning. As birth-rates slow and demographics change in Europe, Australia, New Zealand, and in Northeastern United States (For example: Schoenmaekers & Kotowska 2005; Hodgkinson 2002), professional development of experienced teachers is a priority. Without growth, few new teaching positions will be available and older teachers will remain in the classroom, many until retirement. National educational reforms and changes in government policies will necessitate curriculum changes that in turn will require an added emphasis on the professional development of experienced teachers (For example: Council of Australian Governments 2008; National Mathematics Advisory Panel 2008). Research is continuing to reveal how children learn and findings inform changes in practice (Bransford 2000). It is safe to conclude that more resources will be allocated to professional development, and many of these efforts will be directed at changing experienced teachers' practice.

Keywords: professional development, experienced teachers, action learning

Professional Development of Teachers

There are several factors that influence the effectiveness of the professional development. They include contextual, methodological, and content factors. Experienced teachers in the United States generally received professional development in a university context as they seek advanced degrees or special credentials. Some priority areas such as science and mathematics receive government funding for non-degree professional development. Large school systems conduct professional development in programs that range from several hours to several days.

Methodological shifts away from informing and towards enquiry are found to be more effective methods for teachers' learning (Darling-Hammond & McLaughlin 1995). As

classroom reforms emphasize child-cantered learning, they synthesize research, advocating for teacher-cantered professional development. Communities of practice are recommended structures for teachers to share their learning with one another. Within these communities, it is advised that teachers enquire into their practices, reflecting and sharing their results with one another. Lesson Study is an example of this type community where one particular lesson is developed and revised by the community of teachers based on their investigations of students' learning (Lewis, Perry, & Murata 2006).

The content of the professional development is a significant factor when considering teacher change. Borko (2004) lists three important areas of content for professional development aimed at teacher change. The inclusion of subject matter knowledge, knowledge of student thinking, and instructional practices are found to be instrumental in changing teacher practice. Among notable professional development programs, Borko cites the Cognitively Guided Instruction (CGI) that focused on student thinking and instructional practices (Carpenter & Fennema 1992).

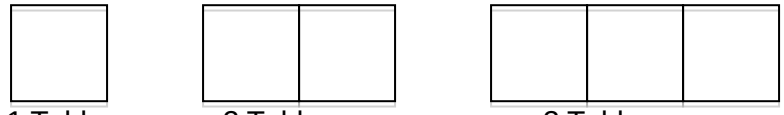
A continuing problem for professional developers is the assessment of programs. Teacher learning is a complex problem entwined with beliefs and experiences. Policy makers in the US advocate for bottom line learning. They want accountability measures that tie professional development outcomes to student achievement (Fishman, Marx, Best, Revital & Tal 2003). Much is known about professional development, much is left to learn about professional development that affects teacher change.

Professional Development Model

Higher Order Tasks

The story I have to tell today involves a model of professional development to which a number of my colleagues subscribe. The objective of most of our professional development is to reflect recent curriculum reforms. In mathematics education, we focus the content of the course on concepts, higher order thinking, and reasoning. An example of a task requiring mathematical reasoning is shown in Figure 1.

How many people can sit around 1 table if only one chair fits on one side? How many people can sit around 2 tables? Three tables? 100 tables? How can you convince me that you are correct?



1 Table 2 Tables 3 Tables

Figure 1. An early algebra task requiring mathematical reasoning for fifth grade.

More simply, we focus on concepts and relational understanding rather than procedures.

Thinking and Reasoning Professional Development [TRPD]

Figure 2 describes the components of instruction we use for Thinking and Reasoning Professional Development. Teachers begin by solving mathematical reasoning or conceptual task. Next teachers consider their ideas and possible solutions to the tasks in class discussions. They then think about how their students might solve the task. The next step is to view web videos of children performing the same task (Video Mosaic Collaborative 2011). Finally teachers engage in action learning with their students, reporting their observations and results to their colleagues for community discussions.

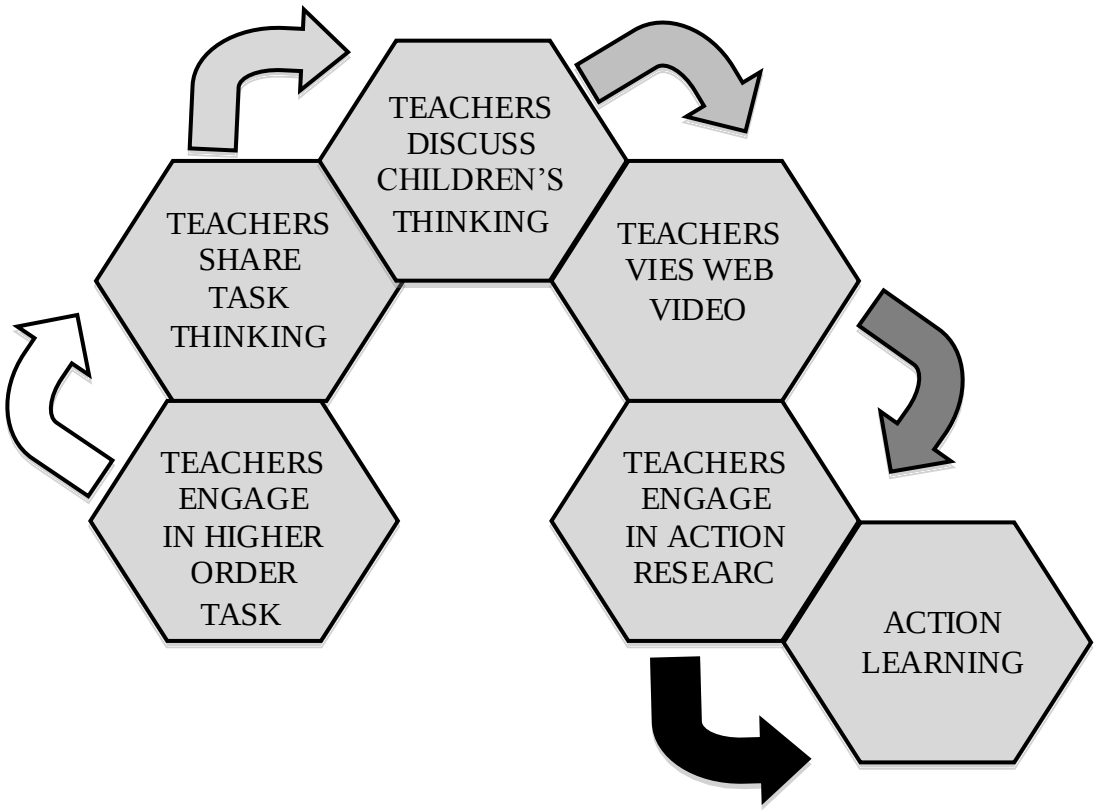


Figure 2. The model of Thinking and Reasoning Professional Development for experienced teachers that focused on teaching reasoning and higher order content.

Action Learning

Action research is a tool for teacher educators to use to increase teachers' knowledge of teaching and learning. There are several types of action research but all aim at an educational problem and share cycles of acting, observing, reflecting and revising (O'Brien 1998; Dick 2006). I use this professional development tool so that teachers will connect the new learning to what they know about teaching children. The value and the relevance of the new learning is revealed as it relates to those practices related to national reforms. Our goal is for experienced teachers to balance traditional practices and procedural learning with student-cantered learning and higher order tasks. Dick (2006) reviewed several types of action research that have quite different philosophies and procedures. Within the types of action research, we see that our work relates most closely to Marquardt's (2010) action learning views of action research. Our teachers engage in tasks that required actions on their parts with their students and their peers on a problem that was aimed at both individual and collective development while inventing their own extensions of action. Teachers engage in action learning to explore their students' conceptual understanding. The action learning involves the teachers in 1) using a conceptual task, 2) reporting students' tasks responses,

3) sharing the action research results on a web discussion board, and 4) responding to colleagues' action research results (See Figure 3).

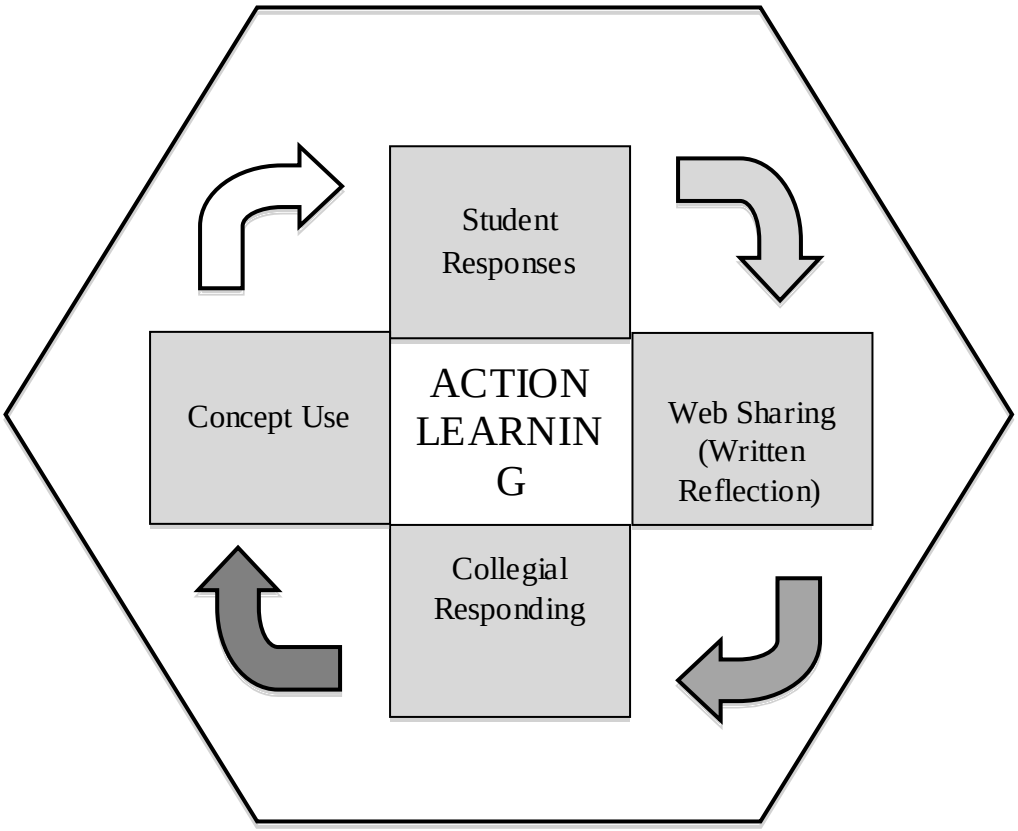


Figure 3. The components of action learning within the model of TRPD.

These two TRPD models shown is Figures 2 and 3 describe components of professional development associated with teacher change (Borko 2004). First they engage the teachers in learning content associated with higher order thinking and open-ended problem solving. These reasoning situations often include instructional materials that are not commonly used by many teachers. For example, the Table Task, shown in Figure 1 uses pattern blocks as instructional materials. Finally, there is pronounced emphasis of children's thinking throughout the professional development experiences. To further illustrate these ideas the following story provides a meaningful example to the TRPD model.

Thinking and reasoning professional development model enacted

Course Overview

I taught a master's level course for elementary teachers on rational numbers and operations. This, as many of you can guess, is not most elementary teacher's favourite subject. For many K-3 teachers, their subject matter knowledge tends to reflect the emphasis that the elementary curriculum places on whole numbers and operations. In this class there were 6

kindergarten teachers, 4 first grade teachers, 2 second grade teachers, 4 third grade teachers, 4 fourth grade teachers, and 3 fifth grade teachers. Over the 14 weeks of class there were three action learning activities associated with rational numbers. The goal of the first task was to have teachers consider how to use Cuisenaire Rods to conceptualize ideas of unit and fractional numbers. For example, "If the brown rod is one, what would be 1/2?" or " If a train of an orange rod and a red rod is one, what rods would be 2/3?" Teachers worked in groups on the first Cuisenaire task shown in Figure 4. First they spent time exploring the rods that were unfamiliar instructional materials to most of the teachers.

If the brown rod is two what can you tell me about any of the other rods?

1) Can you show how you would split the brown rod exactly into two equal parts with two other rods? What are the number names of these rods? Label the rods with a number and color.
2) Can you show how you could split these two rods into exactly two equal parts? What are the number and color names of these rods?
3) Can you split these smaller rods into exactly two equal parts? What are the number and color names of these rods? Can you split these smaller rods into exactly two equal parts?

Figure 4. Teacher task and protocol for action learning for grades K-5.

Teacher did have some degree of difficulty with this task. It was interesting to note that the kindergarten and first grade teachers had the least difficulty with the tasks and those that taught the rational number operations had the most difficulty. The teachers' results were shared with the other teachers and considerable discussion followed about the tasks. Some teacher invented new ways to express fractions with the rods. When asked how their students would do on this task, there were a variety of answers ranging from, *they will not be able to do this* to *they won't have any trouble with these tasks.* Then they were provided with a transcript and watched a video of fourth grade children representing fractional numbers with Cuisenaire Rods (VideoMosaic Collaborative 2011). A discussion followed about the children's thinking among the teachers after the video. There are a variety of reactions by teachers to these videos. Some teachers think the video is a staged production. Still, all become fascinated trying to understand the children's thinking and explanations of the tasks. Teachers were then given instructions and a protocol of the same task to follow with a small group of their own students (Figure 4). This became the action learning experience of the professional development cycle. Some teachers add to the protocol according to their

judgments of the children participating in the learning. Figure 5 illustrates the action learning instructions that were given to teachers.

BlackBoard is one of several web tools used to manage university courses at my university. Syllabi, assignments, grades, and course readings can be posted on the web for student and faculty access. One function that I used in the action learning is the discussion board. First I set up the discussion board threads. Teachers reported their results and other teachers responded to these postings, presenting evidence from their investigations that supported or negated the findings. This proved to be a very successful forum for teachers to showcase their expertise.

> Complete this action research in groups of no more than 3 students. If you do not have a set of Cuisenaire rods, use the attached template to simulate the rods. Follow the protocol, found in the *BlackBoard* assignment folder. Select students who you think can be successful at the task. K-2 do the brown rod = 2 activity only. Grades 3-5 do both rod activities.

Figure 5. Action learning assignment.

Discussion Board Postings

The teachers' responses were interesting to me and to each other. They indicated that teachers sometimes underestimate and sometimes overestimate their students' abilities to understand. However, all were intrigued with the action learning of this assignment. Sample teacher comments are listed below to each thread.

Thread 1: Surprising Results from a Kindergarten Teacher.

> *For this activity I did not choose students I thought would be successful. I chose a student from each academic level in my room (Low, Medium, High). I wanted to see if there was going to be much of a difference in this difficult task. I was very shocked that out of the three students, the student that is below grade level in math was successful in splitting smaller rods into equal parts. I was so proud of him and upset with myself for doubting him. I was also shocked that this child used numbers like 5 1/2 and 1 1/2. I am wondering where he got that vocabulary from. We have not spoken of fractions in my classroom so I am wondering if his mom says numbers like that at home.*

This teacher takes a rather traditional, but caring, approach to her children. Note that she did not follow the directions of the assignment. She hoped to disprove the assumption that kindergarten children could equi-partition objects. We can tell teachers repeatedly to have high expectations for all students but there is nothing like action learning to drive that lesson home.

Thread 2. Naming Fraction Results from a Fourth Grade Teacher

> *My two AG students had no difficulty naming the fractions. They explained every step of their thinking along the way. "When you divide 1 in half, it becomes 1/2. And when you divide 1/2 in half, it becomes 1/4." I found it interesting that they manipulated the rods for the first few questions, but soon left them behind and began coming up with equations to solve the problems.*

What this teacher found interesting was the students' moved from concrete to abstract levels of thinking. The teacher shares in the web discussion that her students can provide mathematical justification about the concepts, associating the word "divide" with fractions.

Thread 3. Unit Results from Another Fourth Grade Teacher

> *When I first read the tasks for this assignment, I predicted my fourth graders would be easily confused when I told them to change the value of the brown rod. However, I found the students did not even stumble when the values changed. The very first question, when the brown rod was worth 2 units and I asked the students what the values of the two purple rods would be, they responded by saying they were each worth 1/2. After a very brief discussion, they all agreed the purple rod was actually worth 1 whole because the brown was worth 2. When I asked them to change the value of the brown rod to 1, they were easily able to tell me the fractional part of each other rod.*

Teachers were, in general, quite resistant when I spoke about the importance of "unit" as a fractional concept early in the course. So, I designed a task and a thread to address this idea. This teacher's expectations were low for her students to be able to understand that the unit can change in size. This is one of the teachers who had great difficulty when initially presented with this task. This raises an interesting question about expectation that is associated with teachers' content knowledge for teaching.

Thread 4. Equal Part Results from a First Grade Teacher

All three of my first graders in my group understood equi-partitioning. When I asked them which rods equal a purple, they all immediately went for the red. So I asked them how many reds make a brown, one student replied, "4 because 2+2=4 and 2 reds = 1 purple and 2 purples = 1 brown." I had the other children show me what he meant, and they successfully did. Each student was able to find out that 2 white units were the same as a red. The boy, a little more advanced, used his same reasoning as above and said it took 8 whites to equal one brown, because 4+4=8. The other students were confused with his methods until he actually used the blocks to prove it. As he began doing this, the girls did, too. They were able to explain that it took 2 whites to = red, 2 reds=1 purple and 2 purples = 1 brown.

This teacher was creative with the protocol choosing to emphasize equi-partitioning with her first grade students. She explored fully the children's thinking and remained much more of a researcher than a teacher in this setting. Her work proved to be a powerful introduction of new instructional materials to these first graders as they were able to apply what they knew about addition to the Cuisenaire rods.

While teachers reported on each of these four threads on the discussion board, they also wrote a two-page paper describing the action learning. These papers were not shared but provided additional time for teachers to reflect on their children's thinking.

Model applications

The TRPD model is generic in nature as long as the content is based on higher order thinking and reasoning. A goal in a science teacher workshop may be an enquiry approach to teach concepts of simple machines in middle school. For high school English teachers it could be a workshop to teach their students to read a newspaper to separate fact from opinion. A professional development program for history teachers could explore concepts of economics using a problem-based approach. In all cases, teachers engage in the learning of the content that their students will learn. They learn from one another to broaden their content knowledge. Ideas about instructional materials can be shared within these communities of practice. While video cases may not be available, other students' work can be analyzed before teachers explore the tasks with their own students in action learning. Discussions and short reports share additional ways that students think about the goals of the professional development programs. When engaged with studying their own students' thinking during the action learning phase, teachers are very interested in how their assumptions about their students are either supported or negated. From task through action learning, the TRPD model of professional development can draw on the experience, expertise and knowledge of classroom teachers.

Summary

It is no longer pedagogically sound to lecture or to rely solely on the transmission model in professional development settings. Experienced teachers are active professionals in their classrooms. When professional developers acknowledge these teacher attributes of action, experience, and knowledge, the programs have the potential of affecting teacher change. With well-developed goals, a program can focus teachers on conceptual learning of the content they teach with tasks that require reasoning and higher order thinking. Discussions reveal different ideas and strategies to every member of the learning community. The learning is further enhanced when new instructional materials are introduced along with the task. The elements of content and instructional materials are complimented when the program focuses on children's thinking using videos and action learning.

References

Borko, H. 2004. Professional development and teacher learning: Mapping the terrain. *Educational Researcher.* 33 (8): 3-15.

Bransford, J. 2000. *How people learn: Brain, mind, experience, and school.* Washington, DC: National Academy.

Carpenter, T. P., & Fennema, E. 1992. Cognitively guided instruction: Building on the knowledge of students and teachers. In *Researching educational reform: The case of school mathematics in the United States,* ed. W. Secada, 457–470. *Special Issue of International Journal of Educational Research.*

Council of Australian Governments. 2008. *National numeracy review report*. Canberra: Commonwealth of Australia.

Darling-Hammond, L., & McLaughlin, M. 1995. Policies that support professional development in an era of reform. *Phi Delta Kappan. 76*(8): 597-604.

Dick, B. 2006. Action research literature 2004-2006: Themes and trends. *Action Research*. *4*(4): 439-458.

Fishman, B., Marx, R., Best, S., Revital, T., & Tal, R. 2003. Linking teacher and student learning to improve professional development in systemic reform. *Teaching and Teacher Education*. 19: 643-658.

Hodgkinson, H. 2002. Demographics and teacher education. *Journal of Teacher Education. 53*(2): 102-105.

Lewis, C., Perry, R., & Murata, A. 2006. How should research contribute to instructional improvement? The case of lesson study. *Educational Researcher. 35*(3): 3-15.

Marquardt, M. A. & Banks, S. 2010. Theory to practice: Action learning. *Advances in Developing Human Resources 12*(2): 159-162.

National Mathematics Advisory Panel. 2008. *Foundations of success*. Washington DC: U.S. Department of Education.

O'Brien, R. An overview of the methodological approach of action research. http://www.web.net/~robrien/papers/arfinal.html.

Schoenmaekers, R., & Kotowska, I. 2005. *Population ageing and its challenges to social policy.* Study prepared for the European Population Conference, Strasborg.

Video Mosaic Collaborative. New Brunswick, NJ: Rutgers University. http://videomosaic.org/.

Innovative Approaches and Learning Strategies for Effective Work of Today's High School Teachers

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Abstract

We live in a constantly changing world: fast development of technology, globalization of education, area and business, cultural changes etc. It is very important, for today's youth, to get a good/ stable education, which meets the modern requirements for competitiveness in labour market. Young people should more seriously consider their choice of higher education because they are interested to be enrolled into approved school and to receive a competitive diploma/occupation.

Investigations in Latvia and other EU countries show that young people often have difficulty in choosing a future occupation and institution of higher education. There are also a lot of problems during the study or employment after graduation. This all may indicate a poor awareness of requirements and features of education and labour market and insufficient preparedness for study.

Today's high school teaching staff should begin preparation for study and for the prospective professional work in advance. Teachers should involve in the process prospective employers to help the young people in professional orientation, choosing a study direction and university pre-entry training.

A significant question of the innovative approaches and learning strategies of today's high school teacher's work for improving preparation of young people for university entry, studies and for the prospective professional work in the suggested article is examined. It describes the training program, which is being realized at present in the particular vocational school of Riga.

Keywords: classification of the higher educational institutions, higher education, preparation for university entry, student competitiveness, teaching staff

Introduction

Case studies, conducted in one of vocational schools in Riga, showed that students' preparation for further studies is a very serious and complicated issue. Young people are less informed about the EU higher education opportunities; often too late start preparing for studies; after entering university a large percentage of students changed the course of study or did not graduate at all. All mentioned above indicates the wrong choice of university and

the lack of competitiveness in the higher education market. This shows that there is a discrepancy between the requirements of higher education area and competitiveness level of high school graduate. To become competitive, today's young person must be prepared in several areas. They must be clearly aware of their possibilities, be able to use their knowledge and be prepared continuously to improve it in order to get adapted to new circumstances. Today's high school teaching staff should expand educational content with competitive developmental methods.

Aim of research: To investigate the nature and structure of the competitiveness of the school graduates. Develop and approve competitive improvement model, based on the European HEIs classification.
This research was started with an aim to help the pupils of the particular school (author since 2005 is principal of this school) to prepare themselves for future studies. It is foreseeable, that elaborated methods will be useful for other schools too.

Object of the research: Educational process in vocational school.

Methods and methodologies

The conditions and components of school graduates' competitiveness in the European Higher Education Area have been studied both from theory (scientific literature analysis) and from practical point of view (analyzing results of students, pupils and teaching staff surveys with content analysis) viewpoints.
During the scientific literature analysis (Altbach 2004; Kalniņa 2010; Meyer-Stamer 2002; Maslo 2003; Sahlberg 2010; Stokmane 2010; Weber 1978; Андреев 2007; Радаев 2003; Фатхутдинов 2000; Morgan 2005) it was concluded that competitiveness is a combination of human individual abilities, which ensure his survival in a complex environment. In a procedural meaning competitiveness is continuously improving because abilities are developing lifelong. Competitiveness is based on human experience, as well as on his character and behaviour traits. Based on result of content analysis drivers of school graduates' competitiveness in European higher education area were divided into following groups:

- Self-awareness. Students' awareness of their knowledge, goals, desires, etc.
- Possibility awareness. A young person is aware of the existing options, what he has to do in order to achieve the desired (which university is available for him, what are the characteristics and entry requirements, what knowledge and skills should be developed)
- Learning. Pupils learn to achieve the desired

After the theoretical study (Meyer-Stamer 2002; Oganisjana 2010; Sahlberg 2009) it was decided that in order to be competitive the human has to have particular abilities, which may be combined under the name - focus on growth (ability to identify and solve new and more complex tasks; the ability to complete started work; the ability not to stop at the achieved; continuously self-develop personal and professional development abilities; and the ability to compare yourself with yourself yesterday, today and tomorrow; self-guidance ability). Such abilities development needs are proved by a number of researchers who declare that in internationalized and technological society of products and services there is a need for a new ability to appear, which in an educational industry could be identified as a "self-organization", "self-governing", or „self-responsible" (Held 2006).
Based on the described above, there were defined criteria and indicators of school graduates competitiveness in European higher education area (see tab.1).

Table 1. Criteria and indicators of school graduates' competitiveness in the European higher educational area

Criteria	*Concretization questions*	*Indicators*
Self-awareness (Self-confidence)	Who am I? What I want to achieve?	Ability to self-determination; The ability to identify your knowledge and skills; The ability to identify your aspirations, goals, priorities; The ability to identify your immediate and future realities;
Possibility awareness	What I have to do in order to achieve it?	The ability to create new knowledge of the universities; Ability to develop your competence/experience to join the university; The ability to develop the necessary items of knowledge, for admission to university;
Learning	How do I do it?	Ability to study purposefully; Ability to deal with learning problems; Ability to learn independently; Ability to assess your own learning;
Focus on growth	How to maintain competitiveness?	Ability to identify and solve new and increasingly more complex tasks; Ability to complete started work; Ability not to stop at the achieved; Ability for continuous self-development, personal and professional development; Ability to compare yourself with yourself today, yesterday and tomorrow; Self-governing ability.

Taking into account several authors' expressions about competitiveness and the close link of cooperation (Špona 2001; Žogla 2001; Maslo 1995; Meyer-Stamer 2002; Sahlberg 2010), the subject – content structure of pupils' competitiveness was enhanced by the external environment (Figure. 1). The picture shows that young people, developing their competitiveness, interacting with the school organized educational environment, i.e. school teachers, invited external speakers, employers, academics, school graduates (current students), etc., besides cooperation in microenvironments taking place with other pupils, who are preparing for entering a university.

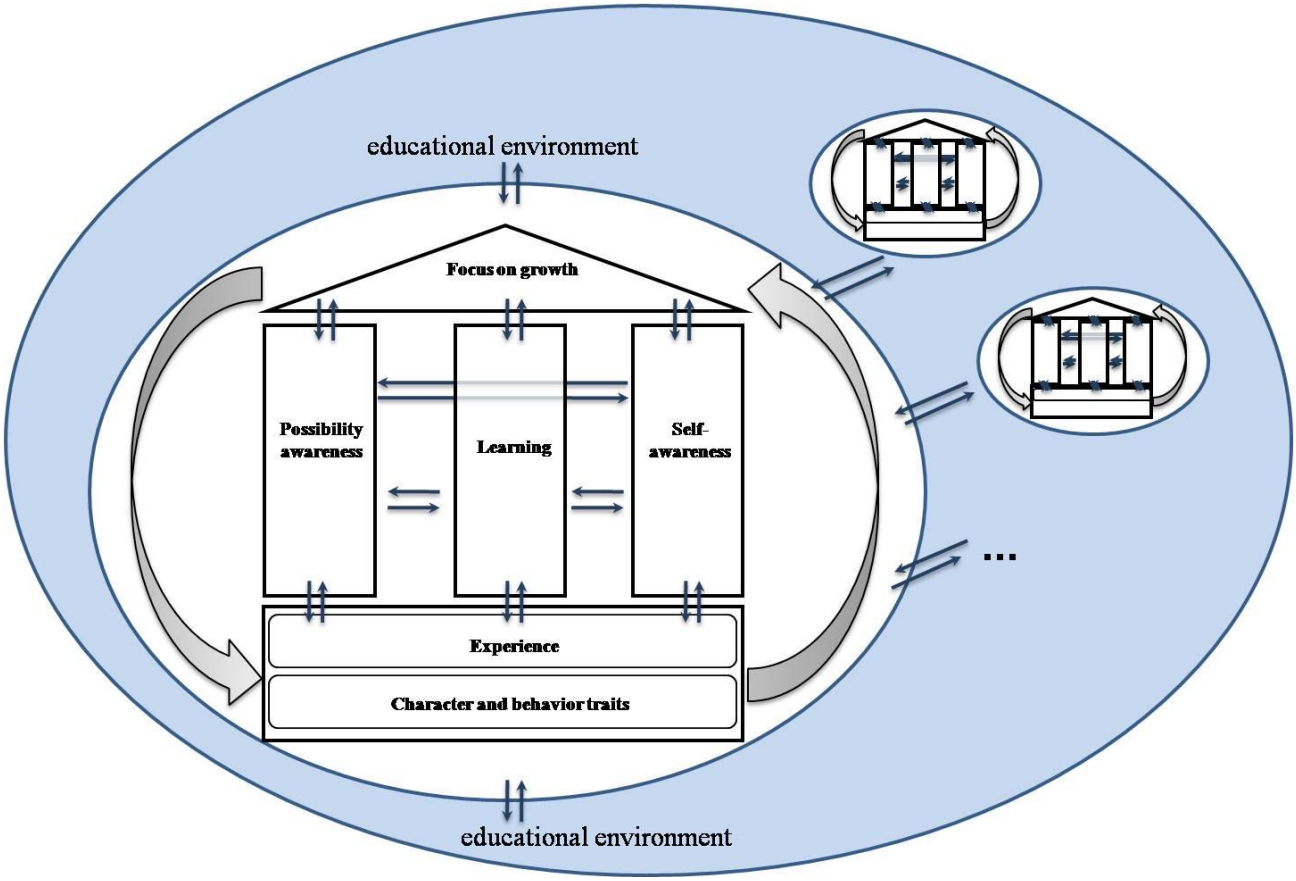

Figure 1. The subject – content structure of the pupil's competitiveness

Competitiveness has a dynamic structure, because its main element is the human abilities which are developing life-long. Procedural structure of pupil's competitiveness in higher education area looks as is shown in the picture (see. Figure 2).

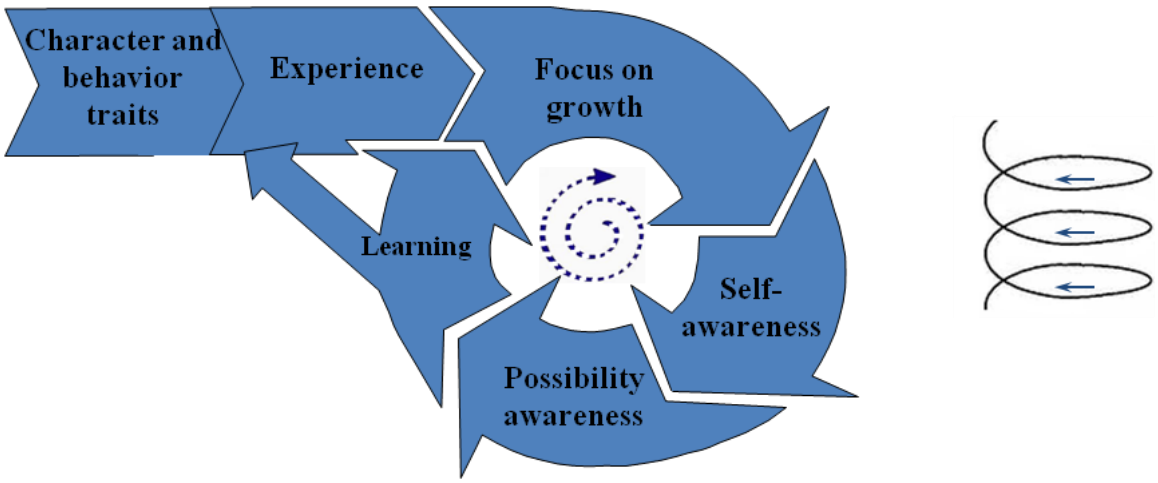

Figure 2. Procedural structure of pupil's competitiveness

Pupil's competitiveness is developing by spiral (Рубинштейн 1973), throughout the learning cycle. Its major driver is a young person's focus on growth, their self-development ability, ability not to stop at the achievement, etc. With each spiral thread, a pupil's competitiveness rises to the next level, experience develops, they become aware of the new themselves, their interests are being updated, it set new goals and targets, causing more and more new opportunities to enhance their competitiveness.

Based on the analysis, the author has defined pupil's competitiveness in European Higher Education Area as a dynamic structure, which consists of individual combinations of a focus on growth, self-awareness, possibility awareness and learning abilities. It is based on human experience, character and behaviour traits.

Next important phase of the research is to develop a classification of the HEIs, to make for the Latvian students easier the orientation in the joint European education area. Classification includes evaluation of universities' characteristics, according to individual needs such as, the distance from home, the cost of studies, additional knowledge requirements, etc. HEIs classification is necessary for a better orientation of the pupils of secondary school and their parents during future high education institution selection (for more details see Dementjeva 2009).

Using classification, a group of suitable universities is being selected. Then pupil's skills matrix and individual development plan are being prepared.

Thus, pedagogical process of improving competitiveness consist of 5 phases (see. Figure 3)

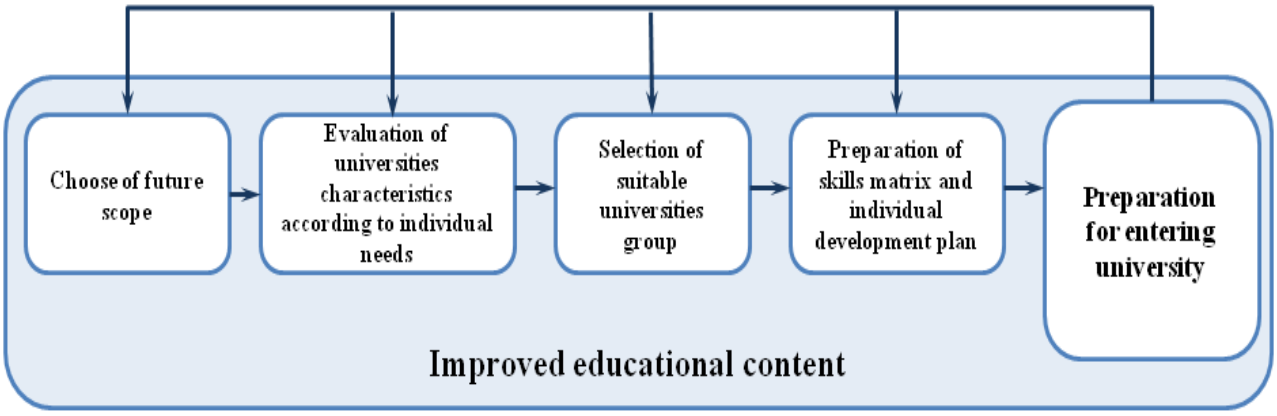

Figure 3. Scheme of pedagogical process model for developing pupil's competitiveness

A young person during the preparation process for the university entry, relies on the individual development plan and focuses on the targets, identified by skills matrix. He can always return to any previous stage to clarify or change the selected scope or group of universities, which, of course, affects the content of skills matrix and the development plan.

Results

Study was organized with the aim to determine the relationships between school graduates university admittance results and SKPV meaningful educational support during the preparation process. Research technique includes: pupil's performance records, measurements of pupil's competitiveness at different stages (three measurements of pupil's competitiveness were organized with a 1.5-year intervals), university admittance results and statistical analysis of information.

The results of research demonstrated high reliability.

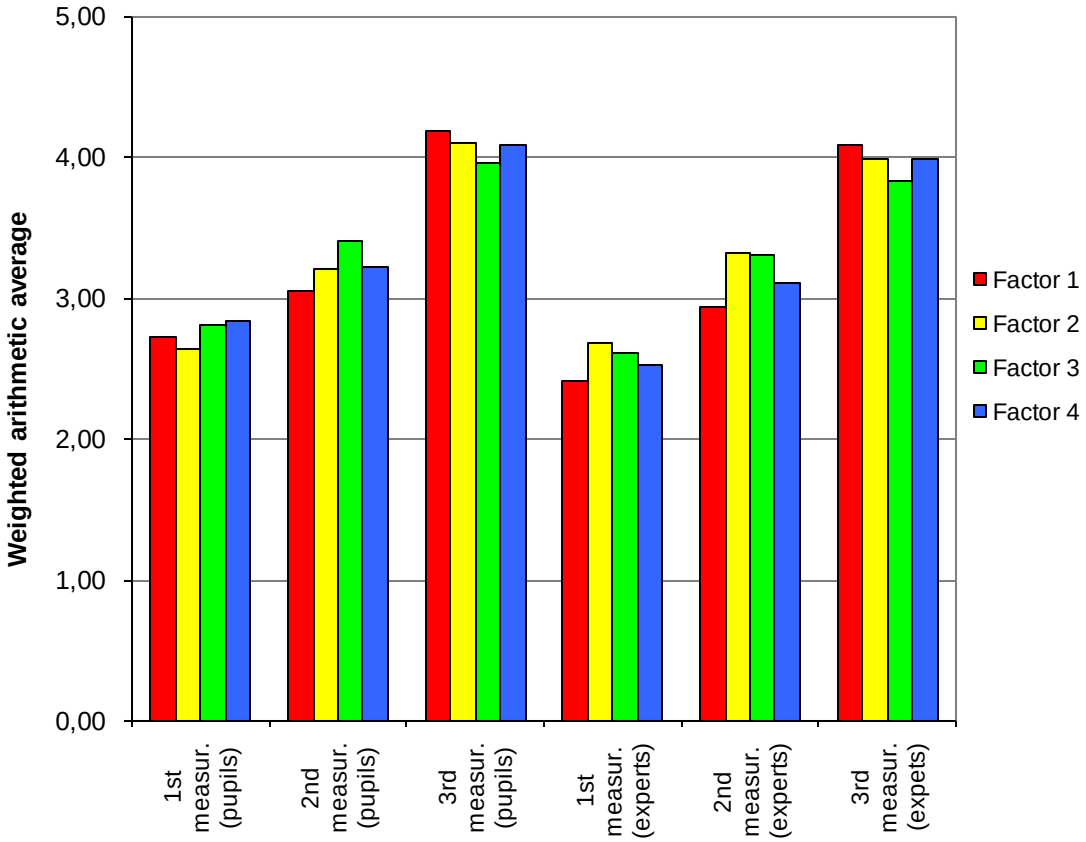

Figure 4. The comparison of students' and experts' opinions between the factors weighted by the mean

The picture (see Figure 4) shows the positive dynamics of both students' and experts' opinions by each measurement.

Conclusions

The described model of preparation for HEI entry gives the possibility to improve the educating process in school, in order to provide alumni competitiveness during entrance at EU educational institutions, based on European HEIs classification.

Since 2005 this model is introduced into the work of particular school, with an aim to help pupil prepare themselves for future studies.

The analysis of results shows increase in pupil's competitiveness level.

This work is not finished yet. After reception of the next results, the program will be more improved.

It is foreseeable, that elaborated methods will be useful for other schools in total, too.

References

Dementjeva, O. 2009. *Improvement of teachers and pupils orientation in EU HEIs, for successful competition of secondary schools graduates in Join European education area.* ATEE Spring University 2009 journal "Changing Education in a Changing Society". Klaipeda University, 5, pp. 69-73.

Helds, J. 2006. Mācīšanās kā konstruktīvs un sistēmisks jēdziens. In *No zināšanām uz kompetentu darbību: Mācīšanās antropoloģiskie, ētiskie un sociālkritiskie aspekti,* red. I. Maslo, 31-35. Rīga, Latvijas Universitātes Pedagoăijas un psiholoģijas fakultāte: LU Akademiskais apgāds.

Maslo, I. 1995. Skolas pedagoģiskā procesa diferenciācija un individualizācija. Rīga: RaKa. – 172 lpp.

Meyer-Stamer, J. 2002. *Clustering and the Creation of an Innovation-Oriented Environment for Industrial Competitiveness: Beware of Overly Optimistic Expectations.* Institute for Development and Peace, University of Duisburg, Germany, and Fundação Empreender, Joinville, Brazil. Revised Version of Paper prepared for International High-Level Seminar on Technological Innovation, sponsored by the Ministry of Science and Technology of China and United Nations University, Beijing, September 5-7, 2000 Duisburg February 2002.

Oganisjana, K. 2010. *Studentu uzņēmības veicināšana studiju procesā.* Promocijas darbs. Rīga: LU.

Sahlberg, P. 2009. Creativity and innovation for lifelong learning. *Lifelong Learning in Europe Journal*, 14(1): 53-60.

Sahlberg, P., & Oldroyd, D. 2010. Pedagogy for Economic Competitiveness and Sustainable. Development. *European Journal of Education.* 45, Issue: 2: 280-299.

Špona A. 2001. *Audzināšanas teorija un prakse.* Rīga: RAKA, 162 lpp.

Žogla, I. 2001. *Didaktikas teorētiskie pamati.* Rīga: RaKa, 275 lpp.

Рубинштейн, С. Л. 1973. *Проблемы общей психологии.* Москва: Педагогика, 424с.

Mentors Matter! What Makes a Mentor Teacher a Successful Mentor Teacher?

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Abstract

In the Netherlands, as in other European countries, school based teacher training is more and more common and successful in teacher education, it strengthens the connection between teacher training institutes and schools. The Dutch secretary of Education van Bijsterveld (2010) called it 'a great example of mutual learning'. Schools, training institutes, mentor teachers (MT), teacher trainers and student teachers (ST) are partners in the training of the students.

The Regional training school West Friesland (ROWF) is a cooperation of thirteen schools and three teacher training institutes. Two hundred teachers are MT's of over 300 ST's each year. Each school has one or two school based trainers and there are 6 institute trainers assigned to the schools. In this training school there are four groups who directly participate in the ST's guidance, the ST's themselves, the MT's, school based trainers and trainers from the teacher training institute. All are involved in the students' development but all with a different focus. There are two different types of teacher training institutes involved, a teacher training college and a post graduate teacher training course. At the teacher training college students are trained for four years at bachelor level, the post graduate teacher training course is one (or one and a half) year training at master level.

Keywords: mentors, mentor teachers' competence, training model

Theoretical approach

Studies on MT competences

How MT's behave during their mentoring, and what characterizes their success, is a question that has been studied from various perspectives and in different contexts. Most of the studies I used focus on one or two specific skills, for instance the specific supervisory and reflective skills of a MT (Hennissen, Crasborn, Brouwer, Korthagen & Bergen 2008); the MT as teacher educator (Feiman – Nemser 1998); the change in responsibilities of a MT- (Hall, Draper, Smith and Bullough Jr. 2008) and the role of expectations in the relation of mentor- and ST. (Rajuan, Beijaard & Verloop 2010).

Although it is very useful to focus on specific competences, I especially want to look at the combination of the most successful ones and look at where the different competences show overlap and similarity.

In the nine articles I studied, nine aspects of mentoring ST's were mentioned in two or more studies. I'll use these nine themes as a frame to discuss the theory about MT's competences.

In four studies the work of the MT is understood as complex. Because of the increase in responsibilities in mentoring (Hall, Draper, Smith & Bullough Jr. 2008), the complex nature of teaching (Feiman – Nemser 1998; Buitink 2008), but also because the relation between ST and mentor is an interpersonal one, complex, dynamic and often problematic (Rajuan, Beijaard & Verloop 2010). Learning a complex activity like teaching can only be effectively done in an authentic context, i.e. in the schools (Buitink 2008).

Four studies pay specific attention to how the school becomes a learning - and workplace for the ST. The MT is crucial in creating a place where the student can learn, experience and develop. In teacher training the emphasis is more and more often placed on the school as a learning environment (Hennissen, Crasborn, Brouwer, Korthagen & Bergen 2007). This environment is a key aspect in the development of students teachers, so the learning outcomes are probably primarily determined by the organization of the learning environment. The MT plays an important role in this. (Buitink 2008). The classroom is a place to teach. MT's create opportunities for ST's to have rich learning experiences. These experiences are shaped by joint activities of mentor- and ST's (Hall, Draper, Smith & Bullough Jr. 2008; Feiman – Nemser 1998).

All the researchers address the importance of paying attention to the ST's concerns, and creating space to let the student reflect on them. One article pays more specific attention to that. Hennissen et al. (2007) state that over the years the role of a MT has changed from helping the student socialize in the school to a more reflective role. This role shift also requires that MT's attend to ST's present "concerns" (Hennissen, Crasborn, Brouwer, Korthagen & Bergen 2007).

Should a MT be a role model for his students? In four studies this theme is addressed. Many MT's think that being a model-, and demonstrating teaching are amongst the most important skills (Hall, Draper, Smith & Bullough Jr. 2008). But modeling is also a cooperative enterprise (Feiman – Nemser 2001; Feiman – Nemser 1998; Buitink 2008)! Generally modeling and demonstrating teaching activities are understood as useful as long as MT's see the danger of ST's not being conscious of why they follow their mentors (Buitink 2008).

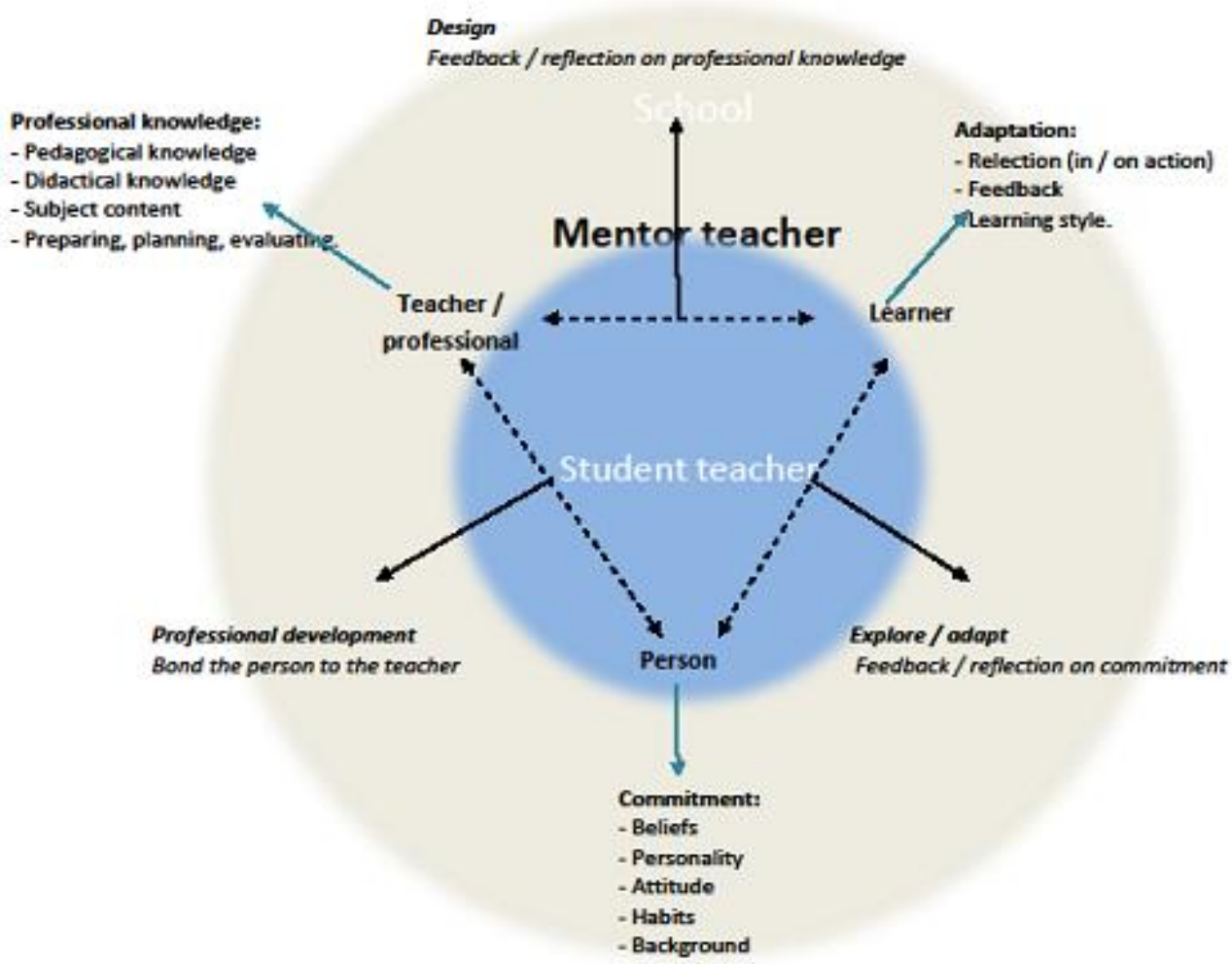
In four studies the interaction between teacher training institutes and school is of importance in school based training, and the connection between theory and practice a powerful tool in the development of ST's (Hall, Draper, Smith & Bullough Jr. 2008). Feiman – Nemser (1998) considers MT's as school based trainers, and sees it as a major role! To help ST's make this connection, MT's need to have relevant theoretical knowledge (Feiman – Nemser 2001).

MT's possess a practical or usable knowledge and help ST's develop this knowledge (Feiman – Nemser 2001; Buitink 2008).
Reflection is a powerful tool. Five articles focus on reflection more specifically. Reflection is crucial in making the things students do (well) but are not aware of, visible and explicit (Feiman – Nemser 1998; Buitink 2008). Trained mentors are better in reflecting on ST's actions than untrained mentors (Hennissen, Crasborn, Brouwer, Korthagen & Bergen 2007; Harrison, Dymoke & Pell 2006). MT's should help ST's by helping students to focus on the kids in their reflective conversations (Feiman – Nemser 2001; Buitink 2008). All articles point out that reflection is learning how to help a ST reflect and making a ST reflect. Self-reflection is important for MT's too!
Effective MT's give feedback and are able to be , constructively, critical. Two researchers go deeper into that part. Feedback should always be specific and focused on growth (Hall, Draper, Smith & Bullough Jr. 2008; Feiman – Nemser 2001).
Good MT's are thoughtful MT's, they have a clear vision on what good teaching is, and are able to share that with the ST. They help and stimulate ST's in developing their own vision on good teaching (3 studies: Feiman – Nemser 1998; Feiman – Nemser 2001 ; Buitink 2008).
Every ST but also every MT has his or her own style and personality. These factors have an influence on the ST's learning processes (Hennissen, Crasborn, Brouwer, Korthagen & Bergen 2007). Especially where the pairing of MT's and ST's is a forced one it is critical to monitor if the mentors approach and the students' needs are matched. (Hennissen, Crasborn, Brouwer, Korthagen & Bergen 2007; Rajuan, Beijaard & Verloop 2010)

Training model

Teaching is complex, as is the guidance of students who learn how to teach. To frame this complex process for participants the ROWF uses a training model. This model was first developed in the Ignatius project, an international project on the guidance of newly appointed teachers. (Van der Linden, Kragten, Koet 2008; Kragten, Hoeksma, Koet, Van der Linden 2010)
In this model there are three levels; level one concerns the student, level two the MT and level three the school (- organization). The ST is the starting point of the model and within the development of each ST, three 'roles' are active, the professional didactics, pedagogy, organizing lessons, subject content etc.), the learner (reflection and feedback on the ST's development and learning style) and the person (what kind of person is the ST, what kind of teacher does he wants to be, how does he think about teaching and children etc.). The MT (level 2) must focus equally on all three roles, as does the school in organizing the school based training. This research focuses on the second level of this model, the MT. This model might be- a useful tool to frame all the data collected in this research.

Figure 1. Training model Regional training school West Friesland.



The research

A lot of things can happen at the ST's workplace. One of the goals of training schools is to connect the workplace to theoretical concepts and thus give the ST more, and more effective, tools to cope with all the things happening in and around the classroom. Universities and teacher training institutes have performed numerous studies on the role of the MT in the development of the ST.

I searched for the role of MT in well-known and reviewed researches and then described what competences make this role a successful one.

In the structure of school based training, and arranging the workplace of the ST, the MT is very important. This role requires specific competences of this teacher. The competences of a successful teacher are not by definition the same as those of a successful MT. And what it is that makes a teacher a successful MT that we don't know for sure!

I wanted to know what aspects in the mentoring of teacher student create success, and what MT's need to make their guidance a successful one and if the mentioned training model provides a useful framework to establish this.

Research questions:

What do MT's do to make their guidance a successful one?

- What competences are the most important, relevant ones?
- Does the mentioned model provide a useful framework?

Methods

I used a semi structured interview with twelve participants to collect data to find out what MT's do to make their guidance successful. To structure the interview I used two frameworks; the first one arose from themes I had found in the literature. Nine themes were mentioned in two or more studies. According to these studies a MT should:

- pay attention to the complexity of teaching;
- create a workplace where the ST can have rich experiences;
- pay attention to the ST's actual concerns;
- be a role model;
- help the ST to connect theory to practice;
- reflect on- , and let the ST reflect on his experiences;
- give constructive feedback;
- have a clear vision on good teaching;
- be able to create a workable relation with the ST.

The second structure is our training model. Although this training model does not play a role in the interviews, I placed these nine themes in our model so that that could be used as a tool in the analysis of the data afterwards.
Themes 1 to 5 all have to do with the development of the professional knowledge a ST needs to become a teacher / professional. Themes 6 and 7 have to do with- adaptation, reflection and feedback on the experiences and learning process of the ST. Themes 8 and 9 have to do with personal aspects, beliefs, having a safe and inspiring relation with the MT.

Participants

In our training school there are four groups who directly participate in the ST's guidance, the ST's themselves, the MT's, school based trainers and trainers from the teacher training institutes. From all groups I interviewed three participants.
The three students I chose were nominated by their school based trainer, two of them had had three or four mentors the last three or four years, one only had one. The three MT's also were nominated, as good MT's, by their school based trainer but were not the MT of the chosen students. They had 3 years of experience or more and were trained in guiding ST's. Two of them are MT's of bachelor level ST's and one of them is the MT of a master level student. The three school based trainers were chosen from different schools and selected on the basis of experience and training. From the teacher institute trainers two are teacher trainers at the teacher training college, one is a teacher trainer at the post graduate teacher training course.

Data collection

The goal of the interviews was to collect data on what a successful MT is from all four perspectives. The school based and institute trainers look at the MT on the same level but also from the institute's perspective. Do MT's connect theory to the practice of the ST's? I started each interview by asking if the participant could tell what he or she thinks is the most important competence of a MT.
Also all the participants were asked if the mentioned competences are realistic, useful and developable. All participants I invited agreed to participate.

Measures

The interview was a semi structured interview. All together I arrived to the nine themes mentioned in 4.2. Supplemented with a tenth theme; what is missing, what's the most important competence?
When the participants were invited I gave them a list of these ten themes accompanied by a short explanation per theme so that they could think things over. All the interviews took place within three weeks and were recorded on audio and video. The interviews lasted 1 hour.
I made a transcript of the interviews per respondent and per theme.
Then I wrote down all the respondent's statements per theme and compared them with what the different studies say about that particular theme.

Reliability / validity

To guarantee the reliability I invited two colleague researchers, who are also school based trainers, to look at the transition of the 11 studies to the interview themes. They stated that the transition had been done well and the themes selected were valuable in answering the research questions. The transition into the themes was correct, but I had to make sure not to be too detailed in my questioning, and to be aware that there is enough space for the participants to state their view. I performed two test interviews, one with a ST and one with a teacher trainer. In advance I asked them to specifically look if the interview, the structure and the themes, would lead to an answer to the questions: 'What do MT's do to make their guidance a successful one? And what are the most relevant competences?' They were positive, felt comfortable and got enough room to express their feelings and opinion and felt the themes were the right ones to answer questions.

Results

Teaching is complex, and guiding ST's is too. All of the participants agree that teaching can only be learned properly in the schools; this corresponds with at least three studies.
The model is used to combine the themes from the studies and the data from the interviews.

What does a successful mentor do to support the ST in developing his professional knowledge?

He helps the ST's get a grip on things. To do so they must be able to make things smaller;
"the MT must be able to break up the content into small pieces.. " (Lisette, student teacher).
"Together with your ST you have to look for chances for success." (Jan, teacher trainer).

Learning how to teach, and mentoring that process is a joint activity of ST and MT. (Feiman – Nemser 2001).

The MT creates possibilities to teach, he sets the pre-conditions (Hall, Draper, Smith and Bullough Jr. 2008). The school, the class, the pupils, you cannot do without them in learning how to teach! (Hall, Draper, Smith & Bullough Jr. 2008; Buitink 2008). "The MT takes care that the class is in order and that the ST can teach safely there." (Evert Jan. Teacher trainer). Learning at the workplace is a joint activity, MT and ST are fellow learners. (Feiman – Nemser 1998). "The MT is co – developer, and participates" (Harry. School based trainer). The whole school is involved, not only the ST's mentor!"(Joseph. School based trainer). The school is a place where the ST can practice, experiment and have rich learning opportunities

(Feiman – Nemser, 1998). " … everybody wants to help, give tips, or be a listening ear. Not just the MT, but everybody!" (Lisette. ST).

A MT should have insight in what his ST's concerns are and pay effective attention to that (Buitink, 2008). The ST's decide what's important. "The guidance should be customized, every ST is different" (Jan. Teacher trainer). "My MT should see what's bothering me" (Pieter. ST). The ST- and MT should always reflect on the ST's (actual) concerns! (Hennissen, Crasborn, Brouwer, Korthagen & Bergen 2007).

One way or the other a MT is a role model. Being a model is important but the modeling should be 'thoughtful' (Feiman – Nemser 1998). MT's demonstrate and show activities of good practice, but they can explain why they do things and connect them to the ST's development (Hall, Draper, Smith & Bullough Jr. 2008). The danger of unconsciously copying your MT's teaching style does not exist if this is discussed openly between MT and ST. (Buitink 2008). "Copying is not a problem if you know what and why you copy"
(Noortje. Teacher trainer). "Copying is good! I copy a lot, why shouldn't I if it works! We do talk about it though." (Leonie. ST). Although all participants think that the MT should be a good teacher, everybody wonders what a good teacher is!
MT's become school based educators, they make their knowledge accessible, and they help ST's make meaningful connections between theory and practice (Feiman – Nemser 1998; 2001). "The role of the MT is essential." (Evert Jan. Teacher trainer). "You don't need to have all the knowledge, but you must know it's there and how to stimulate a ST to go and search for it." (Jan. Teacher trainer). " If my MT asks me to search for solutions, and explain them to him that next week, that is useful and fun, getting concrete questions." (Pieter. ST).
MT's have a considerable practical (usable, tacit) knowledge, they should be conscious of that knowledge and make it accessible (Feiman – Nemser 1998; Buitink 2008). "My MT is intellectual challenging…. She connects theory in all the steps… !" (Lisette. ST).
All the participants endorse the importance of connecting theory to practice by the MT. They also state that it is not done often, or constructively. The MT's say they do not have enough knowledge of institute concepts to use that structurally in their mentoring practice.

What does a successful mentor teacher do to let the ST (successfully) reflect on his classroom experiences and professional development?

MT's should learn how to reflect and learn how to let the ST reflect on himself or herself (Hennissen, Crasborn, Brouwer, Korthagen & Bergen 2007).
Learning (how to teach) only takes place when the learner reflects on his learning process, on what he wants to achieve (Schön 1983). "Reflection must be focused on what the ST

wants to reach!.." (Sjef. School based trainer). " .. Ask for concrete behavior … if that does not come I'll connect it to observations." (Paul. MT). Trained MT's are better in helping, and reflecting on the ST's process (Hennissen, Crasborn, Brouwer, Korthagen & Bergen 2007; Harrison, Dymoke & Pell 2006).

The MT is the person to help him create consciousness of what they are doing and knowing what works and why! (Feiman – Nemser 1998; Buitink 2008). ST's learn how to teach without being conscious of it. " The MT must stimulate the ST to come out his 'intuitive state'." (Jan. Teacher trainer).

Reflection is also important to help the ST to focus on the pupil's perspective. 'What did they learn? What did I do to make them learn? ' (Feiman – Nemser 2001; Buitink 2008). "The MT must be able to reach that with his ST" (Hans. MT).

"A MT must be able to be critical and be able to give feedback." (Lisette. ST) Feedback and criticism should always be constructive and specific! (Feiman – Nemser 2001; Hall, Draper, Smith & Bullough Jr. 2008).

Giving feedback and reflection are related. "Feedback should be focused on the ST. All participants regard feedback as useful, but only constructive and with a positive attitude. Feedback must be concrete, small, realistic and has to stimulate success! "Tips are not feedback!" (Noortje. Teacher trainer).

What does a successful mentor teacher do to connect the ST's personality, habits, beliefs, attitude and background with his professional development and reflectiveness?

'Thoughtful' mentors have a clear vision on good teaching (Feiman - Nemser 1998, 2001). The MT discusses this vision with his teacher student. "Promoting your vision is stating what's important for you. " (Jan. Teacher trainer). "On the way back we spoke about teaching and his experiences. You learn a lot by that." (Pieter. ST). Having a clear vision on teaching is important. But again everybody asks himself: "What is a good teacher?".

"It is important to have a match! The MT must be conscious of his style! He must be sensitive to the needs of the ST." (Evert Jan. Teacher trainer).

A mentor – ST relation is an interpersonal relation- and because of that often problematic. Although it is better to create informal relations, in almost all the Dutch training schools the relation between MT and ST is a formal one, most of the time subject related and based on availability of the MT's (Rajuan, Beijaard & Verloop 2010).

MT's and their ST's often have different learning styles (Hennissen, Crasborn, Brouwer, Korthagen & Bergen 2007). Student – and MT's have expectations of the relation and the other , these expectations can match, in that case it often feels harmonic, comfortable and safe for the ST (and MT). When the expectations mismatch, it feels uncomfortable, (to)

challenging and sometimes threatening for ST, but most of the times there is a mixed pattern (Rajuan, Beijaard & Verloop 2010). “It felt like a bad marriage, our relation was under constant stress, I set borders, I only will guide you on Biology and teaching! “ (Marco. Mentor teacher). When there is too much comfort there might be not enough challenge for learning, and where there is too much challenge the relation might be so threatening that student- or MT ends the relation (Rajuan, Beijaard & Verloop 2010). “That MT gave me the feeling; ‘I am not good at this’, I almost quit school, that half year was painful, hard, no fun.” (Leonie. ST). “It is this point in training where MT tell things are going wrong! Expressing expectations should take place at the start of a mentor – ST relation. ” (Noortje. Teacher trainer).
Extreme match and mismatch contribute to limited opportunities for learning (Rajuan, Beijaard & Verloop 2010). “Clearly all the participants had the most to say about this theme! It is quite clear that each student- and MT brings his own style and personality into the relation. That is not a problem. But consciousness about that is important. A good match leads to learning for both student- and MT! (Rajuan, Beijaard & Verloop 2010).

Conclusions

What do MT’s do to make their guidance a successful one?

Successful MT’s always and first pay attention to *the person*. They make contact, establish a comfortable relation in which a ST feels safe and comfortable with enough room to develop his or her own style. MT’s are responsible to discuss the expectations they have with the ST. They invite the ST to do the same! A relation preferably is not too comfortable. A successful MT recognizes the level of comfort and can switch, challenge the ST if the level of comfort is too high. On the other hand no comfort creates an unsafe environment with too much challenge for the ST; here too the MT can react successfully if he notices that the ST is not feeling safe enough.
Especially this aspect in guidance is crucial because ST’s indicate that if things go wrong here they can get the feeling there not suitable to teach (and quit)! Especially there where the relation is a ‘forced’ one; a MT should always discuss this at the start of his relation with the ST.
MT’s can be a role model and they can explain why they do the things they do!
They help the ST *develop professional knowledge*, by organizing their class in a way that the ST can teach (a lot!). They help the ST organize lessons and together with the ST they create rich learning opportunities. They know how to help the student connect theory to practice and challenge the ST to look for, theoretical, answers.
They know how *to reflect, but of all let the student reflect* and make unconscious actions conscious!

The MT knows how to involve the pupils perspective in the ST's reflection. They help the ST to make big things small and understandable.

What competences are the most important, relevant ones?

Knowing how to establish a comfortable relation, with enough challenge! Be conscious of the mutual expectations and be able to discuss that. A MT lets the ST's develop his or her own style. They know how to communicate well. They are a role model, can demonstrate-, and discuss his or her vision on good teaching. Together with the ST they can create rich learning experiences for the ST's. They can challenge the ST to search for theoretical answers on practical questions. They can help the ST to reflect on his development, and make the invisible, visible. They involve the pupils perspective in the reflection of the ST. They help the ST to make big things small and understandable.

Does the mentioned model provide a useful framework?

MT's should always pay attention to all the different aspects of a ST's development. Looking at the model that means all three roles, the person, the learner and professional. The model helps to structure this process and helps to clarify to what role an actual concern is related to.
As do Hennissen et al. (2008), this case stresses the importance of training. This research is only the start. I'm curious what a larger group of ST's, MT's and school based trainers think about this. I'm going to examine that in September. After that I will design an experiment in which I will try out a training with a group MT's based on the most effective and crucial competences of a successful MT. How? That we will see next year.
Mentoring ST's: Complex? Sure! Interesting, even more! Developable? Yes! Is it useful for schools? Definitely! Or as Feiman – Nemser (2001) states: "Tools of good mentoring are also the tools of continuous improvement in teaching. "

ETALAGE: a good example of how to organize workplace learning for ST's

Because of the partnership with teacher training institutes, training schools are involved in all kinds of development and research projects. One of the projects the ROWF is involved in, is the ETALAGE project. ETALAGE stands for *European Task-based Activities for Language Learning; a good practice exchange*. In this Comenius Multilateral project samples of good practice of ICT based language learning tasks for four levels of the Common European Framework are collected, re-designed, adapted and disseminated and in-service teacher training courses in which teachers are trained to adapt these samples to their own classroom

situations are produced. A unique characteristic of this project is the cooperation of 8 national tandems of Teacher Education Institutes and schools. At the ROWF ST's co-create, deliver and evaluate task based language activities for pupils.

When ST's start their placement at a school, the school always looks for interesting tasks for ST's. When a school participates in a project like ETALAGE ST's will automatically participate in this project. In this case two schools were involved and at both school two fourth-year ST's of English participated.

The ST's helped their MT's, who were teachers of English, in the design and delivery of the language learning tasks. Especially this design process was a joint activity of ST's and MT's. It forced them to look into the theory of task based language learning and connect that to the delivery of the tasks. These ST's actually delivered all the tasks to different groups of pupils and with different teachers. They brought the concept of task based learning to different teachers and classes. They enhanced their knowledge of task based learning and improved their teaching through evaluating the tasks with the pupils. These ST's were given considerable autonomy. They felt very confident and got all the space they wanted in developing, organizing and delivering the tasks. Because of their feedback some tasks were changed, with a good result.

At the start of the ST's' commitment to the ETALAGE project there was a meeting with the coordinating teacher. He thought that the tasks and their role in designing, performing and evaluating the tasks was clear. The ST's did not have a clue and had other expectations of their role, the meeting and the coordinator. After this first meeting their enthusiasm was almost gone and they stated that they would rather not be involved in the project. A second meeting was necessary to discuss this and explain the MT's and ST's' expectations. After this meeting the ST's were reassured.

A project like the ETALAGE project gives ST's lots of opportunities. They were involved in a joint activity with other ST's and teachers. They had to search for theory of the underlying concepts and connecting them to the performance of the tasks. They did involve the pupils' perspective through performing structured evaluations with them. There were lots of discussions with the teachers and the ST's on the use of the tasks, their effect and the question if the tasks are a better way of learning English than more traditional activities, such as grammar and vocabulary exercises. And the ST's felt the liberty to explore; they gained confidence in delivering the tasks the way they wanted. But they were guided and helped whenever they needed. This was definitely a rich learning experience for both student and MT's!

References

Buitink, J. 2008. What and how do student teachers learn during school-based teacher education? *Teaching and teacher education*, 25: 118-127.

Feiman Nemser, S. 1998. Teachers as teacher educators. *European journal of Teacher Education,* 21 (1): 63 – 74.

Feiman Nemser, S. 2001. Helping novices learn to teach: Lessons from an exemplary support teacher. *Journal of teacher education,* 52: 17.

Hall, K.M., Draper, R.J., Smith, L.K. & Bullough Jr, R.V. 2008. More than a place to teach: exploring the perceptions of the roles and responsibilities of mentor teachers. *Mentoring & Tutoring: Partnership in learning,* 16 (3): 328 – 345.

Harrison, J., Dymoke, S., Pell, T. 2006. Mentoring beginning teachers in secondary schools: An analysis of practice. *Teaching and Teacher Education,* 22: 1055–1067.

Hascher, T., Cocard, Y., Moser, P. 2004. Forget about theory – practice is all? *Teachers and Teaching,* 10 (6): 623 – 637.

Hennissen, P.P.M., Crasborn, F.A.J., Brouwer,C.N., Korthagen, F.A.J., Bergen, Th. 2008. Mapping MT's roles in mentoring dialogues. *Educational research review, 3:* 168 – 186.

Korthagen F.A.J. 2010. How teacher education can make a difference. *Journal of Education for Teaching,* 36 (4): 407 – 423.

Kragten, M., Hoeksma, M., Koet, T. & Van der Linden, H. 2010. An international model for induction for newly qualified teachers. M. Montane & J. Salazar (eds). *ATEE 2009 annual conference proceedings*. Brussels: ATEE. ISBN: 9789081563901 pp. 601-615.

Ministerie van OCW. 2008. *Kwaliteitsagenda leraren: 'Krachtig meesterschap'.*

Rajuan, M., Beijaard, D., Verloop, N. 2010. The match and mismatch between expectations of student teachers s and cooperating teachers: exploring different opportunities for learning to teach in the mentor relationship. *Research Papers in Education*, 25 (2): 201 — 223.

Rippon, J.H., and Martin, M. 2006. What makes a good induction supporter? *Teaching and Teacher Education* 22 (1): 84 – 99.

Schön, D. 1983 *The Reflective Practitioner: How Professionals Think in Action*. Basic Books.

Van der Linden, H., Kragten, M. & Koet, T. 2009. IGNATIUS Induction and Guidance of Newly Appointed Teachers in European Schools. In *Teacher Education, Facing the Intercultural Dialogue. Proceedings of the 33rd Annual Conference of the Association for Teacher Education in Europe,* Libotton, A. & Engels, N., 99-114. Brussels: ATEE. ISBN978-90-812456-2-3.

Teachers' Professional Development at School: Externally Organized, Self-organized and Mutual Learning

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Abstract

The research problem is set in the context of Latvia as a post-Soviet country that finds expression in a contradiction between the educational demands of a student within a democratic society and the teacher's professional competence developed within or being influenced by an authoritarian educational system. This is a case study in one particular school in Latvia and aims to advance the idea of organizational learning both as a balancing perspective between the two fundamental goals of democratic education – autonomy and ability to function as members of the society – and as an opportunity for teachers' professional development. Organizational learning is considered as supporting current reforms in order to overcome contradictory aspects in schools related to rapidly changing educational goals and values, and is assumed by taking the concept as a hallmark not as a standard that can be measured against strong yes/no criteria. It is analyzed by looking for organizational learning as a process, being both an outcome for school as an organization and a tool for teachers as an acquired experience.

The theoretical framework of the research is based on; (1) the interpretation of the concept of organizational learning at school; and (2) linking the ideas of experiential learning, organizational learning, and action research.

The article considers two research perspectives – the analysis of one period of teachers' organizational learning cycle (Dixon 1999) and the advancement of the idea of organizational learning at school as gradually progressing from externally organized through self-organized, to mutual learning.

Dixon's model of generating, integrating, interpreting information and action (Dixon 1999), and Argyris and Schön's theory, defining organizational learning as a process of detection and correction of an error, and distinguishing between 'single-loop learning' – detecting an error without questioning an underlying situation, and 'double-loop learning' – involving questioning and changing conditions in order to achieve desired results (Argyris and Schön 1978) are used for the implementation of an organizational learning cycle. Action research is used for taking an action perspective for analysis of the organizational learning cycle; therefore it is both a research object and a tool within the study.

By its nature the current work is an inductive interpretative study. It merges analysis of existing practice with action research in a school The study mainly uses qualitative data (different kinds of

interviews with teachers, group discussions, diaries, teachers' annual reports, classroom observations and two kinds of questionnaires) and analyses them from a 1-st and 2-nd person perspective (Reason & Bradbury 2008).
Teachers' professional development at school as externally organized, self-organized and mutual learning is explored by looking for convergence of theory and practice and reflects the way of understanding practice.
Keywords: organizational learning, action research

Introduction

Since the collapse of the Soviet Union, educational reform has been carried out in all post-Soviet countries. It attempts to change both curriculum and approaches to teaching and learning. Nevertheless, although educational aims are reformed, many teachers who implement the reforms act within the understandings that they developed while living and being educated in an authoritarian system (Rubene, et al. 2006; Rubene 2010). Different courses have been provided for teachers to overcome these inconsistencies, and all teachers have been involved in professional development programs during last years. However, the formal requirements for teachers' education and qualification, widely used as the criteria for the evaluation of the quality of schools in Latvia, only partially determine teachers' professional action within a classroom. This is because, while education in formal settings can ensure acquisition of teaching techniques, it does not change a teacher's perception of learning in the sense of "construction and reconstruction of experience" (Dewey 1938). That takes time and being situated in a common practice. These factors are influenced by school culture, structures, management strategies, and furthermore – how all these factors are related to each other and a teacher's everyday experience.
Organizational learning (further – OL) is considered as an idea that promotes, on the one hand, the development the socio-cultural environment and management of a school, expressed through communication and collaboration, forming rules, norms, habits, beliefs, controlling mechanisms and atmosphere; and, on the other hand, the development of teacher's learning experience. Though these are two distinct perspectives, they cannot be distinguished in school's real life, and they do not develop separately. These are perspectives of an organization and an individual closely related both as processes and as outcomes. While OL is primarily considered as a complementing teachers' formal education, at the same time it creates a secondary value by being transmitted to the classroom and in developing students' learning experience.
The aim of this stage of the research project is to take an action perspective to analyze the implementation of OL principles and OL cycle in school. The article treats the concept of OL

as an intentional use of OL strategies at the individual, group and system level developing an individual's OL competence and, therefore, the school's OL capacity.
The *research questions* focus on:

- How can OL principles be realized in school?
- How does teachers' OL competence appears in their daily practice?
- How does OL promote teachers' professional development at school?

Theoretical Framework

There are different definitions and different perspectives of the concept of OL. Their use is generally determined by either the organization's or the researcher's intention. Basically it is possible to sketch two directions. First is OL as a managerial tool, second OL as a social phenomenon. While the idea of school, by its nature, is both social and managerial, neither of these perspectives considered independently can fully illuminate the concept of OL, and therefore the pragmatist research tradition, that accepts the usage of different standpoints for analysis (Elkjaer 2009), and looks for the most appropriate approach to each aspect selected for the investigation, is selected for the study. Generally considering OL as a transformation of experience, the idea of OL in this stage of the study is taken mainly as a tool for practice and uses Argyris' and Schön's approach to the theory, which is directed toward not only understanding the practices, but toward intervention. It considers OL as a process of detection and correction of an error (Argyris & Schön 1978).
The use of 'error' as a stimulus for learning is possibly too restrictive an argument in an educational context. Contrasting views of individuals or contradictory experience could extend the idea. Nevertheless, it is chosen as a suitable indicator for marking the limits for investigation of concrete practice (assuming the existence of relative consensus for shared understanding of what is accepted as a desirable result, already developed within existing school culture), and used also to differentiate learning from mere problem solving.
OL in school in this study is analyzed from three perspectives: (1) individual, (2) action, and (3) whole organization.
Individuals are characterized by their OL competence: competence to learn from others, to learn from diversity of opinions, from cooperation, collaboration and participation, expressed in communication, in ability to deal with changes, to learn from experience, and to take responsibility for the results of the learning process (Dixon 1999; Collinson & Cook 2007). The way the concept of OL is approached within this study from individual perspective mainly could be characterized by answering the question, adopted from Argyris (Argyris 2005): why the others are needed for learning.
Action conceptually links individuals and organization and are observable. From the perspective of OL, action is characterized as intentional and reflective usage of OL strategies

– generation of widespread and contradictory information/knowledge, integration of information/knowledge (collaboration, dialogue), collective interpretation (promoting diversity of opinions, discussion) and taking/giving responsible action/decision/solution by experimentation, critical reflection and exploration (Dixon 1999; Argyris & Schön 1978; Kolb 1984; Collinson & Cook 2007).

School as an organization is characterized by OL capacity**,** that is built on OL competences of members, but is more (or less) than the sum of individual OL competences. It is dependent on school culture and other organizational factors that mainly are opposite to intentionality: the routines and unconscious part of the individual experience manifoldly determine their actions and daily choices and complement (or diminish) intentional use of OL strategies in a tacit way.

The study looks at linking conceptually and processually coherent approaches to learning: from the individual's perspective – experiential learning (Kolb 1984), from the action perspective – action research (Reason & Bradbury 2008; Coughlin & Brannick 2008), and from organizational perspective – OL (Dixon 1999). David Kolb (Kolb 1984) defined learning as an individual learning process in which knowledge is created through the transformation of experience, considering the formation of new knowledge, skills and attitudes in four stages: experience, reflective observation, abstract conceptualization and active experimentation. Although Kolb's model is criticized for not considering differences between the initial theories, not taking into account the social position (Illeris 2007), separation of the actions and thinking of subjects, not connecting the stages in organic way (Elkjaer 2009), and oversimplifying (Jarvis 2007), it constitutes a practically usable structure, demonstrates its applicability for analysis of different cases of learning, and is widely used in educational research. It is also the basis of Dixon's OL cycle (Dixon 1999), that expands Kolb's model to the organizational level, concluding that for OL members of organization should be involved in each step of the experiential learning not individually but collectively. Thus, Kolb's model deals with learning at the individual, but Dixon's – at the collective level.

AR and OL cycles are conceptually, operationally and contextually linked. Hence the OL cycle, used in this case, is based on Kolb's experiential learning model that is derived from Kurt Lewin's idea of action research, they have coherent components and both are oriented to obtaining new knowledge in organization. Action research (further – AR) is used to complement the perspective of individual and organizational learning with an action perspective, thus being at the same time a tool and a research object, and is directly connected to the learning processes in an organization, because "leads to not just new practical knowledge, but to new abilities to create knowledge" (Reason & Bradbury 2008, 5).

While Kolb's concept of experiential learning is derived from the action research idea, it has the same sequence (see figure 1: experiential learning in yellow, OL in red, action research in green), but AR, compared with the OL and experiential learning cycles, is turned for 180

degrees. OL initially starts by gathering information and individual experience, during the next step information is integrated into the organizational level and analyzed by reflection at the individual level. At the conceptualization and integration phase members of the organization plan future activities for new understanding and, in fact, it is the starting point for the action research cycle. It can be the turning point for changing OL from an externally imposed learning to self-organized and mutual learning that will be discussed later when analyzing findings.

Figure 1. Action perspective on exploring Dixon's OL cycle. (Dixon 1999)

Methodology and Methods

There are different approaches for understanding and evaluating OL in a school, and it is impossible to find any unambiguous solution regarding measurement of the phenomenon. Researcher generally does not measure OL itself, but instead look for how learning is perceived by members of an organization and the extent of the presence of factors that facilitate OL. Nancy Dixon (Dixon 1999) proposes the possibility of a causal link between the factors contributing to changes in the organizational knowledge and new or improved organizational performance. However, given the nature of pedagogy, learning itself becomes problematic, if information, knowledge and daily experience are unified, therefore the clues of OL in school processes during the implementation of OL cycle are taken for analysis, and the focus for the findings is to look for precedents that could outline the idea of OL as a promoting teachers' learning experience.

There are two dimensions for analysis distinguished for exploring OL in this study (see figure 1, reflecting the first aspect as internal and the second one as external round):

1) analysis of the implementation of OL cycle, that from the initial point reflects organized learning of teachers within school settings, and afterwards (with the half turn shift) AR, that is viewed as a concurrent process in respect to OL cycle, and aims to improve organizational principles of school, and to some extent to turn the process to self-organized learning;
2) analysis of changes in teachers' understanding of their professional practice and the idea of OL during OL cycle.

The first dimension is methodologically explored using Peter Reason's (Reason & Bradbury 2008) approach to AR. It makes the distinction that action research is research with people, rather than on people – all inferences are the result of co-action of all involved teachers, the result of self-analyses, discussions and reflections. Within such a collaborative approach of exploring practice, 'collective' is seen as supporting three important functions – as an expression of the democratization of scientific practice, it is 'objectification of experience', idea of 'disciplining of subjectivity' and aspect of political agency (Kemmis & McTaggart 2005). The 2-nd person perspective is used for the current experimental study carried out in a small secondary school: 192 students from 7 to 19 years old, and 25 teachers; it includes the full OL cycle: (1) data generating through initial classroom observations (16 lessons) – identifying problems; (2) integrating the findings during teachers' meeting (in this step in terms of Argyris and Schön problems were recognized as errors); (3) interpreting the data by discussion (reaching planning point for AR) to look for fundamentally new solutions, focusing on shared responsibility and decision-making; and (4) taking action – independent work period, followed by (5) follow-up classroom observations (24 observed and 11 self-reflected

lessons), which were compared with the previous ones, to reflect the changes discussed and to evaluate the benefits as a starting point for the next OL cycle and the evaluation of the results (diagnosing for AR), that is (6) followed by collective reflection during discussion getting to next AR cycle. The basis for validation of the first dimension according to David Coghlan's and Teresa Brannick's view is the conscious and deliberate enactment of the action research cycle (Coghlan & Brannick 2008).

The second dimension is focused on teachers' practices during OL and AR cycles from the 1-st person perspective. In this perspective the researcher has been external to the process, holding the position of an observer, nevertheless, having a set of additional factors subjected for evaluation – not only double identity, being a member of a school and at the same time a researcher, but also being in a power position as the principal of the school. This means some restrictions as well as advantages that are specially evaluated. At the same time it is understood that it is impossible to have a strong measurement for the influence of a power position, and that only from insider's position, and even power position, it is possible to understand real school life and to get complex and detailed knowledge about how system works. For reducing the researcher's influence some of the data – a part of interviews and questionnaires – have been detached from the researcher's personal interaction. A portion of the interviews were done by another person, questionnaires are anonymous. To further enhance the experimental distance the conclusions regarding descriptions of observed lessons were validated through discussions with teachers, clarifying misunderstandings and escaped aspects.

The methods for acquiring data for analysis using constructivist viewpoint were selected according to the basic idea of the study to review the OL cycle in four steps. Therefore, some of the data from the action research interact with the data for analysis of OL settings, being the process for the one, and the result for another perspective.

For the analysis of each of the steps in the 1-st person perspective multiple data were collected: 8 interviews and diaries (from 3 teachers for a week) for diagnosing the context and tracing teachers' concrete experience, open type questionnaire for the reflection stage, group discussion for the planning and again 5 interviews and 16 teachers' annual reports. The data analysis is generally qualitative.

Discussion and Findings

OL and AR cycles were realized in school looking for clues of OL that demonstrate how OL principles can be realized in school – does implementation of OL cycle cause any learning that could be called organizational, and if so, what kind of learning happened. Reflective questionnaires (step 2) shows teachers' involvement in their professional improvement – 77% of them declare that the recognition of problems will be followed by active search for

new solutions, but the rest 23% refer to the necessity for deeper personal development to come to sustainable improvement. Besides, 67% of the respondents are aware that they substantially influence the overall performance of the school. 80% rate it as much as they wanted or even too much, and 86% find it personally important to change their own approaches and methods to develop the school. Data demonstrate teachers' readiness for changes, and considering that the need for collective learning by sharing experience is the most important way of learning for 67% of them, it could be a good precondition for organizational learning. For instance (from teachers' discussion):

> *"I think this process is just beginning to get off the ground, because we have had these meetings here and the fact that we talked about it a great deal ... Now we see and we have found, we understand that the objectives and these really good things are ... quite, quite something else. And that maybe just because it is ... it is "kicked" through it, it has started to roll and all ... we would not gone as far as we have. It seems to me a very, very big step."*

Argyris' idea that the inability of individuals to realize and identify their own errors is the main reason why an organization is needed for learning (Argyris 2005), opens discussion about the role of a school as an organization in 'error' recognition and extent to which it is assigned to be done by inspection or expert – by principal, training manager or inspector. During the OL cycle the idea of error recognition itself was realized as shared between observer and teachers: from observed notions to reflection during meeting and questionnaire. It makes a difference from traditional classroom observations, because usually observers analyze lessons taking an expert position, and teachers' learning from such an expertise is fragmented and mostly insignificant for the school as a whole. Although that kind of error recognition only partly removed the idea of somebody's expertise, teachers took the role of an organization that helped to understand learning situations differently and served as the basis for possibility of mutual learning.

It would be premature to expect fundamental changes in teachers' perceptions about teaching and learning. Nevertheless, the differences in teachers' annual reports as compared with previous years suggest positive change. The processes are analyzed in greater depth and detail, for instance, referring to the reasons that limited the ability of opportunity to get better results during a year the number of reasons taken into account more than doubled and more emphasis is put on really improvable issues in teachers' own professional work or management aspects and not so much on shifting the blame on students or colleagues (Diagram 1).

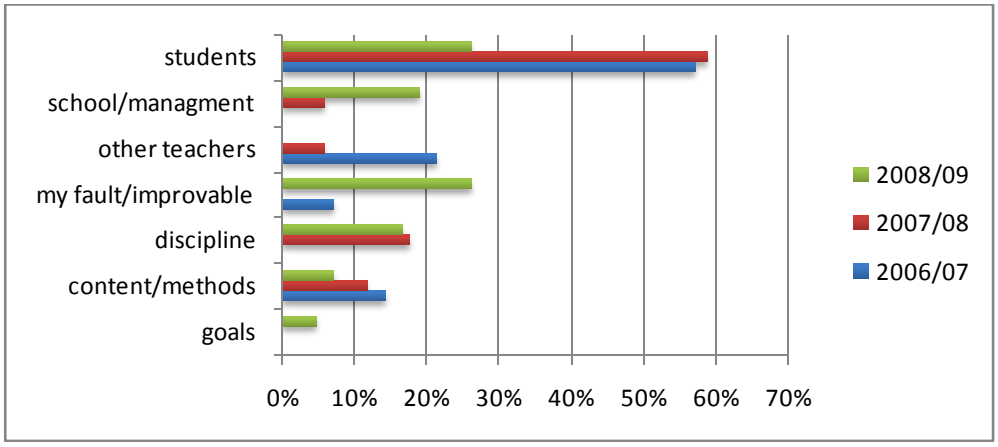

Diagram 1. Summary of reasons that limited to get better results during a year reflected in teachers' annual reports.

Abductive conclusions about three types of OL that demonstrate teachers' OL competence is made from lesson observations, questionnaires, discussions and interviews with teachers during all OL cycle and AR: OL as externally organized, self-organized and mutual learning. This division does not assume people as ideal-typical individuals, and is created to use it as an analytical tool, at the same time acknowledges that the way OL competence is demonstrated in practice is as an interplay of both individual teacher and school as an organization, and therefore could not be separately used for measurement of OL competence. The main characteristics of three types of learning for illustration teachers' OL in school are given in Table 1.

Table 1. Characteristics for externally organized, self-organized and mutual learning in school

Types of organizational learning	Teachers:
Externally organized learning: learning as following instruction	- are characterized by low autonomy in decision-making; - believe that learning success comes from following instruction; - cooperate when given clear and direct instructions; - take responsibility only within the framework of normative regulations.
Self-organized learning: learning as acquisition	- consider themselves as professionals: are reflective, make independent decisions, and act responsibly; - believe that learning success is based on their own personal mastery, and effort that they put into their work; - cooperate for rational reasons, other colleagues are perceived as competitors rather than allies; - take responsibility for their work, but not for whole schooling process.

Mutual learning: learning as development	- consider themselves as members of a learning community; - believe that learning success comes from the skilful collaboration with both colleagues, administration and students; - see others as a resource for development; - are jointly responsible for the whole schooling process.

Considering this division from the socio-historical perspective, the first type is consistent with the learning experience that teachers have from their own school experience (within the educational system developed in Soviet times). The second type is probably supported by the expanded economic and commercialization of society that has occurred in the last two decades (after Latvia regained independence), putting competitiveness and autonomy of the individual at the top of educational goals. The third type of OL, by emphasizing the community aspect, attaches a new meaning of learning both to an individual and an organization, and is consistent with the ideals of democracy and turns learning to really organizational. For instance (from the interview with a teacher):

> *"…my experience from Soviet time was that learning is to read, to retell, to summarize and to remember, and I did not like that at all, so I became a person who knows that learning is boring… but now I think that it is more an atmosphere that induces real learning: you free yourself within these conversations [with colleagues or in a classroom] and you become open with your experience and you do not worry to ask other."*

To evaluate how OL promote teachers' professional development at school, the reasoning is focused on turning OL from externally organized to self-organized and mutual learning. The data suggests that deliberate use of OL strategies significantly affected the school's practice. For instance, at the starting point of the intervention teachers' diaries reflect a variety of day-to-day problems, and reveal that teachers did not discuss their problems in an open way. They acknowledged weaknesses and also saw how to improve others' performance, but did not have enough will or power to influence these changes. Teachers were very emotionally involved in their job, so discussions could be a kind of solution, but statements suggest that communication with colleagues just released mundane job stresses for them and made them feel better. However it was mostly superficially and did not reach a professional level. Openness was formal and it did not go beyond likeability issues, teachers partly had lost a critical view to their own professionalism. That was questioned during the OL cycle and AR; therefore, an improvement in overall atmosphere, in spite of increase of critical discussions, was noticed. For instance, reflecting on how colleagues are changed during the OL process, one teacher said:

"I think that changed, yes. And… maybe not because it… not just that day and that time was put in, we talked about that long enough time … and lived through all these stages and it all…from being really shocked… and all that constructive reasoning, and also relaxing… if it would not be in such a way, if it would take place in some mundane meeting… operationally, it could be possible simply to say: that and that was noticed, and do not do that anymore… it would not be lived through, because, it is evident, that those who did not participate, they continued the same way, because they did not go through. And simply could not accept it."

Starting with intervention and, therefore, as an externally organized process (even if that external factor is leader or leadership group), self-organized learning gradually increased during OL cycle. The interpreting phase of OL that in reality turned to collective action planning, could be considered as a starting point for AR. AR requires more than following instruction, and therefore provide an opportunity for teachers to experience OL as self-organized or mutual learning process, and teachers acknowledge the changes during evaluative phase (step 6), for instance (from facilitated group discussion):

"...we saw that there is a problem ... together we accepted it. Then, the fact is that we, in my opinion, today we speak very differently than ever ... giving reasons for something or ... the fact that we do think, that we understand that it is a problem, it is the way ... now we have to find ways of solving this problem. And to try to do it, instead of sitting down every lesson and thinking that we can't solve it."

Although the solutions for the problems still were often expected from the management or from regulative changes, some teachers recognize the necessity and interest in more cooperation, collaboration and in non-standard solutions, for example (from interview with teacher):

"Every time the school problems are solved with some non-standard means. And mostly we have to find those solutions ourselves. This, in fact, doesn't annoy me much ... the sole fact is that it takes time. And they are not necessarily the solutions that you find here ... they don't always fall in the top ten, it seems to me. In traditional schools, there are generally solutions already. You only need to work and that's all."

Summary

The idea of OL from the action perspective is explored according to Argyris and Schön's assertion that learning by following prescriptions does not make sustainable and valuable changes in organizations (Argyris & Schön 1996). This positions OL in school as opposite to learning from impersonal training programs. The study demonstrated the use of a practical tool – the framework implying both a complete cycle of AR strategy and OL that could be used in educational practice for increasing OL capacity of school. Nevertheless, in practice all these kinds of learning – experiential learning, OL and AR – overlap and can be distinguished only theoretically by splitting reality artificially. This is consistent with the way practices are understood – by distinguishing them conceptually and then considering how to link them (Gherardi 2009).

The most important inference for schools about OL as promoting teacher professional development is the assertion that if OL in school at teachers' level does not go beyond learning organized by management, remaining at the level of externally organized learning, it can facilitate the growth of professional competence of the individual and the improvement of collaboration between teachers, but it does not increase teachers' readiness for self-organized and mutual learning. Hence, OL is primarily based on trust among colleagues, readiness to acknowledge ones own faults and many other factors that create school culture, OL could not be perceived as a separate leadership technique for improving practice, it considers mutuality as the basic principle for increasing OL capacity of school.

The findings from this study could be considered as supporting the OL promoting effects on school practices and as consistent with the results obtained in other countries, contexts and using other methods (Goh, et al. 2006; Marks & Louis 1999; Leithwood, et al. 2000; Mulford, et al. 2004). They also contribute to current need for schools in Latvia to deal with the gap between students' educational needs and teachers' professional experience.

References

Argyris, C. 2005. *On Organizational learning*. USA: Blackwell.

Argyris, C., Schön, D.A. 1978. *Organizational Learning: a Theory of Action Perspective*. Reading, MA: Addison-Wesley.

Argyris, C., Schön, D.A. 1996. *Organizational Learning II.* USA: Addison-Wesley Publishing Company.

Coghlan, D., Brannick, T. 2008. *Doing Action research in Your Own Organization, 2nd ed.* London: Sage Publications.

Collinson V., Cook T.F. 2007. *Organizational Learning: Improving Learning, Teaching, and Leading in School Systems*. Thousand Oaks, London, New Delhi: Sage Publications.

Dewey, J. 1938/1974. *Experience and Education*. New York: Collier Books.

Dixon, N.M. 1999. *The Organizational Learning Cycle: how we can learn collectively*. England: Grower, 2-nd ed.

Elkjaer, B. 2009. Pragmatism: a learning theory for the future. In *Contemporary Theories of Learning,* ed. K.Illeris. USA, Canada: Routledge.

Gherardi, S. 2009. The Critical Power of the 'Practical Lens', *Management Learning,* Vol. 40 (2): 115-128, http://mlq.sagepub.com.

Goh, S.C., Cousins, J.B., Elliot, C. 2006. Organizational Learning Capacity, Evaluative Inquiry and Readiness for Change in Schools: views and perceptions of educators. *Journal of Educational Change*, vol.7, Number 4/December. Netherlands: Springer.

Illeris, K. 2007. *How We Learn: learning and non-learning in school and beyond.* USA, Canada: Routledge.

Jarvis, P. 2007. Learning to be a person in society: learning to be me. In *Contemporary Theories of Learning,* ed. K.Illeris. USA, Canada: Routledge.

Kemmis, S., McTaggart, R. 2005. Participatory Action Research: Communicative Action and the Public Sphere. In *The Sage Handbook of Qualitative Research (3rd ed)*, eds. N.K.Denzin & Y.S.Linkoln. Thousand Oaks, London, New delhi: Sage.

Kolb, D.A. 1984. *Experiental Learning*. Englewood Cliffs, NJ: Prentice Hall PTR.

Leithwood K., Janzi D., Steinbach R. 2000. Leadership and other Conditions which Foster Organizational Learning in Schools. In *Organizational Learning in Schools*, eds. K. Leithwood, K.S. Louis, 67-93. Lisse [etc.]: Swets & Zeitlinger.

Marks, H.M., Louis K.S. 1999. Teacher Empowerment and the Capacity for Organizational Learning, *Educational Administration Quaterly,* Vol. 35: 707-750.

Mulford B., Silins H., Leithwood K. 2004. *Educational Leadership for Organisational learning and Improved Student Outcomes*. Dodrecht, The Netherlands: Kluwer Academic Publishers.

Reason, P. & Bradbury, H. 2008. Introduction. In *Handbook of Action Research* (*2nd ed*.), eds. P.Reason, & H.Bradbury. London: Sage.

Reason, P. & Bradbury, H. 2008. Concluding Reflections: Whither Action Research? In *Handbook of Action Research (2nd ed*.), eds. P.Reason & H.Bradbury. London: Sage.

Rubene Z., Geikina, L., Svece, A. 2009. Implications of Totalitarian Values in the Post-Soviet Educational Space: Results in Latvia. *ATEE Spring University. Changing Education in a Changing Society.* Klaipeda: Klaipedos universitetas.

Rubene Z. 2010. Topicality of Critical Thinking in the Post-Soviet Educational Space: The Case of Latvia. *European Education. Diversity in Unity, Challenges in European Education Since the Fall of the Berlin Wall.* – Winter 2009/2010, Vol. 41 No. 04: 24-40.

Pedagogical Authority in a Teacher's Professional Activity and Possibilities of its Creating

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Abstract

The topicality of present research is determined by the gradual changes of the teacher's role in the modern society. Nowadays to provide qualitative and effective students' learning it is essential for teachers to possess such key qualifications as self-management skills, problem-solving skills, critical thinking skills, communication skills, work and study skills, social and cooperative skills (Ķestere, Koķe 2010) as well as be able to make a reflective dialogue and on the basis of cooperation form mutual relationships between teacher and students. In order to form mutual relationship with students, the teacher should be an authority for the students. In context of life-long learning there is to emphasize the necessity to perfect oneself, so that the teacher could be competitive in the circumstances of changeable environment.

The objective of the paper is to analyze students and teachers comprehension about pedagogical authority in the circumstances of shifting educational paradigm and point out possibilities to learn being an authority, where an authority is emphasized as a relationship between people and an art of interaction. Teacher can learn how to make good relationship by self-reflecting, analyzing his/her activity, extending his/her/ knowledge in psychology by self-directed learning, learning at teacher's work place i.e. learning anytime and anywhere, from their students and colleagues.

Theoretical framework of the research is formed by the theories on the authority development (Volmer 1990; Frei 2003; Geissler 2006; Helmke 2009; Dubs 2009) which regard authority not as certain traits of character but the quality of people's interaction and relationships.

The findings of the research confirm the theoretical criteria of to be teacher's authority:

Teachers, parents and students acknowledge a teacher an authority if he/she is professional in his/her subject and education, knows how to make relationship between people, he/she has leadership skills and has interesting personality qualities.

It is necessary to educate the novice teacher so he or she could earlier master his or her potency to be an authority for students. In the context of life-long learning the necessity to perfect oneself, so that the teacher could be competitive in the circumstances of ever changing environment has to be emphasized.

Keywords: comprehension, pedagogical authority, relationship, teacher's competence

Introduction

The world is at the point of transition from the modern industrial society to the society, which is based on the development of the spheres of information and service (Rifkins 2004; Alijevs 2005).

At this point there is a tendency also in Latvia to follow the so called post modernism, the key words of which are acceleration of changes, cultural diversity, complexity of technologies, complicacy, national insecurity, uncertainty, unclear future. Also the value and attitude to them are undergoing changes (Blūma 2000).

In the post modern times there are new tasks and tendencies of education and upbringing marked out, which demands new pedagogical approaches, theories and methods. It means that pedagogues have to reconsider their previous experience to be able to work according to the demands of the new age (LIAS 2011).

O. Zīds (2007), in the Forum of Pedagogues of Latvia on October 6, 2007 made a speech called "Change of paradigms and scenarios of education development in Latvia" where he points out that at the time when the social – political system is changing the changes in people's and every person's consciousness must take place simultaneously with the changes in economy but the changes in person's consciousness is a slower process and it is connected with a more permanent process of the change of values and attitude. O. Zīds (2007) points out that "the paradigms in education change on all its levels. (Zīds 2007)

Education paradigms are still gradually changing from the normative to human-pedagogical ones, and it cannot be considered yet that the normative pedagogy tradition has been fully exterminated.

After analyzing theoretical literature and the documents (Izglītības attīstības pamatnostādnes 2007.-2013. gadam; LIAS 2011) published by Ministry of Education and Science of Latvia it is possible to conclude that the post-modern society and the demands of the new education paradigm bring forward the following tasks for teachers:

- help, give advice to students how to select information;
- manage a critical use of information, help students to create rational skills of operating with information
- help students to learn how to study independently, acquire knowledge and topical information;
- accentuate the practical use of knowledge, teach how to think professionally and pragmatically;
- develop students' analytical and critical thinking, ability to solve problem tasks;
- encourage, lead, consult students about research works;
- promote the creation and development skills of active behavior of students, ability to take initiative, risk, make decisions;
- enhance the creation and development of students' communication skills;

- help students to learn to cooperate, form a dialogue, solve conflicts;
- promote the development of student's self-initiative and personal competence.

Theoretical underpinning

De-canonization has to be mentioned as one of the typical characteristics of the postmodern time; it means opposition to all kind of canons, authorities; no traditions and preconceptions are acceptable (Kūle, Kūlis 1998). Changes in society go together with the loss of teachers' authority. The idea can be found in literature that the authority crisis is connected with the crisis and changes in society (Reichwein 1989; Frei 2003).

As we can observe changes both in society and education in Latvia, there is also loss of teachers' authority. Many things (lack of discipline, pupils do not take seriously what the teacher says) point out that if a teacher does not have authority he cannot teach successfully.

Most often the cry for authority is uttered when we lack it. The authority has been tested when students with their behavior consciously or unconsciously challenge the teacher, for example, with their aggressiveness, reluctance, non- motivation, vandalism, noise and conflicts (Frei 2003; Foray 2007; Hagemann 2009). Periodicals express the opinion that the attitude towards authorities has changed nowadays, in earlier days there were more reverence to the authority, today we have to earn also the professional authority (Rītups 2010). In mass media we can read ideas that "during the times of authority it was enough for the teacher to go out in the front of the classroom to get the respect but nowadays the situation is different –you have to earn the respect" (Asare 2011). A child does not want to go to school, he does not like learning because "he does not like the teacher" (Dreijere 2011).

Authority is essential in teachers' professional work but we simultaneously see the decrease of it in society, which hinders the teacher from qualitative work. This fact caught the author's interest to research the understanding the teacher's pedagogical authority nowadays in the situation of transformation of the educational paradigm.

By analyzing theoretical literature the conclusion has been made that the theoretical argument of pedagogical authority is composed by several theories and approaches.

Related to personality

There are mainly two understandings of a personality in the modern pedagogical literature. The first one is the traditional and the most popular; it is focused on the authoritative personality and its certain qualities are appreciated by people (Hobmair 1996; Reņģe 2007). The other understanding characterizes authority as relations among people, as the art of communication (Volmer 1990; Geissler 2006). R. Reichwein concludes that the education

and social sciences are unanimous about the idea that the authority does not mean a body of a person's characteristics but the quality of human relations (Reichwein 1989).
Thus, both understandings must be used to research the idea of a pedagogical authority, both that of the authority as a body of personality's characteristics and the authority as the quality of human relations being in the opinion that the pedagogical authority is characterized by both approaches because the relations are created by the help of the characteristics of a specific teacher. Creation of relationship cannot be separated from the personality of the teacher.

Approach of competence

Pedagogic literature gives several approaches of understanding the idea of competence. B. Frei (2003) speaks about competence of a teacher which lies on the base of the pedagogic authority and gives explanation of competence as knowledge and experience that determines the teacher's behavior and activity (Flammer 1996; Frei 2003).
In this paper, concerning teacher's pedagogical authority and pedagogical competence, the definition of competence suggested by I.Tilla (2005) has been used; it characterizes the structure of competence created by experience, which includes knowledge, skills and attitude as well as abilities, which determine person's readiness to act (Tilla 2005).

Approach of action

Competence is developed in action on the background of the previous experience. Approach of action admits that the person learns and develops in action by gaining ones experience (Vigotskis 2002; Špona 2006; Čehlova 2002; Špona, Čehlova 2004).
Communication skills became one of the basic needs in the post modern society, because of that cooperation of a teacher and a student becomes more important. Teacher develops in cooperation with students. This is always a two - way process, pupils share their knowledge with other pupils thus giving their input in the process of acquiring new knowledge (Fullen 2003).

Approach of the social constructivists

Communication between a pupil and a teacher is rooted in the learning/teaching process characterized by discovery of new knowledge and learning together. This approach corresponds to the conception of humanism and it is realized in the approach of the social constructivism and that of action (Freire 1998; Роджерс 2007).
Development of teacher's competence takes place on the base of the approach of the symbolic interaction (Mollenhauer 1976; Habermas 1988; Mead, 1999).
According to theoretical literature in pedagogy there are three criteria which determine teacher's pedagogic authority: teacher's professional competence (including the knowledge of his school subject, didactic – methodological skills, diagnostic skills, knowledge of the

psychology, ability to motivate and self-reflection skills, class management skills), teacher's ability to form relationship (communication skills, empathy skills, pedagogic ethics, psychological competence, emotional intelligence), teacher's personal characteristics.
Teacher's authority is often connected with the teacher's ability to ensure discipline in the class which is necessary for a successful learning. Conflicts about the discipline issues and disturbance of lessons are unavoidable issues of the learning/teaching process. It can be perceived as a feedback signal among the teacher and the students; how reasoned and attuned to norms is the teacher's behavior, namely, how big the difference in the concepts about norms is and what are expected from them by teachers and students (Lohmann 2003). Because of this reason the author decided to discuss the issue of class management as a separate criterion.
According to the analysis of different pedagogic theoretical literature and taking into account the changed tasks of a teacher and the demands of the current education paradigms in teacher's work, the author of the research has worked out criteria and indices of a pedagogic authority as well as given their descriptions which have been tested by empiric methods.

Research methodology

Research goal and questions

The research goal was to investigate the comprehension of the pedagogic authority:

- by analytic methods in theoretical literature (by analyzing theoretical literature and sources);
- by empiric methods to verify how/if theoretical criteria manifests in teacher's profession in the conditions of shift of paradigm in a modern school.

Research questions are:
How is the teachers', parents' and students' comprehension on the teacher's authority? What kind of teacher is a pedagogical authority nowadays in the understanding of students and teachers, parents?

Research design and methods

The research has four stages.
The first stage includes the analysis of theoretical literature and sources dealing with the development of an authority.
In the second stage the open- question "What kind of a teacher do you consider the authority?" that was included in the background survey was analysed.

615 students and 143 teachers from 8 schools were surveyed.
The third stage includes a survey of 21 selected teachers and 51 parents.
In this survey there were open questions included to make the comprehension of the criteria of teachers' authority more exact.
To make accurate the students' concept on pedagogical authority, also 158 students essays from 4 schools, forms 9-12 with the title „What kind of a teacher do you consider the authority?" were collected.
To get the confirmation for the findings in the second and third stages, there were semi structured interviews carried out with experts (6 experienced teachers and school principles), some of them were mentioned in questionnaires as authorities.
The fourth stage includes also conclusions and suggestions.
The qualitative analysis methods have been applied during the research. The answers to the open questions included in the background survey and in the third stage were analysed with the content analysis, to make a code system appropriated to the criteria. Therefore the theoretical criteria of teachers' authority were tested.
Students' essays and interviews with experts were analysed with hermeneutical analysis and content analysis.

Findings of the research and discussion

On the base of the second stage background surveys, content-analyses of the second stage opened questions and essays, hermeneutical analysis of the essays' and expert interviews there are made descriptions regarding students', parents' and teachers' concept of teacher's pedagogic authority, where teacher's authoritative action corresponds most to the demands of the current education paradigm. In this paper the author of research has included some fragments of descriptions. Expressions from the descriptions are left as close to the original as possible.

Students' concept

Teacher has perfect knowledge, he is confident of what he teaches and of his point of view. He is comprehensive, erudite in other areas, in other subjects.
He is a real enthusiast of his work and subject but does not consider his subject to be more important than other subjects (does not impose the subject on students).
Teacher teaches well, knows how to explain, and *(explains while everybody understands)*.Teacher gives real examples from life (he can tell much from life), helps to solve problems, helps to understand.

Teacher is able to rouse interest about his subject; he teaches in an interesting and original way, teacher uses different and interesting methods.
Teacher prepares his lessons, provides students with the necessary materials. Teacher motivates students to learn.
He is interested in students' progress.
Teacher teaches according to the students' level, explains individually, is aware of the students' knowledge level, diagnoses the problem and then solves it.
Knowledge in pedagogic psychology, teacher understands students' problems *(he has to distinguish a real problem from a false one, must understand how old the students are, must remember what he felt when he was this age, must have an experience how it feels to be a teenager).*
Teacher plans his work, he is always well prepared for lessons, uses the lesson time efficiently *(does not give too much homework, understands how much homework students can do, his tests do not include questions that had not been taught, works more during lessons not to give much homework).*
Teacher dedicates time to students.
Teacher participates in students' undertakings. Teacher attends seminars to obtain new knowledge, acquires new technologies. Teacher loves and respects his job, profession, enjoys what he does, considers his job a calling.
Teacher knows how to behave in each situation, every student respects him. Teacher knows how to act in different situations, is able to influence attitude and point of view.
Teacher sets the students' limits, what the student can dare; teacher has clearly defined demands. Teacher sets the order in class.
Teacher is like a guardian, supervisor, ruler and teacher looks after pupils and controls them.
Teacher is the leader in the eyes of students.
Teacher teaches in a free atmosphere, creates a light atmosphere in the classroom. Teacher has empathy *(perceives students' feelings).*
Teacher has ideal communication skills and abilities; he knows how to communicate with every student.
There is interaction between the teacher and the student; teacher is able to socialize with teenagers in an ideal way.
Teacher manages good communication skills, *he is a good listener, it is easy to talk to him, you can ask him different questions, pour out your heart, you are not afraid to ask him questions,* teacher is *an equal collocutor, there is a feeling of dialogue,* teacher finds the proper way of communication with every student.
Teacher understands teenagers, knows how to praise *(praises heartily),* not only criticizes, creates the atmosphere of safety, and creates the feeling of participation and community *(you feel like part of the deal).*

Teacher is a perfect example, perfection, pattern to follow. Students see the teacher as an example to resemble *(teacher is like a wise hero who has no unhealthy habits and I want to be like him; I perceive my teacher like a model to follow, I analyze, reconsider what he has said.)*

Teachers' concept

Teacher can keep students' attention, teaches well, captivates with what he teaches, rouses interest about his subject, can present the most boring topic in an exciting way, and prepares for lessons to involve students on the maximum level.
He/she can positively motivate students; teacher can rouse interest and motivate to work independently. Teacher knows how to reach good results. Teacher keeps learning, expands his knowledge, has international experience, loves his profession, invests time and effort in it, teaching is his mission.
Teacher has self-reflection skills.
Teacher has democratic values; he understands democratic style of management. Teacher is able to dominate, he does not yell. Students are afraid to make noise and converse during his lessons. Students do not dare to contradict the teacher and they complete all tasks.
Teacher is friendly, he has benevolent relations with students, the dependents, teacher is a friend, a person, who feels the same way as students, students trust him, students know, that they can trust the teacher, knows how to inspire students, he is human in his relations with others, teacher is honest, he treats equally all people, objective attitude to children; teacher knows and respects the borders, he keeps distance in relations with students.
Teacher is with a sense of humor in tragic situations, smiling, with a radiation of a personality.

Parents' concept

Teacher, who is educated, has reached something more than teacher's diploma.
Teacher who is a high- class specialist in his subject, corresponds to the utmost requirements brought forward by teacher's profession, offers more interesting training than planned in the curriculum.
Teacher always has new ideas, teacher knows how to avoid every day routine, is able to realize his idea, looks for innovative solutions, teaches well, good achievements, results, child wants to improve, delves into child's personality, is able to develop students' abilities, support students' development, interested in students' growth, knows how to work in a team.
Teacher feels responsible for the learning/teaching process.
Teacher, who does not tell off, children react to it in a negative way.

He/she makes impact without yelling, his thoughts are important to children.
He lets students to express their minds, express themselves; he communicates during lessons, encourages students to talk through their problems; Teacher, whom children can trust. Teacher, who promotes a child to be a leader, is an authority.
By comparing the formed teachers', students' and parents' concept with the concept about the teacher's pedagogic authority, which is formed from the theoretical literature, we can see statements which correspond to teacher's work according to the demands of the new paradigm.

Teacher's professional competence

In theory: teacher facilitates improving of the learners' skills to process and analyze information. Methods are purposefully chosen to develop students analytical and reasoning skills, critical thinking; problem tasks are offered to students, students are taught how to make decisions; students are encouraged to cooperate and make a dialogue.
Students: Teacher gives real examples from life, helps to solve problems, and helps to comprehend. Makes to operate by oneself, help to improve thinking, involves students, and motivates comprehension not cramming, makes students get involved in the comprehension process. Teacher is able to cooperate with students and other teachers, uses the time of the lesson efficiently.
Teachers: A teacher prepares lessons so that students learn during the lesson to the upper limit, makes students learn, teacher rouses interest and motivates to learn and work independently. Teacher is able to cooperate with students, parents and colleagues, he wants to cooperate and find solutions.
Parents: Teacher offers more interesting training than it is planned in the curriculum, he always has new ideas, he is able to realize his idea; he looks for innovative solutions, motivates to learn, teaches well, has good achievements and results, child is willing to improve; he improves child's abilities, supports students' development; he is interested in students' development; he is good at working in a team.
Majority of statements about the teacher's work which corresponds to the demands of the current education paradigms are found in students' understanding. Also parents' understanding includes statements which speak about children's skill development, promotion of development, when the child wants to improve. So, about such a teacher's work that motivates students' understanding about necessity to obtain knowledge. Least such statements are found in teachers' understanding, only motivate to act independently, and are able to cooperate with students.

Class management

In theory: purposefully creates students' positive attitude. The order is based on mutual agreement and responsibility about keeping the order.
Students: Students obey the teacher voluntarily, his word is a law, teacher achieves discipline without raising his voice, is respected by all students, reacts adequately or appropriately in every situation. Teacher knows how to behave in different situations, is able to influence opinions and attitude. Teacher sets the borders of students' behavior, what the student can afford, teacher has defined strict demands. There is an order in the class determined by the teacher. Students respect discipline, teacher maintains proper discipline. Teacher is like a guardian, ruler; he watches and controls.
As we see, in students' understanding statements about the order set by a teacher prevail. Though students acknowledge that they obey voluntarily, the statements show that the teacher is the one who solely sets the rules, watches, looks after and also punishes (teacher as a manager). It is difficult to see a democratic way of management here. There is no statement about mutual agreement on discipline, obeying the order and mutual responsibility.
Teachers: Teacher is demanding; he has certain demands, he is consistent in his demands for everybody. Teacher is democratic; he understands a democratic style of management. Teacher can dominate, he does not yell. Students are afraid to make noise in his lessons and converse. Students do not dare to contradict a teacher. Teacher is able to influence processes, is able to react fast and flexibly in different and stressful situations; he is able to solve conflict situations, does not punish students repeatedly.
There is a contradiction about the class management: in teachers' understanding teacher is democratic and he has conception about a democratic style of management but simultaneously students are afraid to make noise and converse in his lessons, they do not dare to contradict.
Statements about the teacher's concept about a democratic style of management could be read in the background interview answers but the statements about being afraid to make a noise and contradict are taken from the second stage teachers' interviews. Thus the interviewed teachers have different understanding about the order and discipline. Alongside with the teachers who combine the class management issues with a democratic style of management, there are teachers who think that the authority is the teacher who works with authoritative methods; they do not understand the idea of authority; they do not see the difference between "authoritative" and "authoritarian". Expressions does not yell and does not punish repeatedly indicates to teachers' negative experience concerning their colleagues (probably also their own experience), but it does not show that the teachers- respondents have a clear and certain concept about what the best way to ensure the order and discipline necessary for a successful work in a classroom is.

Only in the expert interviews there were such statements as we came to terms on the issues of discipline.
So the class management skills are the week point of the teachers to achieve authority; it is proved also by the statements in expert interviews, formation of authority depends on how the issues of discipline are solved.
What concerns the criterion relations it can be said that the statements made by students, parents and teachers about this criterion are quite similar and corresponds to the viewpoint of human paradigm, and wherewith corresponds to the description of criterion created in theory. Only it is stressed in theory that a teacher teaches students to understand the necessity of moral norms, teaches how to behave and act to build relationships. Respondents do not comprehend the teacher's role in such an aspect, for example, teacher makes student to feel self- confident, or according to parents' understanding lets the student express himself, a teacher who allows the student to be a leader is a sign of the teacher-authority's ability to create successful relationship which allows students to feel as a value and a personality.

Personal characteristics

Criterion „personal characteristics" shows a similar understanding in all respondent's groups. Intelligence, honesty, righteousness, strictness, sense of humor of the teacher takes a special place in respondents understanding; the quality understanding has been specially pointed out. Contrary to the respondents' understanding in the background surveys, in essays students mention the teacher-authority as an example, a pattern. Also parents express such an understanding. Teachers point out emotional intelligence and strong health. All respondent's groups think that the teacher–authority is an interesting and original personality.

Conclusions

To sum up the common expressions of all surveyed groups, it is possible to conclude that in the teachers', parents' and students' comprehension to achieve authority the teacher has to:

- Obtain high professional level, which corresponds to the demands of the human paradigm and the modern age; review the tasks (from the provider of knowledge to a helper, a consultant), who helps students to navigate quickly through the wide range of information, etc.

- Be able to solve the issues of class management successfully (create positive attitude to school and studies); be able solve the issue about the mutual agreement

on abiding the order and rules in school (students understand the necessity of it); involve students in maintaining order in school, students take partial responsibility as well as consistently respect the agreement and ask other students to do it.

- Create relationship based on mutual respect and trust; comply with the requirements of teacher's ethic.
- Constantly improve personal competence by reflecting, analyzing the work and looking for further education possibilities.

Recommendations

Curricula should include more study courses which help teachers to form authority, for example, lectures and courses on class management, communication, interrelations, etc.

Pay more attention to educating new pedagogues in the area of ethics. New teachers need more support at school during the process of adaptation, for example, a mentor; we must study from the positive examples on introduction of the new teachers in work in other countries.

Successful and experienced teachers who have obtained pedagogic authority have to share their experience and cooperate with their new colleagues.

Pay more attention to the development of personalities (Ego) of students- prospective teachers because you have to be self-contained to be an authority; students should be taught to be self-contained.

References

Alijevs, R. 2005. *Izglītības filozofija XXI gadsimts*. Rīga: Retorika A.

Asare, D. 2011. Man nepatīk... skolotājs. *Ieva,* 15 (702): 56.–57.

Blūma, D. 2000. *Paradigms in Education. (a case study of the Transition Period in Latvia)*. Riga: LU.

Čehlova, Z. 2002. *Izziņas aktivitāte mācībās*. Rīga: RaKa.

Dreijere, V. 2011. Mūsu skolās ir vajadzīgs cita veida skolotājs. *Diena*, 49 (5995): 4.–5.

Dubs, R. 2009. *Lehrerverhalten*: *ein Beitrag zur Interaktion von Lehrenden und Lernenden im Unterricht.* Stuttgart: Steiner.

Flammer, A. 1996. *Entwicklungstheorien. Psychlogische Theorien der menschlichen Entwicklung*. Bern: Hans Huber.

Foray, P. 2007. Autorität in der Schule. In:*Zeitschrift für Pädagogik*, Heft 5, S. 615.

Frei, B. 2003. *Pädagogische Autorität: eine empirische Untersuchung bei Schülerinnen, Schülern und Lehrpersonen der 5. 6. und 8. Schulklasse*. Münster: Waxmann. S. 234.

Freire, P. 1998. *Pedagogy of freedom: ethics, democracy and civil courage*. Lanhom: Rowman and Littlefield Publishers Inc.

Fullen, M. 2003. *Change forces with a vengeance*. London: Routledge.

Geissler, E. E. 2006. *Die Erziehung. Ihre Bedeutung, ihre Grundlagen und ihre Mittel*. Würzburg: Ergon Verlag.

Hagemann, W. 2009. *Bournout bei Lehrern. Uhrsachen, Hilfen, Therapien*. München: Beck.

Habermas, J. 1988.*Theorie kommunikativen Handelns*. 2 Bde. Frankfurt/M.

Helmke, A. 2009. *Unterrichtsqualität und Lehrerprofessionalität. Diagnose Evaluation und Verbesserung des Unterrichts.* Stuttgart: Klett.

Hobmair, H. (Hrsg.) 1996. *Pädagogik.* Köln: Verlag H. Stam GmbH (2. Auflage).

Izglītības attīstības pamatnostādnes 2007.-2013. gadam. Ministru kabineta 2006.gada 27.septembra rīkojums Nr. 742. Rīga, 2006. 54.lpp, www.izm.gov.lv./ Izglitibaspolitikasdokumenti

Ķestere, I., Koķe, T. 2010. Skolotāja profesionālās kompetences: vēsturiskais atskats un mūsdienu tendences. In: *Pedagoģijas vēsture: 15 jautājumi.* Zinātniskais rakstu krājums. Rīga: RaKa. 298 lpp.

Kūle, M., Kūlis, R. 1998. *Filosofija.* Rīga, Zvaigzne ABC.

Latvijas ilgtspējīgas attīstība stratēģija (LIAS). 2011. LR Saeima, 10.06.

Lohmann, G. 2003. *Mit Schülern klarkommen*. Berlin: Cornelsen Verlag Scriptor GmbH&Co KG. S. 13-14.

Mead, G. H. 1999. Play, school and society. New York: Peter Lang, corp.

Mollenhauer, K. 1976/1977. *Theorien zum Erziehungsprozess. Zur Einführung in erziehungswissenschaftliche Fragestellung*. 3. Aufl. München: Rittelmeier.

Reichwein, R.1989. *Autorität*. In: D. Lenzen (Hrsg.) *Pädagogische Grundbegriffe*. Bd. 1. Reinbeck bei Hamburg: Rowohlts Enzyklopädie.

Reņģe, V. 2007. *Mūsdienu organizāciju psiholoģija*, Rīga: Zvaigzne ABC.

Rifkins, Dž. 2004. *Jaunās ekonomikas laikments.* Rīga: Jumava.

Rītups, A. 2010. Viss vienā punktā. *Rīgas Laiks*, Dec.

Špona, A. 2006. *Audzināšanas process teorijā un praksē*. Rīga: RaKa.

Špona, A., Čehlova, Z. 2004. *Pētniecība pedagoģijā*. Rīga: RaKa.

Tiļļa, I.2005. *Sociolultūras mācīšanās organizācijas sistēma*. Rīga: Izdevniecība RaKa.

Vigotskis, Ļ. 2002. *Domāšana un runa*. Rīga: izdevniecība „EVE".

Volmer, G. 1990. *Autorität und Erziehung. Studien zur Komplementarität in pädagogischer Interaktionen*. Weinheim: Deutscher Studien Verlag.

Zīds, O. 2007. *Paradigmu maiņa un izglītības attīstības scenāriji Latvijā*. Runa Latvijas pedagogu forumā. www.izm.izm.gov.lv/upload_file/LPS_uzruna_Oskars_Zids.doc

Роджерс, К. 2007. *Клиент-центрированная психотерапия*. Москва: Психотерапия. 5.

Entering and Creating New Worlds. How a 'Writer in the School' Can Support and Empower 'Minority-children'

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Abstract

At two primary schools in one of Amsterdam's urban-outskirts neighbourhoods mainly inhabited by families with a recent history of migration, children had the privilege of welcoming an author of children's books in their midst. Together they have been reading, writing and telling stories for several months. In this paper, the encouraging, supporting and empowering effect of the presence of this Writer in the School will be presented. Furthermore, the contribution of the activities of the Writer in the School to the children's ability of 'narrative imagination' will be explored. The Writer in the School will be regarded an important step toward critical citizenship.

> *"Y. and R. were screaming with excitement telling [their parents – ML] what had been happening in class. They were able to literally recall many of our discussions and talks. I couldn't believe my ears. R.'s mother was so proud of her daughter. Right she was, of course." (web log Writer in the School)*

Keywords: 'minority-children', children's books; writer in the school; empowering effect.

Slottervaart and The Writer in the School

> *"Mohamed Mallaouch stepped off the flight from Marrakesh at Schiphol Airport, took the train into the western outskirts of Amsterdam and marvelled at the green, geometric patterns before him. (…) To his eyes, it looked like a child's model city, full of artificial-looking leafy spaces, built from Lego and green felt. (…) 'It seemed like a perfect place at first,' Mohamed says, 'and in many ways it is a good place to live, but after only a few weeks in Slotervaart I knew there was something seriously wrong. It had become a dumping ground for migrants, cut off from everything.'"* (Saunders 2010, 289-290)

Slotervaart, one of Amsterdam's urban-outskirts neighbourhoods, was created in the 1960s as a bedroom community for Dutch workers. Small apartments, served with only a few shops on the main boulevard, to keep domestic life nice and quiet. Based on architectural ideas which advocated a strict separation of living, working and recreational areas, Amsterdam-Slotervaart was build as a living area with a recreational lake around the corner. The Dutch inhabitants were supposed to work somewhere else in or around the city.

But during the 1960s, migrants from Morocco and Turkey (solving a shortage of labour) were arriving in Slotervaart. Most of them came from remote, rural areas like the Rif Mountain region. The migrants did not speak the language of their new country where they lived and primarily worked in, and they were not familiar with Dutch society. This dis-connectedness to the Netherlands became the more poignant when their wives and children joined the migrant workers as a result of within the scope of family reunification. The wives and children faced a life in an area which was restricted to family life only, isolated from any outdoor activity, let alone from the inner-city life. Satellite dishes reconnected them to the country they left behind. Slotervaart became *"what the Dutch call a 'dish city,' an isolated urban island linked by television to the cultures of the Magreb and the larger Arab world, with little connection to the Netherlands."* (Saunders 2010, 290)

Nowadays things are changing in Slotervaart. An ambitious project to improve the housing conditions, to encourage people to open shops, and to increase chances for the inhabitants of Slotervaart, is successful. But at the same time, right now, life is tough for many (migrant-) families.

On behalf of the children of this area, a remarkable initiative was undertaken by a small group of people, known as *De Schoolschrijver* (literal translation: The Schoolwriter). The Writer in the School. An author of children's books, committed to literature (of course) but at the same time to social justice and diversity, commits himself (or herself) to a primary school for several months: to the children, their parents and their teachers. The Writer in the School aims to engage children in the pleasures and power of reading and writing. He (or she) intends to nurture the growth of the child's imagination, and to awake children to the adventures of narratives, poetry, myths et cetera. Hoping that being familiar with language and narratives also means being confident about one's self.

From February till June 2010 *De Schoolschrijver* started with one author of children´s books (Lydia Rood) at two primary schools. During this period, qualitative, interpretive research has been done on the potential surplus value of the structural presence of the Writer in the School regarding to the child´s pleasure of reading and composing narratives.

Methodological questions

In this interpretive research, the main participants are the children of the two primary schools. Trying to find out the way people interpret and make sense of their experiences and the world in which they live, is a complicated research job in it self. But it gets even more complicated when this group of people are *young* people, more specific: children. How to avoid coincidental responses and socially desirable answers? Especially with children, the moment you present something can be crucial. To a child, today's big problem can be of no significance at all tomorrow.

Tertoolen (2010) puts forward the importance of the natural setting: try to be a part of the child's natural setting as a researcher. Avoid taking the child out of its usual setting. An interview or questionnaire can be interruptive to the natural setting already. Children might consider it an assessment. Doing research, try to participate as much as possible in the usual activities of the child, and observe the child in its natural surroundings.

Despite differences in perspectives, interpretive researchers have this methodological principle in common: a *"direct examination of the empirical world"* (Blumer in Wester & Peters 2004, 15). This principle can be explored in two ways:

- interpretive researches do not start their research by constructing and developing concepts, but they start connecting to the empirical world to be examined;
- interpretive researchers prefer obtaining data by participating observation and case study. A first hand involvement with the empirical world can be considered a major feature of interpretive research.

This 'first hand involvement' raises the issue of the personal involvement of the researcher in the empirical world he examines. Involvement with the world examined and commitment to the participants can be (and often is) considered as something negative: personal involvement would jeopardize objectivity and subsequently the reliability of the research results. But involvement and commitment of the interpretive researcher can be considered as something positive. In his book *Kiss and Tell*, philosopher Alain de Botton explores the commitment of the biographer to the person whose story he intends to tell. When people kiss and tell, they disclose private or confidential information. But the title of this book not only refers to the disclosing activities of any biographer. The verbs kiss and tell may also be considered to be in pursuit: prior to being able to tell or narrate someone's life, you have to get seriously involved in the life of that person. People do not have simply one life, open to careful and unbiased reconstruction by a biographer. Life is far more complicated than that.

> *"[W]e have as many lives as we have people to converse with. (…) [A]n honest account of a life could only arise from a relationship between author and subject."* (Botton de 1995, 24-25)

Transferring these ideas to the interpretive researcher, commitment to the participants of the research increases the probability to discover the way people interpret and make sense of their experiences and the world they live in. Thus, involvement of the *interpretive* researcher in the empirical world he examines increases the reliability of his research results.
In line with these considerations, we have chosen to obtain data by participating in meetings of the Writer in the School with the children, their parents and teachers, and to closely observe what's happening. Moreover the teachers were asked to write a journal, keeping up children's reactions on the Writer in the School. The web log of the Writer in the School has also been added to the research data.

The Writer in the School: Encouraging imagination and empowering

According to her web log, the Writer in the School aims at tempting the children to step into the world of reading, writing and telling stories. Her main goal is to encourage the children's imagination. Therefore, ideas that logically spoken make no sense at all are being considered the most interesting, significant and valuable ones.

Being bewitched

Writer in the School: "(…) Keep raising your hand when it is true what I say right now: Who of you has ever been bewitched?"
Children chuckle and lower their hands. All but one.
Writer in the School (to the child who still is raising his hand): "OK, just come here, you're the Champion of Imagination. Guys – what's your name again?"
The child says his name (J.)
Writer in the School: "Give him a huge applause! J. is King of Imagination!"
Applause sounds.
J. indicates he has been bewitched in a dream. The Writer in the School writes down his name, and draws attention to the story of J.
Writer in the School (in a whisper): "Listen, this may be an author to be!"
J.: "My dream was like this: I came out of bed. All of a sudden I noticed: everything is green. It's green all over het place. I open the cupboard, there is a light, and the witch [comes] from over there. [The Writer in the School makes a horrifying sound]. And: 'Abracadabra, turn into a frog.' And then I woke up very hard."
Writer in the School: "And…, did you turn into a frog?"
J.: "No."
The children laugh.
J.: "I had to go to school already."

Writer in the School, laughing: "You had to go to school already! Did you still have your normal body? Glad to hearing you did, because what would the teacher have said if you'd come to school like a frog? Would you've been allowed to stay?"
J.: "No, because then I wouldn't have gone to school."
Writer in the School: "Oh, so then you wouldn't have gone to school?"
J.: "Then… I would have gone to the river."
Children are getting more tumultuous.
Writer in the School: "Listen guys, guys… J.,… this is really nice. You stay in the frame of the story: being a frog you wouldn't have gone to school. Of course not, what kind of a place is a school for a frog? You would have gone to the river. (…) "
J. is shining with pride because of these compliments made by the Writer in the School.

In situations like these, being the only one raising a hand can be quite an embarrassment. Chances multiply of being considered a simpleton. But being considered a simpleton in the eyes of the Writer in the School is out of the question. On the contrary: the child claiming to have been bewitched is declared the "Champion of Imagination", possibly "an author to be". This Champion is invited to explore the highly imaginative path he has chosen to walk. And he does not have to do it all alone. The Writer in the School assists him in his narrative adventure posing questions and responding to the story. She even compliments him for good (narratological) reasons. The Champion of Imagination is enjoying it immensely.
One of the head teachers brought up that teachers have to work under enormous pressures these days. They have to make sure children achieve the highest possible academic standards. This striving for academic achievements sometimes interferes with "fantasizing, stimulating the children's imagination…". To her, the surplus value of the Writer in the School is filling in the gap by challenging children to explore their imagination.

The Queen in the tree

The Writer in the School brings up that one story can be funnier than the other. Take for instance, the story of Annie M.G. Schmidt [a very famous Dutch author of children's books] she just read to the children. That is a story with a twist.
Writer in the School: "That's why it's a funny story. Because did you ever meet a Queen climbing a pear tree…? "
Children: "No ..."
Writer in the School: "…and have you ever seen a Queen hatching an egg in a lime tree?" Children respond in various ways. (…)
Writer in the School, turning to a girl (R.) (…): "R. you just said you actually do know a Queen – quiet boys, because something very special is happening here. R. actually knows a Queen hatching an egg, don't you? ... And (…) where does this Queen live?"

R.: "Eh ... I don't know very well… in Flevopark."
Writer in the School: "Ahh! Now we know! The Queen is hatching her egg in Flevopark. And what will be crawling out of this egg?" (…)
R.: "A cow."
Writer in the School (exclaims): "A cow! [laughter] (…) O., what do you think will be crawling out?"
O.: "A witch."
Writer in the School: "A witch will be crawling out… Well, that seems like a good idea to me. A witch crawling out of a witch's egg. Brilliant! (…) Well, time's running out. Please write down all your marvellous ideas in an email. Remember: Annie M.G. Schmidt wasn't born an author. She's been a child as well, just making up stories."

In this fragment logically impossible solutions prevail as well. A Queen hatching an egg in the tree must be logically considered impossibility, but narratologically a treasure. It is an incentive for the imagination. Starting a process of creating stories, fantasy and imagination can be brought into play without any restrictions. But during this process, distinctions will have to be made between the ideas created. The cow crawling out of the egg is hilarious, but the witch crawling out of the egg fits the narrative much better.
Inviting the children to write down all their marvellous ideas, the Writer in the School expresses confidence in the children's creative writing skills. The remark that Annie M.G. Schmidt started just like them ("a child […], just making up stories) even enhances the empowering effect of her final words that day: it enables the children to relate to this famous author of children's books and it stimulates them to keep in mind that they all can be famous authors too one day.

The web log bears witness to the empowering effect of the Writer in the School:

M. was the surprise of the day. Even the mothers could not believe their ears. 'Did you make that up all by yourself?' a mother asked incredulously when M. had finished reading. Yes, M. really made it up all by himself. (web log)

I was overwhelmed by the amount of stories [I collected today – ML]. Almost everyone had been writing a story. My bag was much heavier when I went home! It's quite an honour actually, being allowed to receive those beautiful stories ... (web log)

Meeting the parents of the children, we discussed story telling. These mothers love to tell stories, not to my surprise. Do you know about Antar, the Black Prince? I asked. He's an Arab mythological character. They started shining: sure they knew him! Great stories! What about collecting them? I asked. I'll write them down. That way, we'll create a book

filled with stories unknown to the indigenous Dutch people. (…) The mothers promised to help collecting stories. I'm looking forward to it. (web log)

Narrative imagination

Educating children is a complex phenomenon. Not just the practice of teaching and learning, but constructing, developing and thinking through educational theories (including their underlying premises) as well. Achieving measurable results and correcting deviant behaviour of children seems to be the main focus of education leaders and politicians these days. Focussing on achieving measurable results was already brought up by one of the head teachers. The Dutch pedagogue Micha de Winter (2011) compares the focus on correcting deviant behaviour to puppy training: training a dog is about being consistent, correcting wrong behaviour and rewarding good behaviour. Educating a child however is far more complicated. It is about learning to understand and experience democratic and critical citizenship as well.

The American philosopher Martha Nussbaum (2010) alerts her readers to a silent world-wide crisis in education, evolving out of a growth-oriented paradigm. This crisis manifests itself in cutting away the humanities and the arts in education virtually all over the world. *"If this trend continues, nations all over the world will soon be producing generations of useful machines, rather than complete citizens who can think for themselves, criticize tradition, and understand the significance of another person's sufferings and achievements."* (Nussbaum 2010, 2)

Both de Winter and Nussbaum underline the importance of educating democratic, critical citizens. With their concepts of education, they are obliged to philosophers and pedagogues like John Dewey. Throughout his work Dewey argues that education and learning are social and interactive processes. School is not just a place to gain content knowledge, but also a place to learn how to live with other people. Dewey considers school as a *"miniature community, an embryonic society"* (Dewey 1907, 32) where children can experience life as a citizen.

Nussbaum (2010) favours a form of education that promises good citizenship. She argues that cultivated capacities for critical thinking and reflection are essential to that form of education. She puts forward the concept of 'narrative imagination' as an important ability of the citizen. Narrative imagination *"means the ability to think what it might be like to be in the shoes of a person different from oneself, to be an intelligent reader of that person's story, and to understand the emotions and wishes and desires that someone so places might have"* (Nussbaum 1997, 10-11). Narrative imagination refers to the ability to imagine the experience of another.

Reading and telling stories – the main activities of children during the meetings with the Writer in the School – contribute to this ability. By valuing ideas that logically make no sense

as the most interesting and significant ones, the Writer in the School stimulates the capacity to see things from a different, unexpected perspective. Ignoring the fact that it is logically impossible to have ever been bewitched, the Writer in the School opens a new world to be entered and explored. This 'opening new worlds' can be considered a first step in 'thinking, what it might be like to be in the shoes of a person different from oneself.' Nussbaum continues with the explanation of the concept of 'narrative imagination' clarifies why the activities of the Writer in the School can be seen only as a first step towards narrative imagination:

> *"The narrative imagination is not uncritical, for we always bring ourselves and our own judgments to the encounter with another; and when we identify with a character in a novel, or with a distant person whose life story we imagine, we inevitably will not merely identify; we will also judge that story in the light of our own goals and aspirations. But the first step of understanding the world from the point of view of the other is essential to any responsible act of judgement, since we do not know what we are judging until we see the meaning of an action as the person intends it, the meaning of a speech as it expresses something of importance in the context of that person's history and social world."* (Nussbaum 1997, 11)

Critically understanding the world from the point of view of the other can be considered a goal hardly achievable for children in primary education. Selman's (1980) theory of social role taking for instance – a theory dealing with developmental differences in children's ability to take the perspective of another – suggests mutual role taking just starts during the final years of primary education. Taking into account that mutual role taking does not coincide with a critical encounter with another. Attaining narrative imagination can be considered more suitable for students in secondary education. Excerpts from *The Freedom Writers Diary* (1999) can illustrate this:

> *"Dear Diary,*
> *We've been talking about the war in Bosnia and how similar some of the events are to the Holocaust. We have been reading about a young girl named Zlata, who many call the modern-day Anne Frank. Zlata and I seem to have a lot in common because while Zlata was living through a war in Sarajevo, I was living through a different kind of war – the L.A. riots. Ironically, Zlata and I were both eleven years old when our city was under siege. I can understand how afraid and scared she was to see her city go up in flames, because my city was on fire, too. (…)*
> *Zlata and I lost our childhood innocence because we were denied the right to do childlike things, like go to school, talk on the phone, and just play outside. The buildings were burning and the people got beaten up just because of the colour of their skin, their*

religion, or ethnicity. Unfortunately, we both had to suffer because of other people´s ignorance and destruction. (…)
I can't believe that someone I don't even know, who lives thousands of miles away, could have so much in common with me." (The Freedom Writers & Gruwell 1999, 73-74)

This Freedom Writer critically compares his world with the world he encounters reading the book of Zlata Filipovic. This fragment also illustrates another ability of citizens Nussbaum distinguishes: the ability "to see themselves not simply as citizens of some local region or group but also, and above all, as human beings bound to all other human beings by ties of recognition and concern." (Nussbaum 1997, 10) Reading Zlata's book links this Freedom Writer to someone living in a very distant place.

Conclusion

Reading, writing and telling stories with the Writer in the School encouraged the imagination of the children. The Writer in the School stimulates the children to think outside the box and to enter and explore new and unexpected worlds. That way the Writer in the School contributes to what Nussbaum calls 'narrative imagination': the ability to imagine the experience of someone else. The capacity to see the world through another person's eyes as an (adult) critical citizen has to be activated during childhood education. Focussing on achieving measurable results can jeopardize this attention to creative thinking. Initiatives like The Writer in the School can redress the balance of results-oriented and human development-oriented models of education.
Restoring the balance in favour of human development oriented models of education is all the more important to so-called 'minority children'. Children of families with recent histories of migration who live in deprived circumstances often are regarded as problematic and socio-culturally deprived children. The Writer in the School and the involving orientation on human development improves the self-esteem of the children and their parents. Children and parents are proud to be working with the Writer in the School, regardless their familiarity with the new language. Mothers came to meet the Writer in the School, even if the Dutch language was hard to understand for them. Mothers more acquainted to the Dutch language were willing to translate if necessary. They all were proud that a Dutch author of children's books worked with their children on a weekly basis. And they were curious meeting this author about whom their children spoke so enthusiastically. Regardless of their familiarity with stories, story telling, and the Dutch language.
In various parts of Europe populist politicians equate migrants with problems and deficiency. Stemming this current opinion, initiatives like the Writer in the School empower children and

their families, assuming every child has the capacity to think creatively. Like a student of Kathy Evans – one of the teachers of the American WritersCorps –, as she recalls:

> *"My first assignment was in San Francisco's Tenderloin District, where I worked in a centre for community resources and development, teaching immigrant children poetry, which was a way of also helping them to learn first-time computer skills. I loved those kids, the ones who lived in small apartments, sometimes ten to a family – or no family at all – some with very limited English, others, wise beyond their years because of what they had witnessed on the streets. One student, Alan Nyguen, had no concept of what poetry was or meant. Every time I mentioned 'poetry,' he thought I was talking about a 'Poet-Tree.' One day he typed this poem:*
>
> ***POET TREE***
> *Today I went to the park.*
> *I saw a tree.*
> *I like the tree.*
> *It's a different tree.*
> *It spells words.*
> *One day it grew my name.*
> *Birds come on it.*
> *I always come to that tree."* (Sweeney 2009, 175)

Regardless of degree of the child's literacy, the (narrative) imagination of a child is there to be activated. It even has to be activated if we aim education at democratic and critical citizenship, from the earliest days of the child's schooling. Like Writers Corps and the Freedom Writers the Writer in the School can be considered a valuable contribution towards education for critical citizenship.

References

Botton de, A. 1995. *Kiss & Tell.* London: Macmillan.

Dewey, J. 1907. *The School and Society.* Chicago: University of Chicago Press.

Nussbaum, M. 1997. *Cultivating Humanity. A Classical Defense of Reform in Liberal Education.* Cambrigde, Massachusetts / London, England: Harvard University Press.

Nussbaum, M. 2010. *Not for Profit. Why democracy needs the humanities.* Princeton and Oxford: Princeton University Press.

Saunders, D. 2010. *Arrival City. How the largest migration in history is reshaping our world.* London: William Heinemann.

Selman, R., & Yando, R. 1980. *New directions for child development.* San Francisco: Jossey-Bass.

Sweeney, C. 2009. *Days I Moved Through Ordinary Sounds. The Teachers of WritersCorps in Poetry and Prose.* San Francisco: City Lihgts Foundation Books.

Tertoolen, A. 2010. De stem van de leerling. Retrieved from: http://www.lectoraat.nl /library/File/De_stem_van_de_leerling_KK_200110_Anja_Tertoolen.pdf

The Freedom Writers, & Gruwell, E. 1999. *The Freedom Writers Diary.* New York: Broadway Books.

Wester, F., & Peters, V. 2004. *Kwalitatieve Analyse. Uitgangspunten en procedures.* Bussum: Uitgeverij Coutinho.

Winter de, M. 2011. *Verbeter de wereld, begin bij de opvoeding. Vanachter de voordeur naar democratie en verbinding.* Amsterdam: Uitgeverij SWP.

INITIAL TEACHER EDUCATION AND THE VIEWS OF THE STUDENTS

Practice in Teacher Education:
Preparing Teachers for Work and Life in an Educational Community

Dr. Dieter Schulz

Abstract

It is true that public interest in the profession of teachers has considerably grown after TIMMS and PISA, the international tests of school efficiency, were published. Thus, the debate concentrated more and more on those whose work is decisive for an efficient performance of school education, namely: teachers. Teachers are expected to combine the characteristics of more than one personality at the same time, as for example: being advocates, advisers, therapists, hosts, organizers, initiators, or entertainers. This list could easily be enlarged. However, any experienced educationalist will know that the accumulation of too many tasks does not work. As attractive a vision of a social and political omnipotent role of a teacher may be, it will soon turn out to be merely a mirage that can never come true, but which will rather trigger off a chain reaction of frustration.

Keywords: teachers' professionalism, accents of development, school practice, stuff development

Teachers' Role and Professionalism

We had to learn from educational practice at schools that families nowadays are more influenced by social change that they used to be. Because this is so, it is teachers who are expected to take over educational tasks, which families no longer feel to be responsible for, or, for that matter, can no longer cope with. Parents' natural or inborn obligation to be responsible for their children's education is slowly shifting towards the responsibility of teachers. This development implies that the teacher education and training system will necessarily be obliged to discuss these problems and to prepare students adequately. A debate of pedagogical solutions seems to be urgent in the face of the questions raised. But although these thoughts may well be convincing and true, one still has to be cautious because, obviously, schools and teachers are confronted with an increasing number of duties generated by society, which teachers then are expected to fulfill.[1] Or – to phrase it differently – schools are quite often understood to be a kind of repair shop for a great number of social deficits and ruptures. Having said that, this caricature should not lead to the misunderstanding that a teacher's job should consist of nothing more than merely rejecting

[1] Cf. Cloer, E. Gymnasiallehrerinnen im Urteil heutiger StudentInnen. In: ders. (ed.): Welche Lehrer braucht das Land? Notwendige und mögliche Reformen der Lehrerbildung. München 2000. S. 107

demands targeted at altering his or her professional obligations. The mandate to provide predominantly educational teaching units has been and will be eternally valid. However, nowadays the raison d'être of this assignment is even more varied than before, and the approaches are more individualized than they used to be: "We have to cope with our students' actual problems in life before we can offer solutions to their problems of learning".

For many years, it had been common practice to improve educational professionalism by employing strategies to heighten scientific input. Admittedly, good progress was made on the way to attain deep subject related knowledge. At present, the debate is being pursued in a context of differentiated reflections on "quality in schools", taking place in various fields of conduct. However, since a school system – generally speaking - cannot be better than the teachers who are involved in it, under the heading of "development of manpower", questions of teachers' authority are, at present, equally investigated. Indeed, it is in this area that we find momentous deficits of teacher education models being insufficiently conceptualized. There is still no process of verification of the quality of academic results of what has been learned in the context of good teaching practice. Or, to put it differently, there does not exist a clear distinction yet between a job profile and a job career. The concept of a teacher's profile has, indeed, to begin with taking into account the conditions of a school's cultural and educational environment.

Educational professionalism will be understood, more often than not, as being located between concepts like being useful for everything and a "sophisticated mellowness". This, however, is merely a functional view. The development of educational professionalism will doubtlessly have to be initiated right at the beginning of teacher education and training. Its foundation is constituted by an academic study of educational theory and practice including subject oriented study courses as well as special didactics, educational pedagogic and educational psychology. During their educational studies teacher students will be offered the opportunity to develop and train their didactic skills when, for example, giving a paper on research results, which were presented earlier in study courses. Not only will they learn to focus them according to their academic significance, but they will also apprehend how to do their own research. In the end, these are the didactic skills, which also guide the learning process at school. Teachers, who never developed their own investigative skills, will find it hard to arouse their students' interest for intellectual discoveries and research. They also ought to have found out and know where the transition line between learning and research is, and they also ought to have gone all the way from novice to educational expert. Having acquired a kind of "implicit knowledge" concerning context and sequence they will be expected, with good reason, to differentiate between significant or insignificant questions when problems occur in school teaching.

Professionalism points at a concept that demands an overall responsibility, which means that the sum of its parts does not encompass the sum total. The sum total, in its turn, will only become evident in its situational interaction. Essentially, we are talking of five criteria, which, in their collaborative action and personal interaction, may lead towards a new profile of teacher education and training:

Professionalism,
Life-long Learning,
Responsibility,
Co-operation,
Flexibility.

Significance of Teacher Personality for Education and Teaching

"Responsibility" as a criterion has to be elucidated and illustrated in a more intensive kind of consideration since we are not talking of "housekeeping" or an "economic-ethic dimension", as a matter of priority. The responsibility teachers have may be deduced from the simple fact that these professions exist only because children and adolescents have to be supported to the best possible degree. After all, responsibility always encompasses the task to care for children in our present time as well as for their future. A simple model of education and training directed at a "the standard pupil" does not exist.[2] Every child is different and deserves to be addressed individually. This means, of course, that teachers ought to understand their pupils in different behavioural situations, because it is here that the proper pedagogical professionalism will be developed. "This kind of sensitivity which is characteristic for the tactful teacher may be circumscribed as a feeling for his fellow men, for the individuality and the otherness of different people. It reveals, at the same time, respect towards a, in the last instance, inaccessibility of the other. As any other sentiment it cannot be predicted or planned in advance. Sensitivity will be realised in concrete, but unpredictable situations a person is being thrown into, by way of caring for other people's needs to be assisted, if necessary. Tactfulness will never encroach on other people's privacy."[3]

Teachers or educators' sensitivity will be complemented by a certain restraint and self-control they exercise towards their pupils. True sensitivity is revealed by acting tactfully that is by abstaining from coercion, an attitude, which can rather be defined by omission than by

[2] To my understanding this is an important argument for a differentiated school system, because "there will be nothing more unjust than to demand equal results from those who are not equal!"
[3] Cf. Muth, J.: Pädagogischer Takt. Monographie einer aktuellen Form erzieherischen und didaktischen Handelns. 2. durchgesehene Auflage. Heidelberg 1967

action. At the end of the day, restraint will allow the other one to be or to become what has already existed, but maybe was hidden in his nature, in the first place. By not trespassing one's own limits, one does, indeed, respect the limits of other people. Neither does this attitude expose the private sphere of others, while it nevertheless takes care of it.

Although this might sound somewhat philosophical and idealistic – it is this interplay of restraint and sensitivity that will help adolescents to accept a teacher's authority, which, as a matter of fact, is the pedagogical authority. Unfortunately, neither those who are in charge of teacher training for teachers themselves seem to be well acquainted with the mechanism of this relationship. There can be no doubt that all those who merely rely on their authority because they are "in charge" or because they passed a university exam or employ disciplinary measures to coerce good conduct, will soon be steamrolled by their students. Sensitivity as well as restraint can only be effective in concrete situations, which, more often than not, take a person by surprise. Whoever keeps a low profile in a calculating way will, in principle, not act tactfully because this kind of restraint does not care for the other but only for his or her own interests.

To be sure, it will hardly be possible to organise such educationally professional habits of teachers in a technical way. They rather grow from a background of permanently reflecting one's own actions. It shows that there still is a considerable shortfall in this area of teacher training. Practical teacher education units are sometimes in danger of overemphasizing the planning phases of tuition as part of an anticipated reality. But thinking intensively about sections of tuition or about pedagogical actions will in most cases be neglected and not thoroughly exercised, which then may have a detrimental effect on teacher's acting.

Teacher Education – Theory and Practice in an Area of Tension

It has become a common kind of stereotypical thinking that Higher Education Institutes do not tend to be in favour of practice, but that practice tends to disqualify theory. However, this being rather a sort of "armchair policy", no serious deduction for professionalism in teacher education could be conceived from that angle. Theory and practice will by necessity have to be regarded as sides of the same coin, because professional pedagogical acting, indeed, has to be grounded in theory.

However, here we come across a certain kind of misunderstanding, which, unfortunately, seems to be quite stubborn and hard to remove. Pedagogy is not merely an empirical science. Neither can pedagogical actions be explained by the repetitions of habits or other

mechanical routine exercised by numerous agents. Pedagogy as science is not only a mere postulation – it's scientific character is, indeed, constituent.

Allow me to focus my perspective on and discuss phenomena in my own country, although comparable things may well be found in other countries, which, I am sure, members in the auditorium will be aware of.

In the federal member states of Germany, various approaches towards a reform of teacher education have shown in recent years that the pedagogical element called "vocational practice" is pivotal, while, in blunt contrast to that consideration, in reality, this assessment seems to be more than disregarded. Ideal type concepts are contrasted with pragmatic results, which, however, do not contribute towards a consistent relationship between theory and practice.

Although in about all occupations that require training, a proper linkage between theory and practice has been achieved as a matter of fact, it seems to be strange that this is hardly the case in academic oriented training. In principle, it is quite clear that teacher training simply will not be good enough without a close relationship of theoretical and practical elements, notwithstanding the fact that the introduction of internships, in some cases, has led to an even greater confusion than which, in all fairness, could have been anticipated.

To be sure, internships used to be part of regular teacher training courses at pedagogic academies and colleges. In a way, they stood for a practically orientated vocational training. Fully acceptable as this was on the one hand, it still lacked an important element, and that was the non-exciting connection with the school subjects the teachers were to teach, in short: the connection with the vocational academic disciplines and/or the related subject science. And it was not helpful either to point out that there were specialists for methodological questions who were in charge of connecting the needs of vocational training and the subject science. However, this claim was merely tolerated by the universities as a kind of excursion into the practice, with a slightly ironic undertone that it could not be wrong altogether to take a good look at practical events outside academia, although, really, the students should already be well aware of what was going on after having been at school for 12 or even 13 years. Having said that, the universities were not in a great mood to stop them from attending practical courses since they luckily took place during university vacations.

By and large, the general public concerned with education and science turned a blind eye and was happy with the introduction of internships as part of the curricula. What could be less harmful for "practice hungry" students than to look over the artist's shoulder and to try to

copy the master's work? But pedagogy is not a craft like in guilds or trade corporations and their so-called roles of training.

It has been nothing less than a hard quarrel for us to find out what it means when we ask for a qualified connection between theory and practice. And it was only after endless experiments including the creation of mixed forms and rejecting them again that we were finally happy with what we called "SchulpraktischeStudien", which might perhaps be translated as: "school-oriented practical study courses". It cannot surprise anyone, though, that it was more than a hard job to convince people that this, indeed, was the solution to our problems. And even granted that by now this educational element may enjoy some greater approval than it did, it still needs the occasional caveat that we have not just exchanged the labels of an educational element that had been there for a long time. On the contrary, there is an essential difference between internship and school-oriented studies, on which we do insist: school-oriented studies approach practice via theoretical studies and want to find out theoretical implications in practice and understand the part of practical involvement in theory. In other words: school-oriented studies will never come along isolated. They present themselves as being a link of mutual responsibility between university/student and schoolteachers on the one hand, but they also have a considerable potential of innovation on the other hand, which, alas, is but rarely accepted or appreciated as such by the universities. Thus school-oriented studies are a study element of some weight, which may have the power to instill qualified energies of education and training into a mutual interdependence.

New Accents of Development

Dovetailing School-oriented Practical Study Courses

Linking the first and the second phase of teacher education is a necessary prerequisite for moulding the element "SchulpraktischeStudien" into a form that meets the desired qualitative standard. Provided we agree upon the assumption that vocational practice of teacher education deserves the pedagogical dignity to be researched and studied as an academic subject, those who are in charge at universities or schools should feel obliged to develop suitable ways of teaching and learning, as for example:

- School-oriented practical study courses have nothing in common with "vocational school tourism". It is rather so that schools and seminary rooms are study areas side by side, being the proper places for theoretical statements to be examined, or where subject specific and pedagogical ideas may prove to be seminal for further studies. This implies that, by necessity, school-oriented practical study courses need

differentiated preparatory courses for students as well as consummate training for school tutors.

- Any university faculty of teacher education and school research should feel obliged to make sure that only those academics are admitted as qualified professors or lecturers who do not have less than three years experience as teachers in schools. With regard to university acts which have postulated such demands again and again, this, indeed, is not new, but, deplorably, there have been ways to bypass these obligations and that not only for professorships of pedagogy but also for psychologists employed in the same faculty.

- The engagement of temporarily delegated teachers proved to be a successful measure for the implementation of linking theory and practice, as was made clear by convincing results in the city of Leipzig.[4]

- A three months long basic internship as a prerequisite of university enrolment and a further two internship semesters / school based practical studies should be introduced which replace the traditional three to four weeks long internships. This should be the case during Bachelor as well as during Master study courses.

- All kinds of internships and practical semester are in charge of universities, which involves the task of sitting in on school classes for the students and their accompanying monitoring university teachers as well as to document and evaluate the results, which, in their turn, will serve as teaching material for future studies.

- All forms of internships will be ascertained in experts' reports and will be documented in talks that also advise students on their expected suitability as teachers. The results of these assessments bear significance for the first final degree of teacher education, which is the so-called Staatsexamen.

- While the university teachers' task to monitor the students is important enough, there can be no doubt that school tutors' special training as mediators of theory and practice is of overall importance. Their introduction should be differentiated and reflect the multifarious demands of their responsibilities. The university of Leipzig, in cooperation with the teacher training institutes of the Free State of Saxony, has submitted and put into practice three outstanding concepts, which, in addition, claim to be able to reduce the time span of the second cycle of teacher education.[5]

[4] Cf. Frank Haß / Jörg Oettler / Rita Thomale: Lehrerausbildung in der Schule. Stuttgart 2008

[5] Oettler Jörg: Rolle und Selbstverständnis der Mentoren in den Schulpraktischen Studien. Entwicklung einer Qualifikationsmaßnahme zur wissenschaftlichen Begleitung von Lehramtsstudenten. (Diss. Universität Leipzig, Erziehungswissenschaftliche Universität) Norderstedt 2009

- School tutors ought to be reimbursed in one way or another for their responsible and extensive tasks. If a financial reimbursement should be problematic for reasons of a tight budget, other ideas should be taken into consideration in order to acknowledge their special contribution to teacher education. One of the most obvious possibilities could be to integrate their names into the official faculty lecture timetable. Another feasible suggestion was realised by the State of Baden-Würtemberg where tutors, after ten years of engagement, are granted the title ”Senior Student Tutor”.

- The proportion of educational studies ought to be raised in relation to the subject studies, because it seems that the present situation is more than out of balance. Although it is true that teachers will normally be called “pedagogues”, a title which generally is linked to a previous academic study, it is also a commonplace that teachers, more often than not, do not study pedagogy as a subject.

- The administrative structure of the present school system will have to be gradually changed towards genuine all-day schools. In Germany, however, the majority of schools are still characterised by the fact that they offer, to a great degree, merely half-day tuition, enriched, as it were, by what may be ironically called “social camping”. A real all-day school would, in fact, have a beneficial effect on the public reputation of teachers, which is urgently needed (cp. the results and statements concerning the public reputation of teachers in the international performance studies, especially those for the Scandinavian countries).

- By and large, the real all-day school will also exercise a lasting effect on a pedagogically desirable numerical balance of male and female teachers. This will also cause a strategical change of the salary regulations, even when this cannot be achieved at the moment. It is, however, hard to understand, why primary school teachers should receive a lower salary than teachers of secondary schools, although it is this group that realizes the decisive basic educational work, thus being responsible for the children’s educational biography (“Primary school teachers are children’s destiny!”).

- The time span for educating a generation of pupils (15 to 18 years) is very different from the time span of parliamentary terms (4 to 5 years). In other words, members of parliament will be responsible for decisions, which may be outside their time of mandate. Their votes may well have consequences for generations of pupils to come. Those who are in charge should be aware of this fact, because it may well be that adolescents will not find out but at the end of their school career whether the decisions taken were wrong or right.

- At the same time, thinking in generations will offer the opportunity to finance educational tasks as investments for the future instead of subsidizing it as it still done today. Although it is true that some political areas of schools and universities are market oriented, we still turn a blind eye when it comes to financing educational matters.

Broadening Curricular and Methodological Dimensions

- While we acknowledge a positive development in the new shape of the introductory phase of the school career (structural and curricular slimming down and a mutual responsibility of kindergarten and primary school), this development has also to be taken into consideration for teacher education and training of all teaching professions, as postulated by the results of international comparative studies.
- The same applies for the pedagogical consequences of the international "Conventions for inclusive education".
- The changes on all levels of social life ask for the inclusion of social and special educational themes in teacher education for primary and secondary schools, and that independently of the structure of BA and MA studies in the federal states. Clearly, any decisions of merely symbolic character have to be avoided.
- A school for the future, which aims at personal independence and autonomy for its students, cannot succeed without teachers who, themselves, are not in command of these characteristics. Pedagogical liberty and responsibility are a constitutive antinomy of the profession; this has to be internalised and implemented into practical actions.
- A "Faculty for Teacher Education and School Research" has to comply with both thematic dimensions. Thus, inquiring and exploring learning is, indeed, an indispensable principle of study, which any teacher will have to observe in order to practice his didactic responsibility.
- It is crucial for a teacher to be an expert in pedagogic diagnostics to help to fulfil his pedagogical tasks. Therefore, and in order to learn and train this qualification, all students ought to be obliged to elaborate on a written observation of pupils' activities in the classroom to be evaluated by the monitoring staff. This should happen on a regular basis every term.

School Development via Staff Development

Teacher education and training consists of a life-long process encompassing the first cycle as university based education, the second cycle as school oriented practical studies and the third cycle as further education and training. Optimizing teachers' professional classroom performance is the overall aim.

1. The federal States of Germany organize teacher education and training at Higher Education Institutes. The above mentioned new form of school oriented practical studies (SchulpraktischeStudien) claim to realize a qualified change of the relationship between theory and practice while, at the same time, reducing the time-span of the second cycle from 24 to only 12 months. For me, this overlapping phase of education from first to second cycle has, so to speak, a kind of rhythmic structure.

2. Teacher Further Training is a compulsory part of every-day work. Here, already acquired qualifications will be broadened according to scientific progress. Those courses, which offer certificates, may provide the possibility of promotion.

3. Participation at further training courses will lead to a scientific qualification that facilitates the engagement in new educational areas.

4. Teachers' educational practice is increasingly challenged by the fact that the acquisition of more and higher administrative skills are being expected. This applies above all to leading positions in education. At the end of the day, a school's quality depends to a great degree on the academic qualification of the school's head.

5. And, although there does not seem to be a great dissent, neither on a national nor on an international level, job advertisements and job profiles for leading positions should be improved in order to meet the requirements of modern schools.

Education or Training?

Giving unilateral preference to science in teacher education would be wrong, which, on the other hand, does not mean that science should not be the fundamental principle of education at all. And it does not mean either that students should not employ scientific working methods. In the long run, it is more important to find out, how the scientific knowledge of pedagogy and didactics can serve educational practice. That is why the basic aim of teacher education will always have to be guided by a certain and often delicate balance between theoretical and practical approaches. Because theory, indeed, is instrumental to overcoming deficits of practice, and it is hardly conceivable that problems of everyday practice could be

surmounted without relying on theoretical rules and regulations. Professional pedagogic actions have to be grounded in theory. They cannot be reduced to mere experience and routine, but will be exercised systematically and analytically, never, however, coincidentally. This is a far cry from what is understood by the British concept "School of Education", although it might be quite tempting to follow that seemingly convincing idea behind it. However, caution is needed. It would be fatal to accept an educational "Master-Apprentice Academy", a scheme that would come close to turning the wheel a hundred years backwards.[6]

The basic aims of teaching consist in equipping students with skills, which are comprehensive enough to meet the requirements of their personal and future vocational lives. These skills can be divided into three fields: competence in subjects, competence in applying methods, and competence in social matters. Naturally, the skills students acquire ask for corresponding skills teachers have to possess, which are subject oriented competence, as well as didactical and pedagogical competence.

If it were agreed upon that competence of action should be a decisive objective of teacher education, this would first of all mean that a close cooperation of teachers at schools, at universities and at the institutes of further teacher training would have to be established. Of course, this kind of cooperation will only be successful if undue competitive struggles can be avoided.

All levels of teacher education have to guaranty educational, didactical and vocational study courses. In the first place, teachers are rather experts in education and culture than specialists in a single discipline. It would neither be permitted nor feasible to understand theory as subject discipline and pedagogical education as practice only.

Furthermore, a stronger focus on Europe is needed for teacher education while the national trend will have to become less important, although there will always exist school related levels of education. Nevertheless, the question has to be answered how the understanding for other cultures can be raised. That is why an intensive study of one foreign language should be obligatory as part of teacher education. It should also be suggested to enable teachers to work in foreign schools in order to obtain substantial insights into other cultures. And last but not least, there should be a kind of European curriculum based on comparable or similar European elements of teacher education, which then would facilitate teachers'

[6] Cf. the differentiated and clear conclusions by Görner, Rüdiger: "Dem lebendigen Geist". Britisch-deutsche Interventionen zur Hochschulpolitik. Herausgegeben vom Deutschen Hochschulverband. Bonn 2011.
Pritchard, Rosalind: The British Higher Education Sytem and the Bologna Process. In: Peter Gutjahr-Löser / Dieter Schulz / Heinz-Werner Wollersheim (eds.): Wissenschaft und Akademische Bildung. Ist Theodor Litt für die gegenwärtige Hochschulpolitik aktuell? Theodor-Litt-Jahrbuch 2010/7. Leipzig 2010, S. 181-201.

possibilities to teach at European schools.[7] As a matter of fact, an exchange programme for teachers can only work well provided that the national teacher education schemes are mutually acknowledged.[8]

Suggestions

It seems to be more than probable that the abundance of yet unsolved and controversial points of view of a new teacher education scheme will not be cleared by conferring the test procedure on a special examining board outside the university (a so-called accreditation office), although this, at first glance, may promise to be a more objective measure. While this, however, does happen right now, the academic autonomy will be undermined, its sense of responsibility will be weakened, and its strength will be annulled. The error rate of decisions has demonstrably not become smaller - on the contrary, necessary corrections were responsible for a longer procedure and, which is more, for a huge amount of increased costs. All this is caused by rash and unchecked concessions made towards the member states of the Bologna process, where Higher Learning Institutes do know neither the autonomous academic responsibility nor the autonomous academic administration.[9]

"Faculty for Teacher Education and School Research"

Concentrating the multi-facetted tasks and obligations in a "Faculty for teacher education and school research" will result in a great number of synergetic effects.

- Quality of Education for teachers of all school levels and forms will be increased to a hitherto unknown scale.
- A professional field-related education will be achieved by structural slimming down procedures and by curricular dovetailing of scientific subject oriented, special didactics and cultural education. It may also be feasible, in single cases, to opt for a cooperation of "smaller subjects" with scientific subjects, which then stand for school, related sciences.
- It has to be guarantied that the curricular tuning of the "Schulpraktishe Studien" will be the crucial prerequisite for a responsible reduction of the second teacher education cycle (Referendariat). Otherwise, serious deficits cannot be excluded.

[7] In the EU the basic right of free choice of employment exists since January 1st. 1993.
[8] Cf. Dieter Schulz / Aida Kruze / Wolfgang Lippke (eds.): Lehrerbildung in Europa – Lehrerbildung für Europa. Leipzig 2005 withspecialattentiontothe "Leipziger Erklärung zum Europalehrer", op.cit. p. 74.
[9] Cf. also Aida Kruze / Iris Mortag / Dieter Schulz (eds.): Globalisierung der Wirtschaft - Internationalisierung der Lehrerbildung. Leipzig 2006

- The academic and theoretical discussion in order to achieve a new understanding of the relationship between vocation and practice did, indeed, result in fairly irrefutable insights and concepts, while however, it must also be mentioned that the translation into action was and still is unexpectedly difficult. Tradition plays a major role in teacher education, and is responsible for a lot of unsolved questions concerning contents and structure. So it can only be seen as a deficit of academic policy when the quality profile for professorships is continuously being slimmed down, or when lecturers, but not professors have to bear responsibility for the teaching of didactics, which happens on a national as well as on an international basis. Moreover, it is also annoying that, when employing professors, it is still not necessary for them to furnish proof of an accepted experience in school teaching.[10] It can be no surprise that the personal equipment of universities with professors who have practical experience in teaching at schools has gone from bad to worse. It is almost certain that those who are engaged in teacher education have not had any contact whatsoever with schools after their own school life of pupils. And, there is still more than the usual amount of deficits in the professional group of "Pedagogical Psychology", where surprisingly often a new nomenclature for academic positions will be created.

Summing up the situation described above, it is an ambivalent picture that seems to be evoked: Although the analysis of the present situation of theory and practice in teacher education is as clear and distinctive as are the conclusions to be drawn, practice oriented school studies could indeed – maybe: nevertheless - become the very core of teacher education, because their function as mediator is exemplary.

Challenges of a Future Oriented Teacher Education

As an overall résumé of my thoughts I would like to re-emphasize the following points:

A unilateral preference of science and theory is not a promising path, which, however does in no way exclude that theory has to be the fundament of teacher education study courses, and that student teachers of course have to adhere to science based working methods. In the last instance, it will be more a question of how scientific knowledge in education and didactics is translated into action. This is why the essential aim in teacher education is to balance out the approaches of theory and practice, because, after all, theory is by definition instrumental to solving practical problems. That, however, can hardly be achieved by abstaining from

[10] In Germany, it is only the state of Bavaria that requires the proof of vocational experience as teachers. All the other remaining 15 states are more or less happy to accept compensational solutions although without defining their quality.

theoretical rules and regulations. Professional educational actions will be theory oriented grounded in problems and not restrained to routine, but covered by systematic and regular procedures.

Another standard aim of schoolwork consists in ensuring that pupils and students receive a thorough practical competence to meet the challenges of their personal and vocational lives. Practical competence can be divided in a subject based competence, a methodological competence, and a competence in social matters. The practical competence for pupils has to be met by the same competence for teachers, which again is composed of subject competence, didactical and pedagogical competence.

If the creation of these areas of competence is indeed the main objective of teacher education, a close cooperation of teachers of universities, school and further training institutes seems to be inevitable, which, however will be more successful if unnecessary tactical strategies of competition are avoided.
All good teacher education courses demand three elements as an integral part of their curricula, that is: educational, special didactics and vocational. This is so, because teachers are experts for education and culture in the first place. They are not specialists for a one subject only; theory and practice should not be divided into special academic subjects as theory and educational elements as practice.

A list of desiderata would be easy to accomplish, and – I am sure – the evaluation of our discussions at our present conference in Riga will deliver a broad spectrum of tasks, which is in itself an important aim of our academic discourse. Although reform of the present systems will be an item of great weight, we should never forget that any change in education and schoolwork has to pass the narrow passage of the needle's eye, namely: the teacher. This means that teachers have to be convinced that reform and change are necessary, and this aim will more easily be reached if teachers play a major role in the procedure of reforms. Mere orders by the ministry of education and science will not be sufficient, but may even have a contrary effect. National and international studies (PISA and TIMMS) corroborate these findings.

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Student Teachers' Workplace Learning in Professional Development Schools: About Affordance and Agency

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Abstract

This research focuses on workplace learning of student teachers in Professional Development Schools. Workplace learning is viewed as an interactive process between the affordance of the workplace and the agency of the student. Mentors from PDS were surveyed as to which activities belong to the affordance of their PDS. Students were asked which of these activities they had actually participated in and which not. The results show that the affordance does not contain all of the activities possible and that student do not elect to engage in all possible afforded activities. In the discussion it is put forward that workplace learning in PDS in this manner is impoverished.
Keywords: workplace, Professional Development Schools, students, teachers

Purposes of the study

The training of future teachers in the Netherlands is taking place increasingly within Professional Development Schools (PDS). A great deal of value is attached to this form of education and much attention is being paid to the quality of the PDS as a place of training student teachers. Quality has been largely defined from the perspective of how the PDS system is organised and the conditions necessary for collaboration and training (Timmermans, Klarus, & Van Lanen 2008). The focus leans towards the manner in which future teachers need to be *educated* within the workplace and has far less emphasis on how and what they actually *learn* there. The impression has been created that how and what teachers actually learn in the workplace is self-evident. The reality, however, is that little is known about this. In order for teacher training institutes and PDS's to ensure an optimal training pathway, and to qualify teachers effectively with solid foundations, it is important to clarify what exactly students learn at a PDS and what the contribution of the PDS actually is to this process.
The objective of this paper is to describe the contribution of the PDS and to provide an insight into what learning activities students elect to engage in.

Theoretical Framework

An important impetus for the establishment of Professional Development Schools is based on the idea that student teachers often learn 'teaching' more effectively in authentic situations (Buitink 2009; Tynjälä 2008). In research on the quality of the PDS from the perspective of training institutes, the key features of quality are defined as aspects and conditions relevant to the training of teachers and to the collaboration between the training institute and the PDS (Bredeson 2002; Geldens 2007; Onderwijsraad 2005). The assumption is that these features exert an influence on the quality, but it is not clear how. Studies on workplace learning from other professional sectors show that three groups of factors influence workplace learning and training. These are: the characteristics of the workplace itself, the characteristics of the student or learner and the characteristics of vocational education and training (Blokhuis 2006; Poortman 2007). Several researchers (among others Billett 2004) emphasize the role and type of workplace activities as learning possibilities within the regular working processes. Learning a profession, it is argued, is not merely a case of acquisition (that which takes place predominantly at the institute) but of total participation.

These workplace activities can be seen as learning opportunities and form the affordance the workplace invites student teachers to engage in. Consequently, *learning in the workplace* is viewed as an interactive process between how workplaces afford workplace activities and how student teachers elect to engage in these activities (agency). A PDS invites its students to participate in a range of workplace activities. The student teacher subsequently decides which of the activities he/she participates in or not.

This co-participation is eventually the basis for quality of learning in a PDS (Billett 2004; Fuller & Unwin 2004).

Research Questions

1. Which workplace activities belong to the affordance of the PDS?
2. Which of the workplace activities belonging to the affordance of a PDS do student teachers actually participate in (agency)?

Methods

Operationalization

Affordance of the PDS is categorized on the basis of the work activities and interactions of a teacher. Four categories are defined:

1. Activities for/with pupils.
2. Activities at school level.
3. Use of (teaching aid) sources.
4. Professionalization activities.

Within these four categories are 64 activities.
The full total of these activities or a selection thereof, forms the affordance offered by the PDS.
Agency is the choice student teachers make to engage in some or all activities comprising affordance.

Modes of inquiry

In order to gain insight into both affordance and agency, questionnaires were used. The questionnaire was developed on the basis of theoretical research, conversations with mentors and a pilot study.
The questionnaires were filled in by mentors and students from 20 PDS.
To measure affordance the mentors of the students were asked which of the 64 workplace activities were optional, which were compulsory and which were not accessible for their student teachers. To measure agency the students were asked which of the activities they had actually participated in (Yes – No). The mentors completed the questionnaires during the practical period of their students. The students completed the questionnaire at the completion of their practical periods.
A reliability analysis was carried out on the scores for the mentors and the student teachers within each of the four activity categories. The α-values (Cronbach's alpha) varied from 0,69 to 0,88. These results indicate that each of the four categories can be considered as reliable.

Data analysis

The survey can be described as an exploratory study. The data analysis focuses upon describing the affordance of the PDS, the agency of the student teacher and the relationship between affordance and agency. To this end, primarily descriptive statistical analyses were carried out.

Results and Conclusions

Affordance

97 Mentors completed the 'Affordance' questionnaire. The results show that the mentors viewed 86% of the activities as belonging to the affordance of the PDS: 63% of the activities were seen as optional and 23% as compulsory. This in turn implies that 14% of the activities are not accessible to student teachers (Figure 1). The activities from the category "Use of (teaching aids) sources" were available to virtually all students; while the "Professionalization activities" formed the category that least belonged to the affordance of the PDS. The workplace activities from "Activities for/with pupils" category were mostly compulsory activities.

The percentages as displayed in Figure 1 are also representative for the affordance of 1st, 2nd and 3rd year's students. The affordance offered to 4th years students contains considerably more workplace activities (94%), and the percentage deemed as compulsory for these students is much higher (41%) than that of the other students.

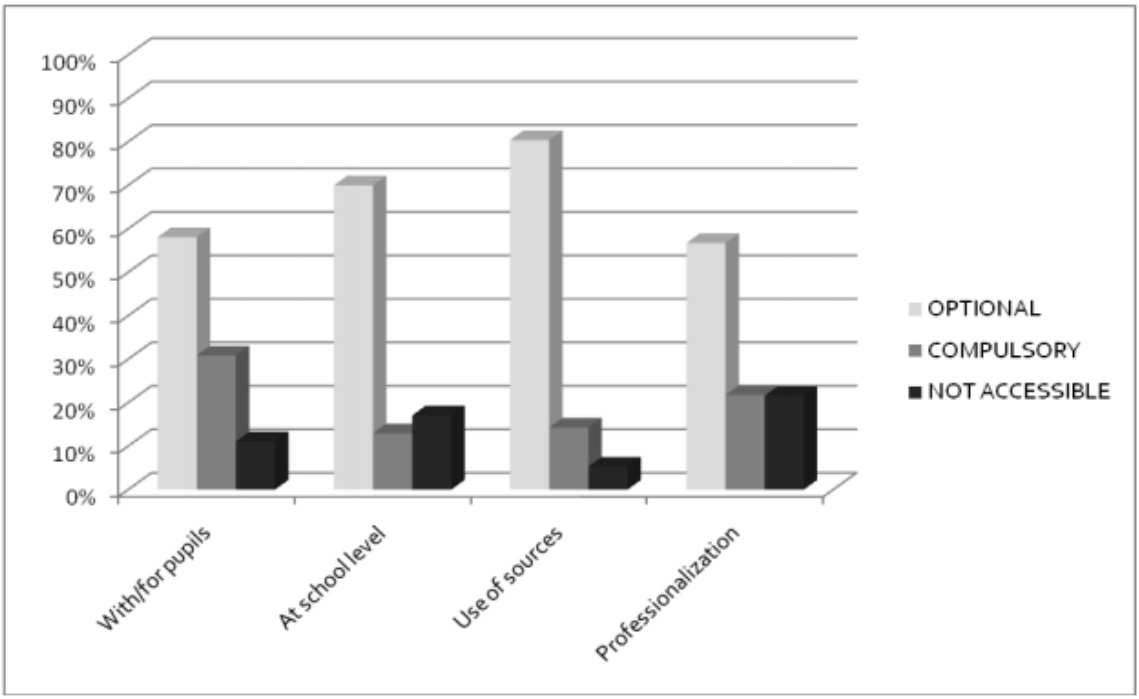

Figure 1. Percentages 'optional', 'compulsory' and 'not accessible' according to mentors (N = 97)

The results also indicate that the mentors have markedly different ideas about which workplace activities can or have to be afforded and which not. 13 of the mentors indicated that no single activity was 'compulsory'. Similarly, 5 mentors deemed all activities as openly

accessible to their students and there were 3 mentors who deemed 25 or more of the activities as *not* accessible.
A more detailed consideration of the activities that do or do *not* belong to the affordance of the PDS yielded the following results. Activities deemed as not being open to student participation were 'acting independently in activities involving parents' (50,5%), 'setting tests for pupils' (48,5%) and 'taking part in staff professionalization activities' (40,2%). Activities deemed as being *compulsory* were 'classroom management and material preparation' (71, 1%), 'lesson planning' (69,1%) and 'having feedback talks with the supervisor'(71,1%) or 'having feedback talks with the mentor'(69,1%).

Agency

97 student teachers filled in the questionnaire 'Agency'. The results show that the students participated in 67% of the activities yet did not participate in 33% of them. The activities not participated in were predominantly 'activities at school level' (49%) and 'professionalization activities' (47%).
The particular course year of the student teachers also seems to be a determining factor with agency; 4th year students did not participate in 14% of the activities, in particular 'activities at school level' and 'professionalization activities'.
Individual student teachers differ in the way they engage in workplace activities. Not a single student had carried out all 64 workplace activities; one student participated in 63 of the 64 activities. By contrast, three students had not participated in 37 or more of the activities.
In order to gain insight into the relationship between agency and affordance the results from each the mentor (affordance) and his/her student (agency) have been linked. Figure 2 displays the relationship between affordance and agency.

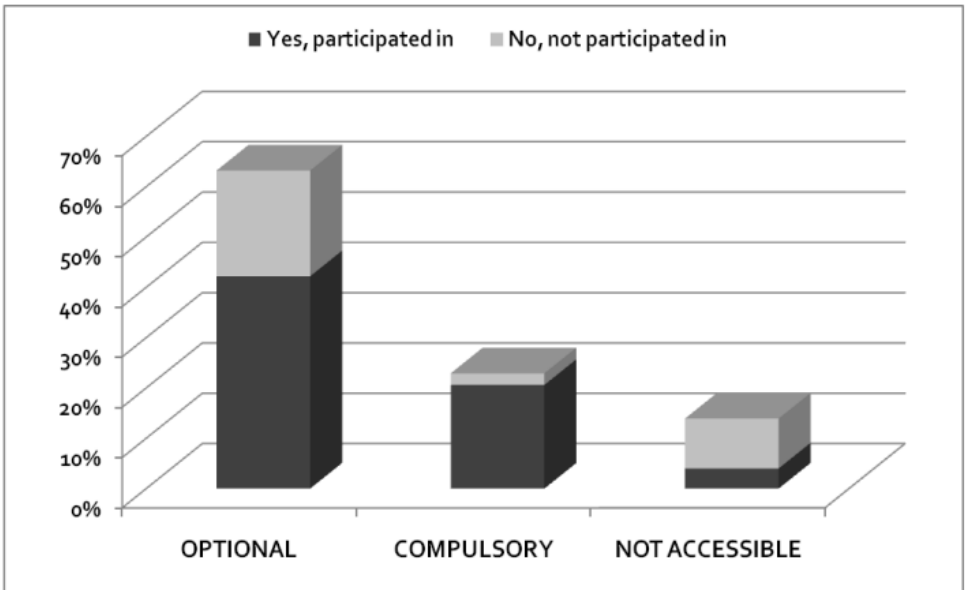

Figure 2. Percentage agency in relation to affordance (N = 97)

Two results stand out here. Firstly, it appears that student teachers participate in workplace activities belonging to the compulsory affordance more often than those activities that are optional. In other words, students carry out what they have been directed to do but make very few choices for themselves from the optional activities afforded. A second result is that student teachers appear to be participating in activities that were deemed *not accessible* by their mentors. Some of these include the 'reading of pupil dossiers' and 'creating planning for single or multiple lesson days'.

An analysis at the level of the 64 activities shows that students are *least* likely to participate in 'activities at school level' and 'professionalization activities', both of which belong to the optional affordance of the PDS; almost half of the students surveyed had *not* participated in these activities (48% and 45% respectively). Students from the 4th course year form an exception to this, having participated in 87% of the optional activities and 92 % of the compulsory activities respectively. This pattern also emerges for 4th year students with respect to 'activities at school level' and 'professionalization activities'.

Scholarly significance of the study

The learning opportunities afforded by the Professional Development Schools do not currently comprise all workplace activities possible. This implies first of all that learning in the workplace at the PDS is impoverished. This is due not only to the large amount of workplace activities *not* afforded by the mentor of the PDS, but also to the *type* of activities that *are afforded*. Those activities that can be accessed or are otherwise compulsory are predominantly workplace activities with pupils. Learning in the workplace currently seems to be organised around preserving what teacher's activities have always been: working with

pupils. This raises the question as to whether the profession of teaching should be viewed as more than this. This implies that student teachers are not being optimally trained as teachers in the PDS. In particular, the categories “activities at school level” and “professionalization activities” are often not included in the affordance of the PDS. In cases where they are afforded, they are more often than not optional. This raises the question as to whether learning in the workplace, as it is currently carried out, can actually lead to the start-readiness of the future beginning teacher, given that activities relevant to collaboration with colleagues and collaboration with the teaching environment are mostly *not* incorporated into the affordance of the PDS.

The distinction between optional and compulsory affordance and the difference between the workplace activities afforded for the 4th year student teachers and that afforded to students from the first three years of training is also interesting. This appears to indicate the existence of a workplace curriculum that is not explicitly identified yet. This also means that the quality of learning in the workplace is determined by the quality of mentors. The question is whether this is actually desirable or whether there shouldn’t be a far greater role for the primary school as a whole in terms of affordance, congruent with the qualities of the school.

For the benefit of the quality of the PDS it would appear necessary to re-evaluate the PDS partnership, with a particular emphasis on the contribution of the authentic situation to the learning of the student teachers with regard to the obligatory objectives that the student as future teacher needs to achieve.

For as long as learning in the workplace means “participating in a certain number of activities”, student learning and training in schools is not being optimally executed.

In order to gain an insight into the effect of the interaction between affordance and agency , and to expand on the above discussion points it will be necessary to determine the quality of the Professional Development School on the development of the student teacher.

References

Billett, S. 2004. Workplace participatory practices. Conceptualising workplaces as learning environments. *The Journal of Workplace Learning,* 16 (6): 312- 324.

Blokhuis, F.T.L. 2006. *Evidence-based design of workplace learning.* Universiteit van Twente, Enschede.

Bredeson, P.V. 2002. *Designs for Learning.A new architecture for professional development in school*. Thousand Oaks, CA: Corwin Press, Inc., A Sage Publications Company.

Buitink, J. 2009. What and how do student teachers learn during school-based teacher education. *Teaching and teacher education,* 25 (1): 118-127.

Fuller, A., & Unwin, L. 2004. Expansive learning environments.Integrating organizational and personal development.In *Workplace learning in context,* eds. H. Rainbird, A. Fuller & A. Munro, 126-144. London: Routledge.

Geldens, J.J.M. 2007. *Leren onderwijzen in de werkplekleeromgeving.Een meervoudige casestudy naar kenmerken van krachtige werkplekleeromgevingen voor aanstaande leraren basisonderwijs*. *(Teacher Education in a working place environment. A multiple case study to determine the distinctive charateristics of powerful workplace learning environments within primary teacher education).* Nijmegen: Radboud Universiteit.

Onderwijsraad. 2005. *Leraren opleiden in de school.Een advies*. (Training student teachers in schools.An advisory report.) Den Haag: Onderwijsraad.

Poortman, C.L. 2007. *Workplace learning processes in senior Secondary Vocational Education*. Enschede: Universiteit Twente.

Timmermans, M., Klarus, R., & Van Lanen, B. 2008. *"Scholen in Opleiding". Het in kaart brengen van kenmerken van de leerwerkplek die het leren van LIO bevorderen*. *("Developing Professional Development Schools."A search for key characteristics influencing student teachers' professional development).* Paper presented at the Onderwijs Research Dagen, Eindhoven.

Tynjälä, P. 2008. Perspectives into learning at the workplace. *Educational Research Review,* 3 (2): 130-154.

Challenge for Teachers´ Professional Growth – how to Become Change Agents in HE Organizations

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Abstract

Higher education is being asked to respond to an ever-changing environment. This research is going to provide some views of change and professional growth as well as key insights into the change process by highlighting the distinct characteristics of higher education institutions and their influences through the method of deep analyses and objective hermeneutics. It seems that teachers are able to identify concrete activities for promoting change, but when doing so they use passive and estranged linguistic expressions. Is this contradiction barely academic? Does it help us to develop instructional tools for teacher education?

Keywords: HE teachers, change agents, HE organizations, passive and estranged linguistic expressions

Introduction

Universities are supposed to offer the highest education, but do they guarantee also the highest learning? Teachers will never improve learning in the classroom or whatever the learning environment is, unless they also help improve conditions that surround the classroom (Fulan 1993). It means that a teacher should act as a catalyst for change. A teacher as a change agent is a subject of organizational activities in order to effect change. Although a teacher´s role as an innovator is usually emphasized during teacher education, individual teachers seem to be exhausted. Higher education organizations are in this sense problematic. (Kezar 2001) Not very much research, however, has been done on HE teachers as subjects of organizational change. In these days the theme is utterly topical. It is deeply connected to teachers´ lifelong learning.

Are universities able to encourage creativity and new ideas in lecture rooms if department leaders promote conservative settings and teachers are unwilling to make radical reforms in teaching and learning practices? Are they able to motivate the most talented and critical students to continue their studies after graduation and take the challenges of science?

Change resistant teachers do not increase the attraction of a scientific career neither do they contribute to the foundations of science itself. What kind of phenomenon does the change resistance seem to be in higher education environments?

This article will be based on the data gathered during the delivery of an intensive teacher education program for higher education teachers when they wrote short essays of their possibilities of being change agents in their universities. The research concentrates on the nature of change resistance and possibility to promote change in HE pedagogy. The focus will be on HE teachers´ social meaning structures or "social grammars" which quietly channel the discourse and interaction.

Theoretical background

The assumptions underlining the starting point of the study are: 1) according to social cognitive theory (Bandura 2001), people are seen as proactive and self-regulating individuals rather than as reactive organisms shepherded by environmental forces or driven by concealed impulses; 2) human functioning is the product of a dynamic interplay of personal, behavioural and environmental dimensions. They create interactions resulting in triadic reciprocality. Consequently, any leadership role and that of the HE teachers in particular comprise personal features and behaviour, and are contingent upon contextual variables. By absorbing influences from the surrounding reality HE teachers are supposed to exercise paths of influence and authority towards the construction of "departmental" teachers, resulting in a `composite´ identity (Bandura 2001; Curry 2000; Young & Skrla 2003).

The assumptions underlining the starting point of the study are: 1) according to social cognitive theory (Bandura 2001), people are seen as proactive and self-regulating individuals rather than as reactive organisms shepherded by environmental forces or driven by concealed impulses; 2) human functioning is the product of a dynamic interplay of personal, behavioural and environmental dimensions. They create interactions resulting in triadic reciprocality. Consequently, any leadership role and that of the HE teachers in particular comprise personal features and behaviour, and are contingent upon contextual variables. By absorbing influences from the surrounding reality HE teachers are supposed to exercise paths of influence and authority towards the construction of "departmental" teachers, resulting in a `composite´ identity (Bandura 2001; Curry 2000; Young & Skrla 2003).

There exist at least three important perspectives, which should be taken into account when designing and implementing change in higher education institution.

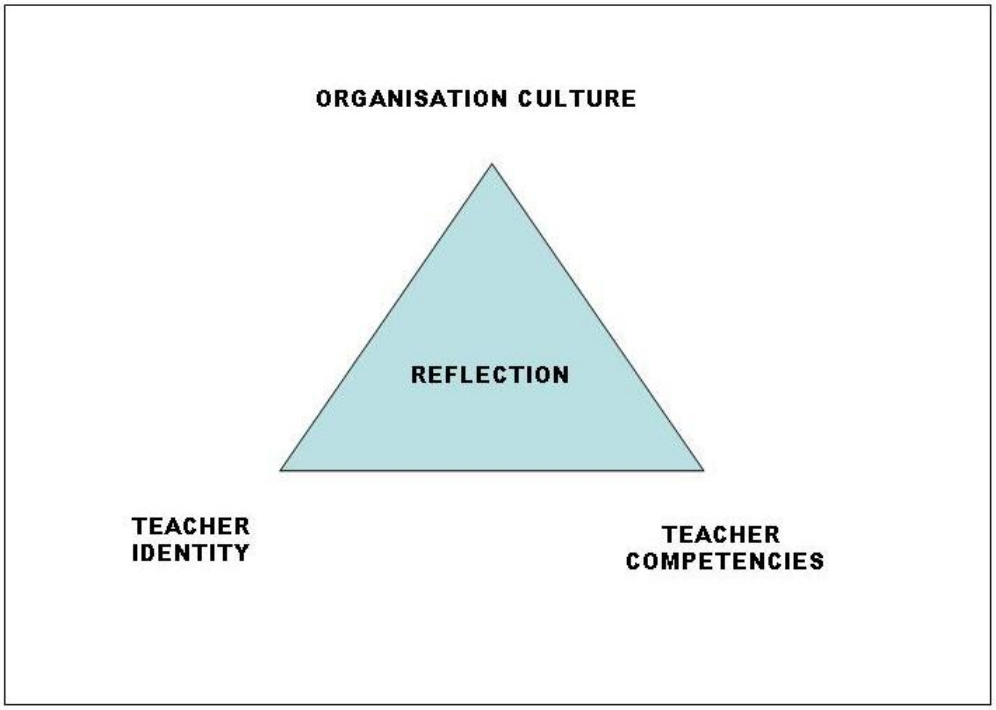

Figure 1. The perspectives of HE change.

Training may increase an individual teacher's ability to focus on students. In addition to increased *competence*, training can improve a number of aspects of teaching as judged by students (organization, group interaction, rapport etc.). Training can change teaching so that students improve their learning (Kezar 2001, 85). The *organisational culture* of universities, however, can easily suppress a larger change. "If individual changes don't translate to the institution, how much less change is there that a whole country's higher education system could be significantly reoriented through an approach addressed at the level of the individual practitioner?" (ibid, 84)

In a sense organisational change is always based on learning. According to the social cognition theories we can assume that sustainable change will take place through the learning of individuals if there emerges *reflective sense-making interaction* among institutional actors (Kezar 2001). We often rely on teachers´ learning from experiences. However, experiences teach only if they are reflected on. The problem of the teacher educator is the same as any teacher´s in relation to his/her students: how to assist such deep learning that will make a difference. This also speaks for the intensive teacher education which promotes authentic teacher competencies and activates the teacher identity formation as change agents in academic organizational cultures. (Karjalainen & Nissilä 2008; Nissilä 2009)

An untrained university teacher in most cases seems to think that:

1. teaching implicates learning - information transfer model;
2. high quality research is a teacher´s main responsibility – students' concerns are secondary;
3. a teacher is not responsible for students' learning outcomes - survival of the most talented.

Teachers´ power to change education is more and more conditioned by their reflective capabilities and professional competencies. (Fox 1983; Menges & Rando 1989; Lloyd Yero 2002) A teacher with a strong researcher identity explains, describes and shows the subject matter and theories to the students and thinks that it is enough. This policy of acting has its roots deep in tradition. It has always been so. Related to this misconception, an expert teacher may think that knowledge is "a commodity which can be transferred, by the act of teaching, from one container to another or from one location to another" (Fox 1983). Teachers' personal theories of teaching and their social common sense assumptions stipulate the teaching practises, when teachers do not have wide enough repertoires of pedagogical vocabulary and concepts.

Research design

Research context and research sample

Oulu University of Applied Sciences and University of Oulu organized a joint program for educating HE teachers in the comprehensive 60 ECTS program. The course Higher education institutions – codes of laws, statutes and practices – as a part of the program was targeted to encourage teachers as reformers in their own departments.

At the end of the course the participants wrote short reflections on the teacher as a change agent. The essays (N=53) dealt with the question "What is a teacher´s possibility to act as a change agent in university?" The data were analyzed by using qualitative data analysis. 8 of the essays were analyzed and interpreted using a deep hermeneutic approach. The choice of the essays for deep analyses and interpretations was made according to the contents and the ways of writing. Contradictory meanings in one meaning unit or joint units were the first feature to cause a closer study.

Additional material to clarify the meanings rising from the present essays comes from the student teachers´ reflections on the dilemma between teaching and researching as well as their opinions of the measures to be taken to invigorate pedagogical thinking among university teachers (Nissila 2009; Karjalainen & Nissilä 2008). They wrote of a kind of inconsequentiality in their careers which Farber (1991, 36) has also identified. This is

obviously due to their increasing pedagogical knowledge. They have adopted new conceptions of teaching and learning. For that reason they were able to reflect and explain their experiences and their change ideas more precisely than before.

Research questions

1. What are the student teachers´ conceptions of their possibilities to act as change agents?
2. How do they describe their possibilities?
3. What hidden meanings can there be behind their expressions? What social "grammars" do they reveal?

Research methodological approach

The qualitative paradigm (Denzin & Lincoln 2000) assumes that knowledge is socially constructed by people in active research processes. The holistic and comprehensive picture of individuals and groups operating in socially complex contexts raises the need for conducting a case study research of deep interpretive / constructive nature. Objective hermeneutics offers this kind of model for defining explicit and comprehensive categories of meaningful action. It is grounded on the sociological writings of Oeverman (1979, 1983) and further adjusted for the Finnish educational research by Siljander and Karjalainen (Siljander & Karjalainen 1991; Karjalainen & Siljander 1993). The basic idea is that a qualitative researcher should operate with the explicit concept of meaning, special interest being directed towards the latent meanings of the case. When analyzing meanings by qualitative data analyses or by the technique of the discourse analysis one should know (in the ontological sense) what he is searching for. Briefly summarized, the goals of objective hermeneutics are (1) to gain better understanding of human action and interaction and to explain social programming of the human mind, (2) to find generative rules that make the successful use of the language and unanimity possible in social situations; and (3) to define the automated social competencies which are unconsciously mastered. Oeverman's ideas have recently increasingly inspired discourse over qualitative research. (Reichertz 2004; Schnettler 2002; Schnettler 1999; Maiwald 2005; Leanza 2008.)

The method of objective hermeneutic is a deep interpretation where the goal is to make data based hypotheses about latent meaning structures. The method is extremely sensitive to lingual contexts, and the interpretation requires accurate language competence to be successful. The method also needs to be tailored to meet the special qualities of the prevailing research data. In this article we will use the meaning matrix (MeM) developed by Siljander and Karjalainen for revealing meaning structures in a written text. MeM focuses on

the meaning structures, either objective or subjective, either historical or universal, as well as their consciousness or unconsciousness (latent nature).

MEANING MATRIX

Siljander & Karjalainen 1991; Karjalainen & Siljander 1993

HUMAN MEANING STRUCTURES (MS)		CONSCIOUS (CMS)	LATENT/UNCONSCIOUS (LMS)
SUBJECTIVE		1.Individual Intentions/ motives	2.Unconscious motives/drives
OBJECTIVE	HISTORICAL	3.Social norms and roles	4.Social grammars/ Generative rules
	UNIVERSAL	5.Knowledge and assumptions upon universal MS	6.Universal social invariances/Generative rules

SUBJECTIVE= INDIVIDUAL
OBJECTIVE= SHARED, CULTURAL, SOCIAL
HISTORICAL= VALID IN CERTAIN CULTURE (TIME AND PLACE IN HISTORY)
UNIVERSAL= COMMON TO ALL CULTURES

Figure 2. The meaning matrix (Karjalainen & Siljander 1993).

The interpretation of the data took place in four stages:

1. Raw reading of the material (N=53). All texts were read independently by two researchers.
2. Selection of the essays with meaningful data (n=8). Workshops were held to find the most meaningful written expressions (MWE) for further interpretation. The most important criterion for the selection was evident productiveness for deep interpretation.
3. Deep interpretation guided with the meaning matrix. Critical sessions (3) were organized where the MWEs were interpreted through the six perspectives of the MeM. See example

An example of deep interpretation –sequence 1.

Example 1: “perhaps this might be possible in the future, when I am courageous enough to develop my teaching more and more ...”
Interpretation: personal, estranging linguistic expression → “change-fugal” attitude

HUMAN MEANING STRUCTURES (MS)	CONSCIOUS (CMS)	LATENT / UNCONSCIOUS (LMS)
SUBJECTIVE	- I have developed my teaching - I want to develop it more, when I get more daring - I am not sure, if it is possible	- the person appears to be a scaring and timid person - -what is she/ he afraid of? (that he/ she appears to be incompetent? that his/ her expertise is not on a firm ground? that he/ she is not valued enough?)
OBJECTIVE/ HISTORICAL	- to be able to speak out or in favour of something, you have to be a real expert or your competence must be recognized in the working community	- manifoldly problematic, - questioning/ estranging - fleeing off - forms of avoidance and rejection
OBJECTIVE/ UNIVERSAL	- *no relevant perspective for this sequence*	- forms of avoidance and rejection

4. Summary of the interpretations. Constructive hypotheses were made to summarize the cases. To be able to construct the summaries, the contexts were to be obliterated, hypotheses to be formed and meaningfully logical units to be created.

During the process of interpretation the method of two independent interpreters was used. Items of meanings were documented continuously in the research protocol. The process was both creative and critical leading finally to joint conceptions. Admittedly, the research method is, however, based on the idea that the outcome will barely be an assumption. Deep interpretation is always based on intuition and the individual competence of the interpreters. The outcomes cannot be proved true by a momentary research process. Instead, every interpretation creates one possible viewpoint of the phenomenon. The validation or falsification of the findings will finally come as a function of time through further research and/ or in the communicative process between researchers and actors.

Findings

A minority of the teachers expressed their readiness to promote change inside an educational organization. Most of the teachers used passive language forms when telling about the organizational change. It was also striking that the expressions in most cases carried on divided communicative patterns where the possibility of true change and especially the writer´s own contribution to it were brought apart into the world of theories or wishful thinking. In this conceptual world they were able to specify concrete activities for change promotion. In the real world they were mostly faced by hinders and constraints. These peculiarities being visible it was very easy to find material for deeper interpretation.

The essentials of HE teachers´ social grammars can be illustrated by the following figure:

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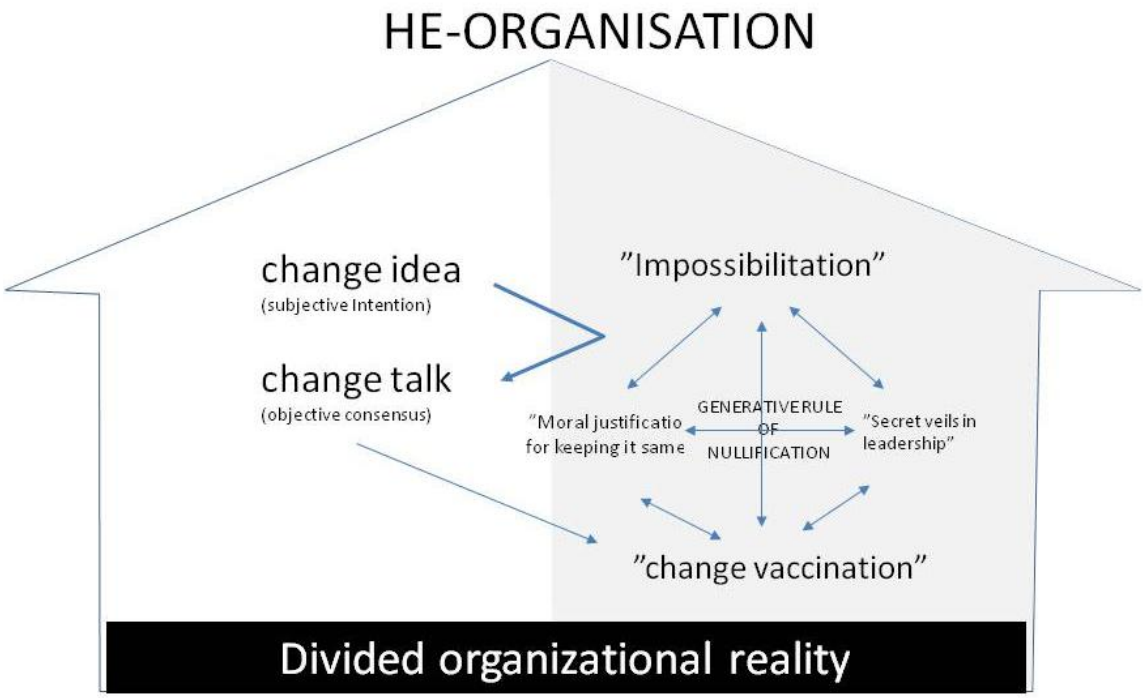

Figure 3. HE teachers´ social grammar.

Individual teachers have change ideas which are however infected by the generative *rule of nullification (RN).* The rule of nullifications is our main supposition which explains the controversial features of the teacher talk. It results in defensive and/or passive ways of thinking and speaking inside the higher education organization. The subjective, creative intention transforms to objective, generally accepted change talk through the generative rule of nullification

The inner logic of the meaning system described in the figure above exemplifies the networking of the social rules and intentional motives. *"Impossibilitation"* means unwillingness to use energy for anything which seems troublesome or energy-consuming. It is greatly based on the critical attitude toward scientific approach and discourse. It gives rise to some sort of moral imperative against over-enthusiastic ideas and totally new practices.
Moral justification of "keeping it same" means misunderstanding the principle of scientific critic to some extent. It also reflects the individual desire to protect one´s own privacy and territory of expertise.
For the reasons expressed above the *leadership and decision making* in academic contexts turns out to happen *in secrecy*, which again strengthens the prejudices and negative as well as estranged, distant talk about reforms.
Resulting from the above mentioned misunderstandings and excuses, academic educational organizations have during the times been *vaccinated against changes* independent of their sources or contents. The vaccination comprises both leadership and actors as functions of time in years of service. The more experienced the HE teachers are, the better vaccinated they are.

Discussion

Higher education is being asked to respond to an ever-changing environment. Research and good practices have to provide key insights into the change process by highlighting the distinct characteristics of higher education institutions and their influences.
It seems that teachers are able to identify concrete activities for promoting change, but when talking about them they use passive and estranged linguistic expressions. The generative rule of nullification channels effectively the discourse and interaction to the minimum value of social energy consumption.
Is this conception barely an academic theoretical claim? Does it help us to develop instructional tools for teacher education?
Provided that (RN) corresponds to the real situation, it stands for serious threat against in-service learning and adopting new educational practices. It creates good substratum for organizational ignorance. Trainers' observations in the course of *Higher education institutions – codes of laws, statutes and practices* were quite remarkable in this sense. It showed astonishingly how insufficient knowledge HE teachers had about higher education legislation and both national and institutional codes of action. This resulted in accepting an a-dynamic role inside the department or institution. University teachers believed for example that it is forbidden to use time for teaching development activities. They did not know that it is decreed in the act of university personnel that the first task of the university teacher is to improve HE teaching.

Getting familiar with the legislation and the official codes of action provide teachers remarkable tools to promote their development initiatives. It also promotes the growth of critical consciousness of the *status quo*. During the course student teachers developed and started to reflect on different strategies concerning change promotion policies in their own departments. This may well illustrate the meaning of deep learning of the organizational change.

Informal strategy promotion can take place in coffee table discussions, for instance when talking of one's teaching experiences, delivering pedagogical material and references and creating new ideas with a colleague to start the snowball effect. The formal strategy promotion presupposes activity in departmental/ institutional committees and teams. The departments/ units should enter strategic processes, quality assurance processes and participate in strategic planning. They should also be encouraged to participate in national and international teaching development activities as well as to encourage pedagogical leadership.

Although the above lines show that much has been learnt and many ideas have been raised, becoming a change agent still needs contra-vaccination against general polite, estranged and latently unwilling attitudes and, accordingly, against passivity in being change agents.

References

Bandura, A. 2001. Social cognitive theory: An agentic perspective. *Annual review of Psychology*, 52: 1-26.

Curry, K. 2001. *Women in power.* New York: Teachers College Press.

Denzin, N.K. & Lincoln, Y.S. 2000. *The handbook of qualitative research.* Thousand Oaks, C.A: Sage.

Farber, B. 1991. *Crisis in Education.* San Francisco: Jossey-Bass.

Fox, D. 1983. Personal Theories of Teaching. *Studies in Higher Education.* 8:2.

Fullan, M. 1993. *Change Forces: Probing the Depths of Educational Reform.* London: Falmer Press.

Harris, A. 2004. Distributed leadership and school improvement. *Educational Management, Administration and Leadership*, 31(1): 11-17.

Harris, A. & Muijs, D. 2003. *Teacher leadership improvement through empowerment? An overview of the literature.* London: Sage.

Karjalainen, A. & Nissilä, S-P. 2009. *Widening identities, deepening capacities*. A paper presented in the ISATT preconference of the University of Lapland. www.ulapland.fi/ISATT 2008

Karjalainen, A. & Siljander, P. 1993. Miten tulkita sosiaalista interaktiota? *Kasvatus* 24:4.

Kezar, A. 2001. Understanding and facilitating Organizational Change in the 21st Century: Recent research and Conceptualizations. *ASHE-ERIC Higher Education Report*, vol.28, No 4. Jossey-Bass Higher and Adult Education Series.

Leanza, M. 2008. Kritik als Latenzbeobachtung, Darstellung und Diskussion grundlegender Konzepte der Objectiven Hermeneutik und deren Anwendung am konkreten Fall. In: *Kritik mit Methode. Forschungsmethoden und Gesellschaftskritik*, U. Freikamp, & al. (Eds.) Berlin: Karl Dietz Verlag.

Leithwood, K. & Riehl, C. 2003. *What do we already know about successful leadership?* Paper presented in AERA , January, Temple University.

Lloyd Yero, J. 2002. *Teaching in mind. How teacher thinking shapes education.* Hamilton, MT: MindFlight Publishing.

Maiwald, K-O.2005. Competence and Praxis: Sequential Analysis in German Sociology. *Forum Qualitative Sozialforschung/Forum: Qualitative Social research,* 6:3. Art. 31.

Menges, R.J. & Rando, W.C. 1989. What Are Your Assumptions? Improving Instruction by Examining Theories. *College Teaching.* 37:7.

Mitchell, C. & Sackney, L. 2000. *Profound improvement: Building capacity for a learning community*. Lisse: Swets and Zeitlinger.

Nissilä, S-P. 2006. *Dynamic Dialogue. Towards transformation in vocational teacher education.* Tampere: Tampere University.

Nissilä, S-P. 2009. *Identity, pedagogical awareness and interaction in HE teacher education.* A paper presented in ISATT Conference in the University of Lapland. www.ulapland.fi/ISATT 2009.

Oeverman, U. & al. 1979. Die Methodologie einer ”objektiven Hermeneutik” und ihre allgemeine forschunglogische Bedeutung in den Sozialwissenschaften. In: *Interpretative Verfahren in den Sozial- und Textwissenschaften,* H.G. Soeffner (Ed.). Stuttgart: Metzler. 352-434.

Oeverman, U. & al. 1983. Die Methodologie einer objektiven Hermeneutik. In: *Aspekte Qualitativer Sozialforschung.* P. Zedler, P.& H. Moser (Eds.) Opladen: Lesle verlag+Budrich GmbH. 95-123.

Oevermann, U. 2008. ”Kreise und Routine” als analytisches Paradigma in den Socialwissenschaften (Abschiedsvorlesung). WWW.IHSK.DE.

Reichertz, 2004. Objective Hermeneutics and Hermeneutic Sociology of Knowledge. In: *Companion to Qualitative Research,* U. Flick, E. von Kardorff, I. Steinke & B.A. Jenner. London: Sage.

Schnettler, B. 1999. Social Constructivism, Hermeneutics, and the Sociology of Knowledge. Review Essay. In: *Hermeneutische Wissenssoziologie. Standpunkte zur Theorie der Interpretation.* R.Hittzler, J. Reicherttz, & N.Schröer (Eds.). Forum: Qualitative Social research. N-LINE Journal) 3 (4).

Schnettler, B. 2002. The Reconstruction of Meaning. Notes on German Interpretive Sociology. *Forum Qualitative Sozialforschung/Forum: Qualitative Social research.* 6:3. Art. 45.

Siljander, P. & Karjalainen, A. 1991 Merkityksen käsite kasvatustieteessä. *Kasvatus* 22: 5-6.

Spillane J., Halverson, R. & Diamond J.B. 2001. Investigating school leadership practice: A distinctive perspective. *Educational Researcher,* 30(3), 23-28.

Trowler & Bamber 2005. Compulsory Higher Education Teacher Training: Joined-up policies, institutional architectures and enhancement cultures. *International Journal for Academic Development,* 10:2, 79-93.

Young, D. & Skrla, L. 2003. *Reconsidering feministic research in educational leadership.* Albany, NY: State University of New York.

The Power of Peer Feedback in the Master Programme Learning and Innovation

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Abstract

This article describes how peer review is applied in a Master Programme to enhance learning and professional development. First the concept of feedback is explored, followed by the way peer review is applied in different stages of product development and learning, and how it is supported in the electronic learning environment. This practice will be presented, the 'look and feel' of the peer review process might be experienced, and opportunities for research will be discussed.
Keywords: learning development, innovation, peer feedback, master programme

Introduction

Inholland University of Applied Sciences offers a Master Programme Learning & Innovation for (experienced) teachers to acquire additional expertise in educational theory, instructional design, implementation theory and educational change. The students also develop skills in educational leadership to become *change agents* in their schools and/or teams. The Master Programme curriculum is based on the pedagogical concept of constructivist learning which implies debate and discussion to stimulate deep learning and conceptual change (Bereiter 2002; Bruffee 1993; Geelan 1997). Peer review is considered a specific type of interaction within this context, aimed at students providing each other feedback on concepts products or assessing each-other's final products. First, the design of the Master Programme curriculum will be briefly introduced, followed by an exploration of the concept of peer feedback, as well as the way this concept is applied in the Master Programme.

The Master Programme Curriculum

The four-semester part-time Master Programme is meant for teachers with at least five year experience who have the ambition to become involved in processes of educational change in their organizations. The first and second semester courses are aimed at exploring the domains of learning and innovation, the third and fourth semester are reserved for the Elective Course and the Master thesis. The pedagogical concept of constructivist learning

implies discussion, and therefore interaction between students to foster deep learning and the (re)construction and acquisition of knowledge to develop understanding. The codified knowledge (theory) is being confronted and combined with tacit knowledge to produce a shared knowledge to be applied in practice. The transfer from theory to practice is stimulated and supported by assignments students have to carry out. During the first and second semester students develop thinking and writing skills by studying and discussing instructional theory, by doing literature research, and by producing academic papers. Understanding of research methodology and research skills are being developed by studying and discussing literature on methodology and carrying out exercises in designing practice-based research. Additionally, acquired knowledge and skills must be transferred to the professional practice through assignments in instructional design and organizational change. In the third semester of the Master Programme (Elective Course), a collaborative learning assignment must be carried out and the students start preparing the Master-thesis research. In the final semester, practice-based research is individually carried out, resulting in the Master thesis. Product development in all assignments is divided into stages, similar to the organization of a project. Four stages are being distinguished, resulting in respectively *first idea and preliminary problem statement*, *definition statement*, *product concept* and *final product*. The final product must be submitted to the tutor for assessment. The *definition statement* is the outcome of an exploration of the assignment, and must result in defining the subject of research, the goals and objectives, and the research strategy. After approval of the definition statement, a product concept has to be developed, which will also be reviewed. The final product must be developed by processing the feedback provided by peers and experts, and should be presented and submitted for assessment and grading.

The design of the curriculum is based on the principle of 'effective interaction in learning practices' (Fransen 2006a, 2007), and this principle is also reflected by the design of the electronic learning environment of the Master Programme (Fransen 2006b). In the learning process 'learning by distributing' (individual learning), 'learning from feedback' (learning in interaction), and 'learning from different perspectives' (collaborative learning) are combined to maximally support the professional development (Reinmann-Rothmaier 2003). Also, the concept of blended learning was purposively applied to support the learning process through optimally combining real-time presentations and workshops with activities in the electronic learning environment, parallel as well as subsequently.

Feedback and Peer Feedback

Feedback, especially formative feedback, is a specific type of interaction in learning practices and a powerful instrument to enhance deep learning (Marzano 2007), provided that feedback is supportive, timely, specific and credible (Shute 2007). Feedback is conceptualized here as

information regarding aspects of one's performance or understanding, and although feedback usually should be distinguished from instruction, formative feedback also implies a form of additional instruction to fill the gap between the current and desired understanding. Feedback is more effective if it is directed at the task, the process and/or the regulation of learning, but not on the self. Additionally, feedback must build on the student's prior knowledge and must provide logical connections, otherwise instruction will be more effective (Hattie & Timperley 2007).

Receiving effective feedback may enhance learning if feedback is adopted and used. Also, providing others with feedback has an effect on the quality of learning and understanding of the feedback giver, sometimes even more than just receiving feedback from peers, although low proficiency learners tend to profit more from providing peers with feedback than high proficiency learners (Lundstrom & Baker 2009). Providing and receiving feedback requires a safe group climate, the ability to deal with the complexity of multiple judgments, sufficient understanding of the subject matter, and good timing to prevent that frustration takes over (Hattie & Jaeger 1998). Also, costs and benefits of peer feedback procedures have to be well balanced, which means that peer feedback procedures should be calculated within the overall time on task and peer feedback should be effectively tuned with the timing of expert feedback (Guardado & Shi 2007). Adequately introducing peer feedback and expert feedback within processes of product development, results in assessment becoming mainly formative and the final summative assessment becoming less important. As a result of that, assessment becomes more meaningful and effective, since learning and assessment are fully intertwined, leading to better results of long-term learning (Boud & Falchikov 2006). Also, providing peer feedback online seems to be more effective than providing feedback face-to-face, and successful uptake of feedback is more likely if feedback contains concrete suggestions directly linked to specific parts of texts students produce (Van der Pol, Van den Berg, Admiraal, & Simons 2008).

Peer feedback in the Master Programme

Peer feedback is considered important within constructivist education, and especially within professional development of teachers. Being competent in effectively applying feedback in managing one's professional development, as well as providing effective feedback to peers, is not only considered fundamental for an expert teacher, it is also conditional for professionals supporting their colleagues in processes of curriculum development and educational change. Therefore, peer feedback is considered an important and powerful instrument within the curriculum of the Master Programme and peer feedback processes are organized in several ways during the four semesters.

The assignments for product development are organized similar to project-based education, which implies that stages are distinguished in the process resulting in products to be reviewed and/or assessed, in this case respectively the phase of idea development, the definition phase, the concept phase, and the final product development. Peer feedback and expert feedback are used in all phases differently, but in every phase supported by using specific applications in the electronic learning environment. Results of peer-feedback processes are being discussed in real-time meetings in the institute. Peer feedback is supported explicitly by discussing the value of peer feedback and feedback procedures with students and by offering them tailor-made checklists and feedback criteria. The quality of peer feedback is monitored by tutors (i.e., the experts) in the Master Programme.

Two principles are leading in organizing the peer review, more specifically regarding the type of activities students have to carry out and the way these activities are being supported within the electronic learning environment. The first is the sequencing of product development; the second implies the functionalities of applications within the electronic learning environment.

Every stage in product development leads to a specific result with its own characteristics. In order to produce a paper to research report of a literature survey, for instance, students have to choose a research topic first and must pose a preliminary research question. The development of a definition statement will be the next step and implies the posing of a problem statement and the research questions, the argumentation for the relevance of the research regarding the perspective of the course the student is attending, some valid references, and an analysis of the feasibility of the study. The definition statement must result in a document containing no more than 800 words. The following step implies the development of a concept version of the product, and the last step is the development of the final product. Feedback must be provided after completion of each stage, which implies formative feedback on first ideas and problem statement, on the definition statement, and on the product concept. Summative feedback is provided after submitting a final product. Feedback has to be different of nature according to the stage in the process, the needs of the feedback seeker, and the nature of the product that must be developed. Feedback on the first idea and problem statement must be limited and should only be a brief reflection on this first idea and problem statement, aimed at discussing the relevance and feasibility of the product the student intends to develop. Feedback on the definition statement must be more elaborate and should address the topics of the definition statement, more specifically the topic of relevance of the proposal, the topic of the quality of the problem statement and research questions, the topic of the validity of proposed references, and the topic of feasibility. To achieve these intentions and to support the process of peer feedback, students are provided with evaluation questions and criteria regarding the issues that must be addressed in the review process. Feedback on the definition statement must be as concrete

as possible and of undisputable quality, since it is conditional for the quality of the concept that someone will develop. This implies that the quality of peer feedback in this stage should be carefully monitored by the expert and the peer feedback must be supplemented by expert feedback. Expert feedback should not be provided before the end of the peer review process, since students are more reluctant to provide feedback to peers once expert feedback has been published. Feedback on a product concept must be more elaborate, which implies that students may comment in detail on parts of the argumentation, as well as on the quality and structure of the report itself. A product concept may be a large document, and assessing the outcomes of literature research implies that a feedback giver is well introduced in the field expertise of that particular research. This is why peer review will probably be more effective if organized in small groups of students working on products in a similar field of expertise, which was confirmed by findings of research on peer feedback (Van den Berg, Admiraal, & Pilot 2006). Since the product concept must be developed on the basis of the final definition statement, and also because at least two peers must provide feedback on the product concept, monitoring the quality of the peer review process is important. Poor quality of provided peer feedback and/or if only one peer provides feedback, additional expert feedback is important for a student to develop the final product. If the feedback provided by peers is of high quality, monitoring the peer review process and randomly evaluating the quality of feedback should be sufficient.

The electronic learning environment of the Master Programme is based on the 'open source' software policy, because this type of software offers possibilities for adapting it according to the needs and wishes of teachers and students in particular learning practices. Also, students enrolled in the Master Programme Learning & Innovation must experience what technology has to offer for the enhancement of learning processes. The Master Programme portal is based on Moodle, and nearly every functioning of Moodle is operational. The activities in Moodle are under control of the teachers, although students are offered several options to add content to the portal, to start and/or moderate discussions, and to manage a personal calendar. Three Moodle functionalities are being used in the peer review process, more specifically the *forum* (discussion board), the *workshop*, and the *assignment*. The *forum* is used for peer review on the first idea and problem statement. Every student starts his or her individual 'thread' and posts a first idea and preliminary problem statement. All students from the whole class are invited to comment and provide feedback. The peer review process is monitored by the tutor and outcomes are being discussed in the next plenary meeting (master class). The *workshop* is used for peer review on definition statements. Every students uploads a definition statement and the Moodle *workshop* randomly divides the feedback tasks among all students enrolled is this workshop. Depending on how the Moodle *workshop* is set, a student provides feedback on definition statements of at least two peers based on a built-in set of review questions with additional feedback criteria. When the

peer review process is completed, additional expert feedback is provided, if necessary. Students adapt their definition statements by processing the feedback, and when finished they upload the improved version of the definition statement to a Moodle *assignment* on behalf of the discussion and evaluation in the next plenary session. The experts prepare the discussion through scanning the uploaded definition statements. After this session, the development of the product concept starts and students have to upload their completed product concepts to the *Annotation Tool*©[1], a freely accessible application for peer review. The peer review in this environment is organized in small teams, consisting of four to five students. Every student provides feedback on product concepts of two or three peers in their team, depending on what was agreed regarding the peer review procedures. Additional feedback is provided by the experts. The *Annotation Tool*© offers the functionalities for rating and discussing feedback. In Figure 1, a screenshot is presented of the *Annotation Tool*© with a document page on the right side and comments of peers on the left side.

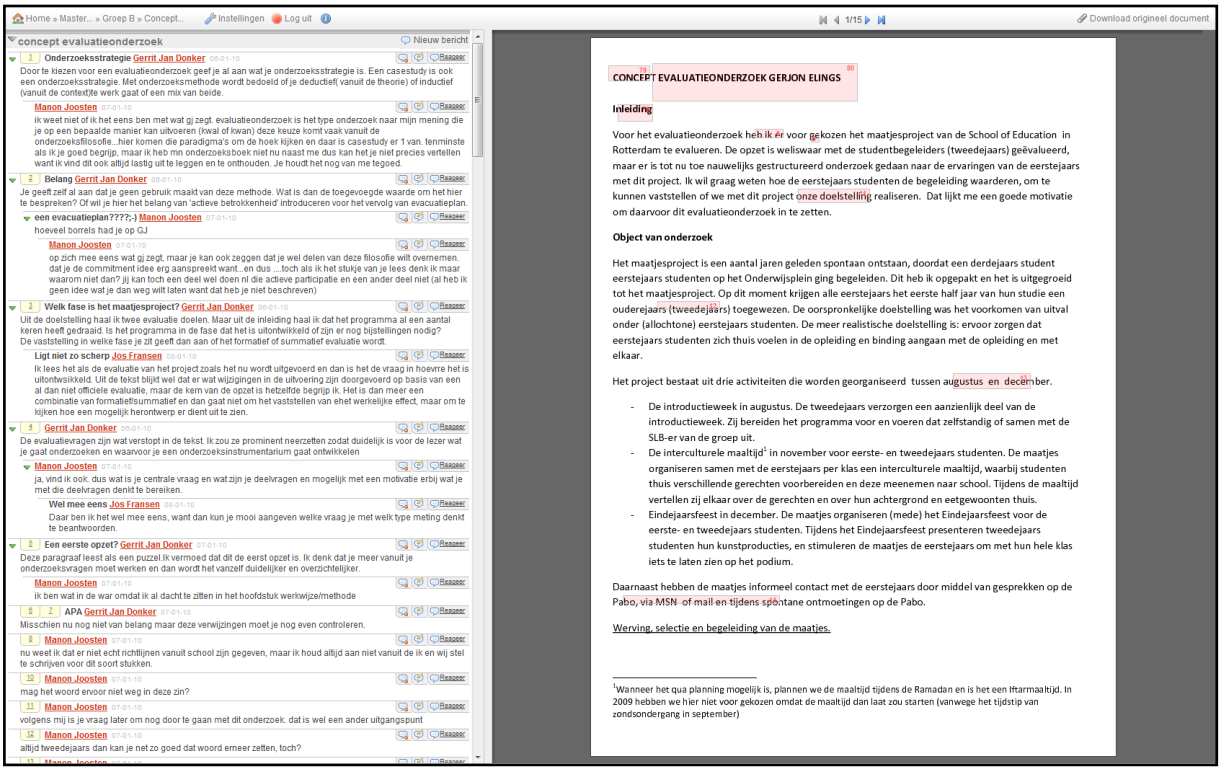

Figure 1. Screenshot of the Annotation Tool© with page of document (right) and comments of peers (left)

After completing the review process, students can print their documents with all comments included to process the feedback and develop the final product. The final products must be uploaded to a Moodle *assignment*, especially set for this purpose, after which these products will be assessed and graded. Summative feedback will be provided separately by the expert.

[1] The *Annotation Tool*© was developed by Dr. J. van der Pol and being used on behalf of his PhD Research on peer review en peer feedback. The *Annotation Tool*© is now freely accessible for educational purposes (www.annotatiesysteem.nl).

Students can also organize additional peer review activities themselves by linking personal learning environments (i.e., a blog or Facebook© page) to the Moodle Course of the Master Programme, and asking peers to review the products they published in there. Final products are also published in the Master Programme Section of the Learning Network of the Faculty of Education. All in all, the choice of applications in the peer review process is driven by the type of products under review and the type of feedback that is needed, which is reflected by the design of the electronic learning environment of the Master Programme (See Figure 2).

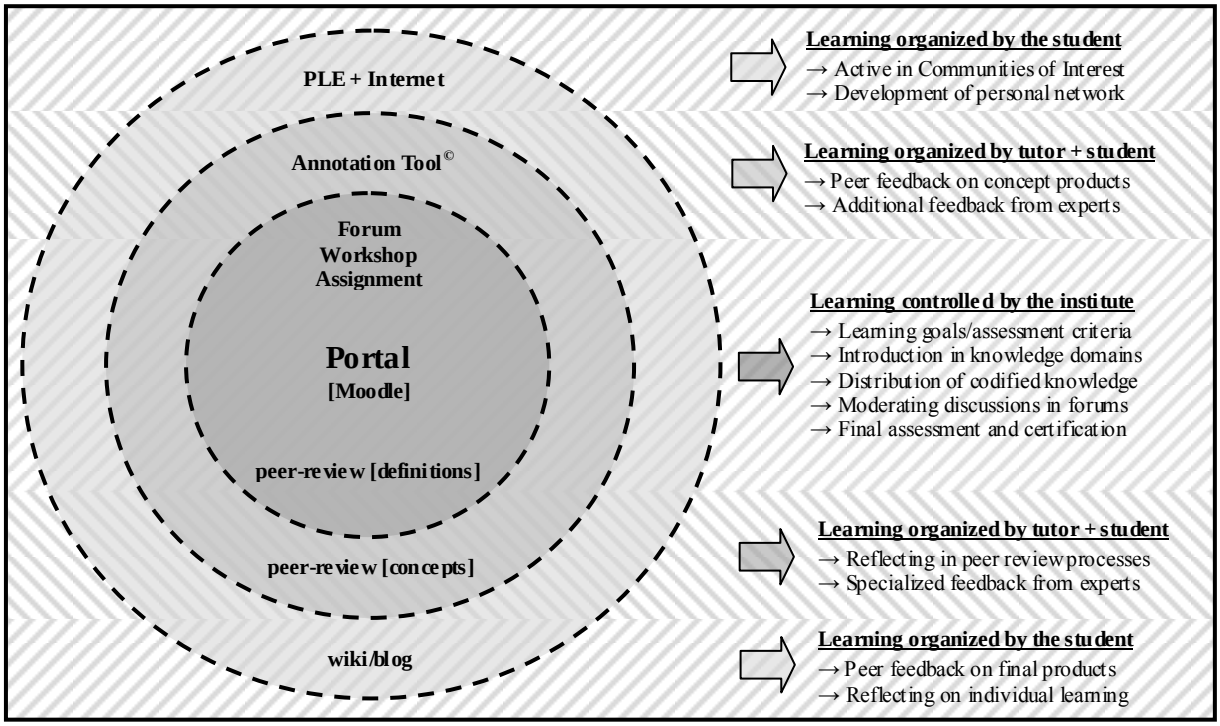

Figure 2. Design and functionalities of the electronic learning environment of the Master Programme.

The process of peer review is summarized in a diagram (See Figure 3), in which stage in the process, type of product being reviewed, type of feedback that is needed, type of application or activity, grouping and roles of students and tutors are presented.

Stage	*Type of Product*	*Feedback Criteria*	*Activity and Support*	*Grouping*	*Locus of Control*
1	Idea and problem statement	Peer feedback on idea and problem statement, more specifically on the relevance for a Master Course.	Individually posting it in the Moodle *forum* by starting a personal discussion thread.	The whole class	Tutor organizes peer review and students are free to choose who to provide feedback.

2	Concept definition statement	Peer feedback on relevance, goals, research question, references, and the feasibility analysis.	Uploading definition statements to the Moodle *workshop* and feedback is provided by peers and tutors using built-in criteria. Expert feedback is added after closure of the *workshop.*	Providing feedback to a few peers, according to *workshop* settings.	Tutor organizes peer review and feedback tasks are randomly assigned by Moodle.
3	Adapted definition statement	Additional expert feedback on goals, research question, references, and the feasibility analysis by focusing on most instructive examples.	Uploading adapted definition statements to the *assignment* in Moodle, discussing outcomes of review process in the next plenary session to be prepared by the tutor.	The whole class has to attend the plenary session.	Tutor prepares the session. Highlights and pitfalls will be discussed under supervision of the tutor.
4	Product concept	Peer feedback and additional expert feedback on the consistency of the argumentation and the validity of the references and conclusions.	Uploading concept products to the *Annotation Tool*© and providing feedback on concept products of at least two peers. Additional expert feedback is provided after closure of the peer review process.	Peer review is organized in teams of four to five students.	Tutor organizes peer review and students choose which members of their team they will provide with their feedback on the product concept.

5	Final product	Summative expert feedback to be used for assignments to come is separately provided along with grading.	Uploading the final products to a Moodle assignment which is especially set for this purpose.	Tutor will provide summative feedback to individual student.	Tutor organizes the assessment, grading, and the communication of summative feedback.

Figure 3. The review process with stages, type of product, type of feedback, grouping, and locus of control.

Workshop and discussion

This workshop offers an introduction on feedback and peer feedback, as well as on how peer review processes are organized in the Master Programme Learning & Innovation courses and how they are supported in the electronic learning environment. Participants in the workshop may experience the effectiveness of peer review by using the specific Moodle functionalities themselves. Results of a small assignment will be discussed, as well as the expected added value of peer review in the perspective of the professional development of teachers. Finally, the organization of effective peer review in different educational setting will be explored and opportunities for research will be discussed.

References

Bereiter, C. 2002. *Education and mind in the knowledge age*. Mahwah, NJ: Lawrence Erlbaum Associates.

Boud, D. & Falchikov, N. 2006. Aligning assessment with long-term learning. *Assessment & Evaluation in Higher Education,* 31: 399 - 413.

Bruffee, K. 1993. *Collaborative learning: Higher education, interdependency, and the authority of knowledge*. Baltimore, MD: The Johns Hopkins University Press.

Fransen, J. 2006a. Een nieuwe werkdefinitie van blended learning. *OnderwijsInnovatie (Open Universiteit Nederland),* 8 (2): 26-29.

Fransen, J. 2006b. Ontwerpstrategie voor blended learning. *OnderwijsInnovatie (Open Universiteit Nederland),* 8 (3): 17-27.

Fransen, J. 2007. *Blended learning and the initial teacher training curriculum*. Paper presented at the EARLI Conference 2007.

Geelan, D. 1997. Prior knowledge, prior conceptions, prior constructs: What do constructivists really mean? *Australian Science Teachers Journal,* 43 (3): 26-28.

Guardado, M. & Shi, L. 2007. ESL students' experiences of online peer feedback. *Computers and Composition,* 24: 443-461.

Hattie, J. & Jaeger, R. 1998. Assessment and classroom learning: A deductive approach. [Article]. *Assessment in Education: Principles, Policy & Practice,* 5 (1): 111-122.

Hattie, J. & Timperley, H. 2007. The power of feedback. *Review of Educational Research,* 77: 81-112.

Lundstrom, K. & Baker, W. 2009. To give is better than to receive: The benefits of peer review to the reviewer's own writing. *Journal of Second Language Writing,* 18 (1): 30-43.

Marzano, R. 2007. *The art and science of teaching; A comprehensive framework for effective instruction.* Alexandria, VA: Association for Supervision and Curriculum Development (ASCD).

Reinmann-Rothmaier, G. 2003. *Didaktische innovation durch blended learning*. Bern/Göttingen, GER: Verlag Hans Huber.

Shute, V. 2007. *Focus on formative feedback*. Princeton, NJ: Educational Testing Service.

Van den Berg, I., Admiraal, W. & Pilot, A. 2006. Designing student peer assessment in higher education: analysis of written and oral peer feedback. [Article]. *Teaching in Higher Education,* 11: 135-147.

Van der Pol, J., Van den Berg, B., Admiraal, W. & Simons, P. R. J. 2008. The nature, reception, and use of online peer feedback in higher education. *Computers & Education,* 51: 1804-1817.

Development of High-school Students' Literary Competence in Views of Educators

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Abstract

The literary education must react to the changing needs and modes of self-perception of modern society. Mass and elite literatures set differing textual conditions to their readers as well as to the discipline of literature. The electronic media enter into play with their reader and pose new pending questions to the development of young learner-reader culture. The value of literary education is precisely in that it embodies the enduring view that literary work makes for the evolvement of personality; that it forms young learner's literary competence or an well-versed reader. The formation of personality is ordered by a range of identifications with its potential to be found in the works of literature in its quality of a source of nurturing aesthetic receptivity; of a field of cognition, within which to develop one's linguistic skills, literariness, imagination, communicability, empathy, identity, one's potential for the construction of opinion and understanding of the reality. The literary education ensures development of the sense of belonging to one's culture, more profound conceptions of culture, ability to perceive social structures and social change. Literature in the 21st century remains as the repository and safeguard of values, therefore, the decisions taken regarding improvement of literary education are of no small importance.

This article will 1) term the characteristics of the literary competence as a unique 21st century value requisite to young learner-reader and 2) focus on the range of problems concerning the evolvement of creative reader.

Keywords: criteria and levels of literary competence, literary education, literary competence, teachers

Introduction

Competence is perceived as ability based on knowledge, experience, values and attitudes, an ability, which ensures readiness to act in authentic situations. The notion of competence, understood in this light, reflects didactic and methodical aspects relying on an overall simple structure: knowledge, abilities, experience, attitudes and values. The structure of competence enables the description of learning content as well as the theoretical and practical aptness to bring it to be realized. A. Dahin (А. Н. Дахин) notes that, in pedagogical

research, competence can be also termed as a sum total of qualitative and quantitative components, which includes the planned results of education. Competence as a stimulating factor of social stability and development bears on individual ability to adapt to incessantly changing world, but also- change future through application of responsible understanding, professionalism and effective self-realization (Дахин 2009). A. Dahin holds the view that the competence approach in education is significant in the era of globalization since it indicates the overall tendency of pedagogical discipline in the world, ensures the correlation of national education and world education system and promotes openness to the transformation of education required by time (Дахин 2009).

Competences open the possibility to qualify the pupils' levels of knowledge, abilities and attitudes, which can be stated. Of course, the spheres of competence can be delineated relying on the tenets of the theories and practice of study disciplines, but the competence levels are considerably more complicated to identify since they would require a clear indication of specific abilities, which need to be improved and developed in order to pass from one competence level to the next, higher one. The elaboration of competence levels requires more than pedagogical and psychological knowledge basis. Empirical observation is of great importance for it, as a credible description of competence levels proceeds only from the formulation of tasks and from their analysis (Klieme 2004).

Application of competence in literary education changes the paradigm of this discipline. It means that what comes to fore in the educational discipline is student – reader's operation with literary texts, which, step by step, develops him as a competent, creative reader, promotes expansion of his literary competence. In literary education, with the view on solving problems concerning learner-reader's perception and interpretive skills, it is useful to identify the knowledge, skills and attitudes, which every young learner needs as a potentially creative reader, a reader with developed literary competence.

This article aims at the characterization of learners' literary competence as viewed by the teachers of literature.

The core of high school student's literary competence

The structures of literary competence include descriptions of reader, his needs and results achieved. Literary competence involves aptitude "to understand, use and think through the written texts in order to achieve one's envisioned goals, expand one's knowledge and maximize one's potential of participation in social life" (definition of reading competence by the *Organisation for Economic Co-operation and Development* (OECD)), but not only that. Additionally, the literary competence encompasses "general knowledge, knowledge of the forms of literary texts (genres, currents, styles) and their historic development, knowledge of prototypes, standard plots and story grammar and story scripts, techniques of storytelling

and dramatization, orientation in literary terms as well as ability of emotional self-investment in literary text (Abraham, Kepser 2006).

The young learner is a reader of prose, poetry and drama texts, whose ability to understand and interpret literary writing develops in the course of the examination of specific literary forms, expressive means of text, varying historic and social contexts, which is enabled by knowledge and application of appropriate sign systems (reading competence) and literary codes (literary competence). Literary competence means ability to perceive literature in line with the tradition, therefore, to understand aesthetically created text coming in variety of audible, readable or visually perceivable form (Rosebrock 1999) within a cultural context.

From the theoretical analysis (particularly, hermeneutic approach to definability of the meaning of literary work and importance of reader's experience) based on definition of literary competence offered by J. Culler, G. Haas, K. H. Spinner, U. Abraham, follows that *literary competence is individual's ability to perceive, analyse and understand a literary work, to interpret meaning of literary work in its given unity of form and content, to cognize one's reading experience, in order to be a motivated participant of literary communication, who is open to diversity of literature and who strives for evolvement of his individual identity.*

Literary competence can be assessed by the following criteria: emotional reaction, building of understanding, concretization of structures, explanation of meaning, reader's self-understanding.

Table 1. Criteria and levels of literary competence

Criteria	1st level (primitive reader)	2nd level (reproductive reader)	3rd level (interpretive reader)	4th level (creative reader)
Emotional reaction	poor	partial	good	very good
Building of understanding	poor	partial	good	very good
Concretization of structures	poor	partial	good	very good
Explanation of meaning	poor	partial	good	very good
Reader's self-understanding	poor	partial	good	very good

Criterion 'Emotional reaction': Learner's work with literature begins with reading and emotional perceiving of text. The degree of reader's consciousness of his emotions is important here, i.e., whether they are intuitive background of reading experience or come to be part of conscious process of text perception, are involved in reader's perception of the content and form of text as well as in forming of his concept of the mastery of literary genre

by its author. It is important for learner to be able to express his emotions verbally and explain them

Criterion 'Building of understanding': The learner's ability to understand text depends on his skills of problem solving as a reader such as ability to detect problems posed to his perception by the specificity of text. The learner himself is the source of his motivation, interest and enjoyment in reading as he finds the most appropriate (for example, imaginative, visual) way of working with text in order to enhance his level of understanding.

Criterion 'Concretization of structures': In order for the student to come to understand a work of literature on a possibly high level, he must be able to identify the content and shape forming structures of literary work according to specificity of its genre, to conceptualize them as a unity (of form and content).

Criterion 'Explanation of meaning': For the reader to be able to explain meaning of literary text, it is important for him to cognize its contexts, the situation of author and reader – everything related to particular text, which enables explanation.

Criterion 'Reader's self-understanding': Reader needs awareness of his own reading process step by step, realization of his reading experience and concept of ways to improve his reading experience and competence.
Understanding of literary work depends on such preliminaries for the formation of dialogue between reader, text and author as the text's potential to engage the reader and genuinely activate the reader. If reading has engendered text-related questions, which promote reader's understanding, the process of analysis and reflection can begin. Analysis deepens the experience of the text (while improper analysis can also disrupt it). The significant process of interpretation is related to reader's awareness that meaning of literary work is to be found in the literary work and reader himself (Bertschi-Kaufmann, Rosebrock 2009).

Development of high school student's literary competence encompasses characterization of high school student – reader on four levels ranging from the highest (4^{th} level) to the lowest (1^{st} level). (See Table 1)
1. The 1^{st} level reader is 'primitive reader', who perceives the content of literary work as a given reality or absolute fiction dividing it into good and bad 'facts' (reader's moralizing) and his perception of the material he reads only on superficial level. On this level, the ethical forms are not cognized.
2. The 2^{nd} level reader can be described as 'productive reader' since, on this level, the reader passes from intuitive understanding of literary work to conscious perception of conformities in

text, stopping short of work's perception in its unity, which, for him, remains a complex matter.

3. The 3rd level involves conception of 'interpretive reader', which concurs to Culler's theorizing of interpretation involving view that literary interpretation is not arbitrary; that 'it takes enormous effort on the part of the reader to convince others of propriety of his reading' and, most importantly, requires posing reader's question – 'what determines meaning?' (Culler 2007, 80). On this level, reader's erudition, aesthetic atonement to the text and orientation in diversity of the literary field evolves.

4. The 4th – the highest – level involves conception of 'creative reader' concurrent with Iser's description of ideal reader as one who is capable of complete realization of literature's potential of meaning (Iser 1976). A proficient, creative reader of literary texts can react to variability of its forms and construct coherences in increasingly more complicated reading matter. On this level, the reader enters creative phase of reading and his thinking touches on the rules of artistic production.

For the understanding of literary work to develop and for learner to be able to interpret text, the level from which the reader approaches text is important. The 1st and 2nd level readers are unable to arrive at an understanding of text without 'creative aid' of other reader. Comparison of 1st and 2nd level readers to those of 3rd and 4th level prompt conclusions about importance of reader constructions employed by particular learners in the process of forming interpretative statements and the range of contexts they are able to actualize in the process of understanding.

These stages of interpretation, in their turn, depend on reader's ability to relate his own knowledge and experience to one contained in text; on interpretive means, by which he constructs the significance of work; on his reasoning abilities and techniques of self-direction in the process of reading (planning, monitoring understanding, reviewing the stages of reading and one's own comprehension); on the kind of relationship developing between text and reader; on reader's effort and responsibility invested in process of reading and interpretation. The principal aim to be posed in this respect is that the largest possible number of high school students achieves their best results and – the level of creative reader. In order for this target to be attained, the pedagogues' care must be development of young learner – reader's perceptivity and understanding of literary text. Learner's emotional activity, activation of reader's imagination and creativity, widening of perception of the content and form of literary work, development of analytical and meta-cognitive abilities, expansion of literary work's meaning synthesis experience while keeping in view that 'openness is at disposal of interpretation' and 'the subject of perception can use 'openness' creatively' (Eco 2004) become important aspects of teaching. But the most important 'in literary work (in literature as work)' is 'to turn the reader of text into creator of text' (Barthes 1975, 4).

Methodology of Research

52 teachers of Latvian language and literature (with work experience over 10 years) were surveyed concerning their view of the literary competence of high school students. Teachers were selected from secondary schools and gymnasia in Latvia (Riga, Daugavpils, Liepāja, Alūksne, Limbaži and Aizkraukle). 12 teachers (heads of methodical units, multiplicators, and state-awarded educators) were also interviewed.

The high school students' literary competence is analysed in this article according to five criteria.

Empirical survey was carried out in year 2010/2011. In October 2010, questioners were handed out to teachers to be submitted to surveyor in person. Interviews were held in March and April 2011, with the surveyor being present in the educational institutions, which employ the interviewees.

The Research Results

1st criterion. Emotional reaction

In view of the teachers, 44,87% of learners achieve just the level, where only emotions that matter to them personally are activated in the reading process, and empathy is formed in relation to literary characters which can be associated with themselves, and often students even do not demonstrate awareness of their emotions as readers. In view of teachers, it is problematic, for a certain part of high school students, to perceive the emotionality of the text, to relate to other's/author's situation, to explain their own emotional responses. According to educators, the proportion of learners capable of the indicated operations is only 11,54% (see Chart 1).

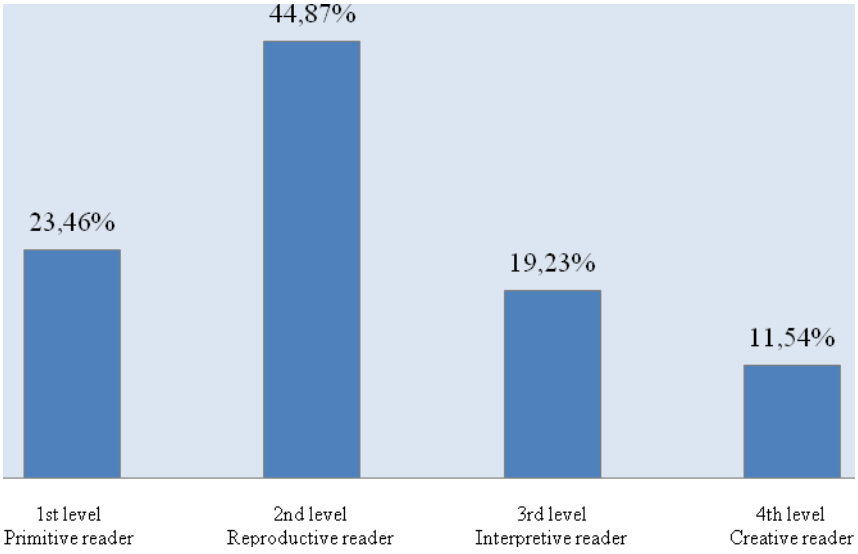

Chart 1. Emotional reaction

The student whose level of literary competence is high, will not retain just intuitive relation to text, but will be aware of his varied emotions, will be able to verbalize them and identify their possible reasons as well as note emotional structures in text. However, teachers point out that learners' awareness of their emotional sphere is insufficient, but they attempt to tract it, although, in process of perception of literary work, most of them stay on level of 'liking' or 'disliking' texts on the level, which does not exceed the narrow scope of their personal relation to material. If, emotionally, the reader remains on this level, it should affect his understanding of literary work and reader will be able to characterize only those of its aspects, which are most relevant for him emotionally and invoke his sympathies. This indicates learners' problematic ability to discern information in text and unsatisfying skills to use the first reading of text effectively.

2nd criterion. Building of understanding

For the student to be able to grasp the content of text, he must be able to self-direct his own in-depth study of text, to cognize problems concerning understanding of text, which arise, without losing motivation to read and enjoyment of reading process. Most important factors affecting understanding are ability to visualize, imagine and empathically perceive the reading material. Teachers discern that, in terms of building of understanding, 14,42% of learners do not rise above the lowest, 1st level. Few learners are able to use their experience, to perceive the content of literary material, to visualize its matter and lose interest to delve into text and continue reading as a consequence, while 44,71% of learners attain the 2nd level, where, while the reader is not fully able to retain enjoyment of reading process, he can sufficiently activate personal experience and be aware of his problems concerning

understanding of text, but cannot independently overcome these obstacles. In view of teachers, only 34,13% of readers attain the 3rd and – 6,73% of readers – the highest level of understanding of text, i.e., the level where the reader fully activates his experience, visualizes material in detail, perceives its content and does not lose the motivation to comprehend a given work of literature even facing conceptual difficulties (see Chart 2).

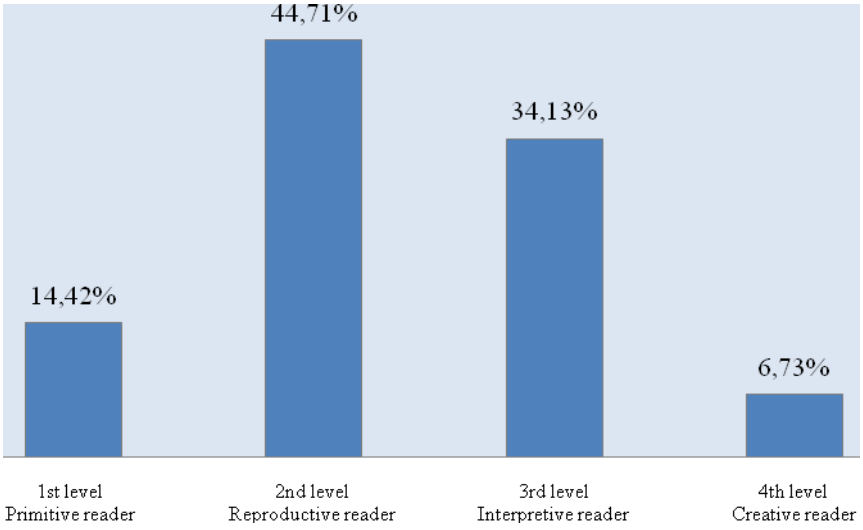

Chart 2. Building of understanding

3rd criterion. Concretization of structures

Student must comprehend the structures constituting the text content and figures of form bearing in mind that form and content of literary work are in unity. On this level, it is important to discern particular features of texts of poetry, drama or prose, to distinguish the range of literary-historic knowledge relevant in understanding of varying textual material as well as to analyze form and content as a unity.

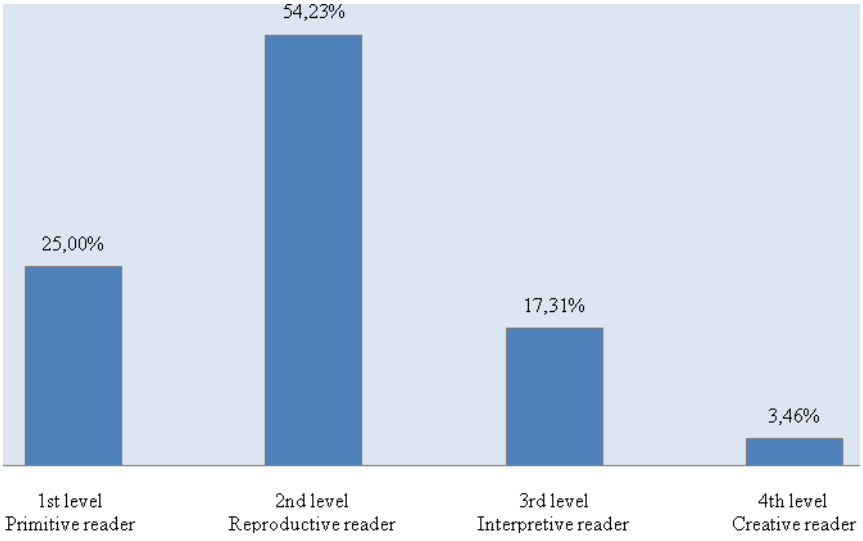

Chart 3. Concretization of structures

On this level, the most important qualities of the reader are precision in the perception of the numerous text structures and the depth of understanding. In view of teachers, the students demonstrate low ability of structure discernment. 25,00 % attain the lowest level, 54,23% - the 2nd level, and only 17,31% or readers rise to the 3rd level, by this criterion, while 3,46% of readers can concretize literary structures fully (see Chart 3).

It means that dominant number of learners cannot grasp the structures constituting content and form, genre specifics and text information to the full even in simple texts. They perceive random details, episodes, events without forming individual picture of interrelations; the structures in the background of text and authorial attitude are not discerned either. Teachers also point out in interviews that 'elementary is noted by many, the specific – by few,' and even that is achieved with 'lengthy and targeted effort' on the part of teachers.

4th criterion. Explanation of meaning

The stage of reading when the meaning of literary work must be determined – the phase of interpretation – is important an creative period in process of reader's working with text engendering drawing conclusions and preparing a clear statement about understanding literary material and – what is important in it. The learner arranges summary of entire period of reading prior to that, perceiving its meaning and its benefits for himself. In view of teachers, students arrive at conclusions about the meaning of literary work, but fall short of ability to substantiate them (see Chart 4).

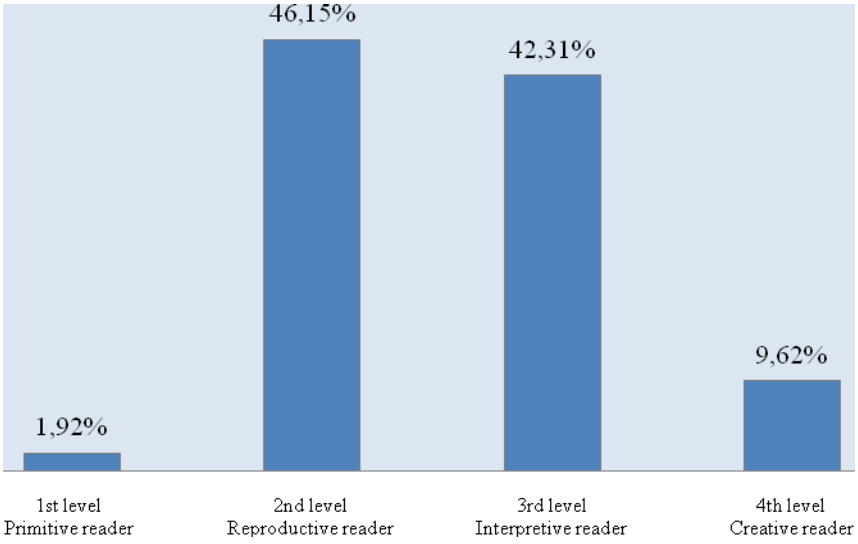

Chart 4. Explanation of meaning of literary work

1,92% of students (1st level) rarely draw conclusions, 46,15% of learner-readers (2nd level) formulate conclusions as a rule, but fall short of being able to explain them, 42,31% of students (3rd level) always arrive at conclusions about literary work, but some of them remain unexplained, and only 9,62% of learners (4th level) never fail to substantiate their own conclusions about meaning of texts. The number of learners who grasp the importance of contexts and of authorial and reader positions in comprehension of texts is minimal. After reading a drama or prose text, most of students can only descriptively render its content, but are unable to analyze the reading matter meaningfully, i.e., in terms of its personae, time and space. The logic of literary work, its characters are beyond the frame of comprehension of text and the aesthetic perception remains unrealized. In interviews, teachers recognize this as problem related to students' tendency to strive for fast results and to their inability to delve in text, while also noting that 'on condition of systematic work, most of 12th grade students develop considerably high interpretive abilities.'

5th criterion. Reader's self-understanding

Reader's reflection on his experience of reading-process, his self-perception as a reader with concrete level of development and his ability to plan his steps in self-improvement as a reader is a complex of skills important in formation of literary competence. Its efficient appropriation enables educators and students alike to determine progress or problems in formation of literary competence. Teachers state that 40,38% of students rarely attempt to realize and explain their actions as readers (1st level), 51,92% of students realize their actions as readers and can comment on them (2nd level), only 7,69% of readers are constantly aware of their actions as readers and explain them (3rd level), but teachers cannot

name students who envision and plan improvement of their actions as readers after they have reflected on their own reading process (see Chart 5).

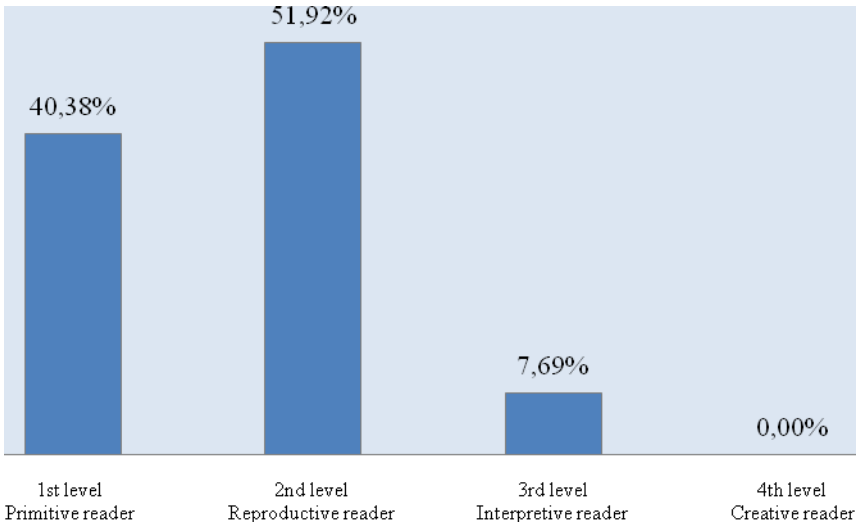

Chart 5. Reader's self-understanding

Teachers acknowledge in interviews that they rarely offer self-assessment to the students as part of their learning process. Absence of reader's motivation to reflect on his actions as a reader and his reading experience and to assess them explains the low level (in teachers' view, at least) of high school students' literary competence.

The levels of high school student's literary competence

As the results of this survey allow to conclude, in view of teachers of literature, it is has not been possible to attain a high level of literary competence (learner-reader level of competence) in the phase of high- school education: the 1st level (Primitive reader) is attained by 21,29% of high school students; the 2nd level (Reproductive reader) is attained by a larger number – 48,73% of students; the 3rd level (Interpretive reader) is attained by 23,63% of high-school students, while the 4th and highest level of literary competence is achieved only by 6,32% of students (see Chart 6).

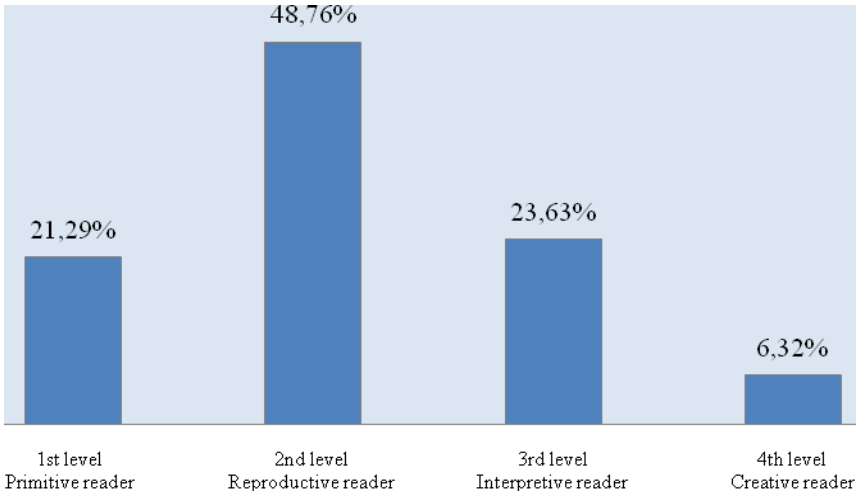

Chart 6. The levels of high school students' literary competence

Teachers recognize importance of literary competence, but point out the difference of student and teacher positions; they underline that 'it is increasingly rare that a student opens a book and reads its full text, which explains their overly general, naïve, uncomprehending conclusions about material as well as the fact that reading competence fails to be formed.' Teachers stress that 'it is not always that teacher can determine correct literary material to be read by a concrete group of readers that class is, and it is not granted student and teacher can form a literary dialogue enabling shared perception, experience and view of the literary matter.' They note that 'student comes to school with a given 'luggage' – the tradition of reading in family or lack of such; the student chooses to belong either to group of readers or that of non-readers in the class; student may or may not find a prominent teacher-figure, who is able to engage his interest during the lessons of literature, in front of the class.' Within the range of views expressed during the survey interviews, the dominant perception is that the formation of literary competence is related to understanding of the role of the teacher and to teacher's targeted action, although with the looming apprehension that 'it is like banging the brick wall. But, undeniably, on condition that teacher has managed to engender students' interest to reader proficiently, a comparison of 10th grade students to 12th grade ones will demonstrate a marked development.' 'Insufficient number of lessons of literature' and XXI century not being 'an era of reading and literature, while the teacher of literature is the youth's only bridge to the world of text' are indicated as impediments to teaching process.

Conclusions

The high school student's literary competence in development encloses ability and readiness to perceive diversity of literary works by reading, listening (also – viewing), to discern features and functions of literary work, to explain one's understanding of the meaning of literary work. The student has to master communication with literary work in order to comprehend literature and to become a competent reader, a reader forming his literary competence. The dialogue contained by literary work holds the most considerable potential of literature, which is the reason why literature retains its significance in education and public discourse.

The results of the survey indicate that discussions in the pedagogic environment are needed concerning formation of literary competence, in particular, discussion of the ways to build knowledge, skills and attitudes enabling perception, understanding, analysis and interpretation of literary work by students. There are certain indications that teachers orient themselves to the perceivable immediate result of literary education such as reception of a passable interpretation of text by student without paying attention to student's skills, which enable meaningful reading and interpretation of literary work. Teachers recognize significance of literary competence, but point out that as educators they are more concerned with volume of literary works to be acquired in the process of high school education, while less attention is paid to the culture of reading and to questions like gradual development of reading skills of learner-reader, evolvement of his imagination and elasticity as individual, so that to prevent the state of matters when every literary material reaching beyond the range of student's experience of life is cast off as value-less and the student restricts his experience as a reader to the levels of Primitive or Reproductive reader.

Assessing literary competence by five criteria (reader's emotional reaction, building of understanding of literary work, concretization of the structure of literary work, explanation of meaning of literary work and reader's self-understanding), teachers' view of students' literary competence was determined in this survey, which prompted conclusions that 1) students are not aware of their own emotional reactions to the texts read on the level, which enables perception of the content of literary work (the reader's awareness is restricted to the moments of personal enjoyment or dislike, which the process of reading engenders) limiting the understanding of literary work to 'reproductive' level of reading; 2) inability to authentically delve in text (to visualize it, to perceive imaginatively) underlies simplified perception of text structures and the discernment of meaning of simple texts alone. However, teachers term students' lack of skills to analyse the steps of their reading and inability to plan improvement of their literary competence as the main problems in formation of literary competence. These aspects of learner-reader problems are related to long-standing stasis in modification in didactic tenets of education, which, in increasingly mediatized society, is necessary for the

development of reading culture and for the formation of learner-reader's literary competence to be engendered.

References

Abraham, U. 2005. Lesekompetenz, literarische Kompetenz, poetische Kompetenz. Fachdidaktische Aufgaben in einer Medienkultur. In: *Kompetenzen im Deutschunterricht. Beiträge zur Literatur-, Sprach- und Mediendidaktik,* Hrsg. Rösch, Heidi Frankfurtam Main: Lang, S. 13.–26.

Abraham, U. 2002. Lesen – Schreiben – Vorlesen/Vortragen. In: *Gründzüge der Literaturdidaktik,* Hrsg. K.-M. Bogdal, H. Korte. München: dtv, S. 105–119.

Abraham, U., Kepser, M. 2006. *Literaturdidaktik Deutsch. Eine Einführung.* (2. Auflage). Berlin: Erich Schmidt Verlag GmbH & Co.

Barthes, R. 1975. *S/Z: An Essay.* Farrar: Straus and Giroux.

Bertschi-Kaufmann, A., Rosebrock, C. 2009. *Literalität: Bildungsaufgabe und Forschungsfeld.* München, Weinheim: Juventa Verlag GmbH, S. 7–17.

Deutsches PISA-Konsortium (Hrsg.) 2001. *PISA 2000 - Basiskompetenzen von Schülerinnen und Schülern im internationalen Vergleich.* Opladen: Leske, Budrich.

Haas, G. 2001. *Handlungs-undproduktionsorientierterLiteraturunterricht.* (4. Auflage). Seelze-Velber: Kallmeyersche Verlagsbuchhandlung GmbH.

Iser, W. 1976. *The act of reading: A theory of aesthetic response.* Baltimore and London: Johns Hopkins University Press.

Kalers, Dž. 2007. *Literatūras teorija.* Rīga: ¼ Satori.

Klieme, E. 2004. Was sind Kompetenzen und wie lassen sie sich messen? In: *Pädagogik* Nr. 6, S. 10.–13.

Rosebrock, C. 1999. Zum Verhältnis von Lesesozialisation und literarischem Lernen. In: *Didaktik Deutsch,* 6, S. 57.–68.

Spinner, K., H. 1993. Entwicklung des literarischen Verstehens. In: *Leseförderung und Leseerziehung*, Hrsg. O. Beisbart. Donauwörth: Auer

Spinner, K., H. 2000. Wider den produktionsorientierten Literaturunterricht – für produktive Verfahren. In: *Schlüsseltexte zur neuen Lesepraxis,* Hrsg. J.Bark, J. Förster. Stuttgart:Ernst Klett Verlag GmbH. S.85 – 96.

Дахин, А., Н. 2009. *Моделирование компетентности участников открытого образования.* Москва: НИИ школьных технологий.

Эко, У. 2004. *Открытое произведение.* Санкт-Петербург: Академический проект.

Student Feedback Based Instructional Coaching for Job-embedded Faculty Development

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Abstract

The paper brings a concise literature review on success factors in coaching, describes the instructional coaching process and related matters and brings a narrative report on the first findings with this newly implemented approach in dealing with student evaluations on lecturers' teaching performances and how to use these evaluations formatively for job-embedded faculty development and professionalism.
Keywords: typology of faculty responses; student feedback; coaching; success factors

Introduction

It is common practice in quality assurance in higher education to ask for student ratings of faculty teaching practice. Student evaluation questionnaires are administered to students to collect students' opinions and measure academics' teaching performance. Student evaluations can be situated between professionalism and performativity (Arthur 2009). They are a key aspect of professional practice (Nicholls 2002), but also an important part of performance management and quality assurance systems in higher education.
Faculty's responses to this type of student feedback appear to be related to the feeling they have on the purpose (performativity or professionalism) of collecting the student feedback. It is necessary for faculty to interpret student evaluations accurately, for which, however, very little support is offered in universities (Richardson 2005).

Typology of faculty responses to student feedback

It was reported that lecturers' responses tend to be influenced by overall results of these evaluations. Teaching performances may be rated either positively or negatively and give rise to consequent responses (Moore and Kuol 2005). However, not all kind of responses may lead to a formative use of student evaluations, which could jeopardize faculty

development efforts. Especially those on negative feedback are at risk. Faculty responses on student evaluations have been studied and typologies of responses proposed. In his typology Arthur distinguished four categories of lecture's responses to negative evaluations (Arthur 2009, 452):

Shame: where the lecturer feels that negative feedback relates to him/her and (s)he cannot change or influence the students' response;

Blame: where lecturers feel that the negative feedback is caused by the students and they cannot make the difference to it;

Tame: where lecturers recognize that the feedback relates to students, but feel able to influence the outcome by making appropriate changes – for example in their teaching and learning strategies – which will make the students feel more positive;

Reframe: where lecturers feel responsible for the negative feedback, but see this as a learning opportunity, reframing the negative as something positive.

Instructional coaching

Coaching lecturers to cope with student feedback on teaching practice has been demonstrated to result in positive reflective practice in university teaching (in 't Veld and Knol 2005). In particular, those new to the profession or with limited experience coping with student feedback may need additional support in coming to terms with it, in order to learn from evaluation and improve their practice (Arthur 2009).

Therefore the University College Ghent launched an instructional coaching programme to help faculty responding in a proper way to student evaluations. The nature of instructional coaching is skills focused with specific targets. Experienced internal coaches or peers, familiar with teaching and learning as well as with quality assurance and student evaluations in higher education are approached to involve themselves in supporting the formative use of student evaluations in the framework of faculty development.

Pre-requisites and success factors

Several authors (Gettman 2008; Ely, e.a. 2010; Hernez-Broome, e.a. 2011) have identified pre –requisites and success factors at the level of the coach, the coachee and the matching. At the level of the coach concreteness of the client's goals and expectations is an essential issue. Also a visible match between coach and coachee in terms of knowledge and experience as well as in terms of cultural exposure is recommended. Finally, change readiness in the coachee is reported as being of crucial importance.

In her study, Schimdt (2003) revealed five main success factors in coaching programmes, ranked as follows: qualification of the coach; involvement of the coach; clarity and goals; trust and quality of the coaching relationship.

Terms of instructional coaching at the University College Ghent

Instructional coaches work on a one-on-one basis with lecturers, providing guidance and other resources as needed. Together, they focus on practical strategies for engaging students and improving their learning. It is job-embedded, addressing issues lecturers face in their daily teaching practice. The goal is twofold: improved teaching practice and improved student learning.

In order to maximize the success rate, the pre-requisites and success factors as found in the literature are embedded in the terms of the instructional coaching practice. Only experienced colleagues are invited for coaching others. Prior to the coaching process, an intake interview is conducted with coachee and coach. After the interview, it is decided by the coachee and the coach themselves, whether or not they are willing to start the coaching project together. To insure the concreteness of goals and expectations an agreement is signed by the human resource manager, the dean, the coach and the coachee, including goals, timetable and knowledge resources. The goals are set in accordance with the so called SMART – principles: specific, measurable, agreed upon, realistic and time-based. Usually the coaching project will run for about one academic year. Coaches are reporting on the activities monthly, to all the parties involved.

The instructional coaching as applied at the University College Ghent implies a similar methodology as labelled as cognitive coaching and demonstrated to be effective in higher education as reported by Maskey (2009). It is about encourages dialogue about teaching, collaboration, innovation, teacher efficacy, reflection, satisfaction, and even empowerment among teachers.

Conclusions and recommendations

Currently three coaching projects are running and the midterm outcomes are quite promising. In their response to rather negative student feedback on their teaching practice, all of the three lecturers were able to move towards the tame and reframe categories (see typology proposed by Arthur (2009)), willing to involve themselves in teaching seminars for faculty, going through recommended resources and proposing new schemes for their teaching practice in the next term.

It might be clear that, although this is a very demanding and time consuming practice, it is a good practice for job-embedded faculty development. The critical factor might be the number

of lecturers seeking for help in their efforts for coming into terms with the student feedback on their teaching practice.

References

Arthur, L. 2009. From performativity to professionalism: lecturers' responses to student feedback. *Teaching in Higher Education* 14 (4): 441 – 454.

Ely, K., Boyce, L., Nelson, J., Zaccaro, S., Hernez-Broome, G., Whyman, W. 2010. Evaluating leadership coaching: A review and integrated framework. *The Leadership Quarterly* 21(4): 585–599.

Gettman, H. 2008. Executive coaching as a developmental experience: A framework and measure of coaching dimensions. PhD-dissertation. University of Maryland.

Hernez-Broome, G. and Boyce, L. 2011. (Eds.). *Advancing Executive Coaching. Setting the Course of Successful Leadership Coaching.* San Francisco: Jossey-Bass.

In 't Veld, R., Knol, M. 2005. Evidence based coachen van docenten in het hoger onderijs. [Evidence-based Coaching of Lecturers in Higher Education]. Retrieved from: http://www.vsnu.nl/web/file?uuid=2cbeb061-7655-4a6a-9deb0cb5f2afa19&owner=ac2a5e28-23c0-4eeb-baea-b8b3c7d7b6b7

Maskey, C. 2009. Cognitive coaching has an exciting place in nursing education. *Teaching and Learning in Nursing* 4 (2): 63–65.

Moore, S., Kuol, N. 2005. Students evaluating teachers: Exploring the importance of faculty reaction to feedback on teaching. *Teaching in Higher Education* 10 (1): 57-73.

Nicholls, G. 2002. *Developing teaching and learning in higher education.* London: Routledge-Farmer.

Richardson, J. 2005. Instruments for obtaining student feedback: A review of the literature. *Assessment and Evaluation in Higher Education* 30 (4): 387-415.

Schmidt, T. 2003. *Coaching: Eine empirische Studie zu Erfolgsfaktoren bei Einzel-Coaching* (Coaching: An empirical study of success factors in individual coaching), Berlin: Technische Universität Berlin.

Thiessen, D. 2000. A skillful start to a teaching career: a matter of developing impactful behaviors, reflective practices, or professional knowledge? *International Journal of Educational Research, 33:* 515-537.

Tsai, M-L.Chen, K-S., &Chien, J-L. 2011. The factors impact of knowledge sharing intentions: the theory of reasoned action perspective. *Quality & Quantity.*

Tynjälä, P. 2008. Perspectives into learning at the workplace *Educational Research Review 3*: 130-154.

Van Velzen, C., Volman, M.,& Brekelmans, M. 2010. *Mentor teachers sharing practical knowledge with student teachers*. Presentation at ATEE 2010 Budapest Hungary

Van Manen, M. 1999. Knowledge, reflection and complexity in teacher practice. In: *Changing schools/changing practices: perspectives on educational reform and teacher professionalism*, eds. M. Lang, J.Olson, H. Hansen, & W. Bunder, 65-75. Leuven: Garant.

Verloop, N., Van Driel, J., & Meijer, P. 2001.Teacher knowledge and the knowledge base of teaching. *International Journal of Educational Research, 35:* 441–461.

Yin, R. K. 2006. Case study methods. In *Handbook of Complementary Methods in Education Research,* eds. J.L. Green, G. Camilli, & P.B. Elmore, 111-122. Mahwah, NY.: Lawrence Erlbaum Associates, Inc.

Zanting, A. 2001. Mining the mentors' mind The elicitation of mentor teachers' practical knowledge by prospective teachers. Dissertation Leiden University: ICLON Graduate School of Education.

The Involvement of Student Teachers in the Development of Language Learning Tasks. Lessons from the ETALAGE Project

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Abstract

In this paper I report a small experiment about the involvement of student teachers as well as experienced professionals in the development of language learning tasks. I argue that involving student teachers as well as experienced professionals may yield better results than involving experienced professionals only. I also argue that the close cooperation of student teachers, novice teachers and experienced language teachers in intergenerational learning groups as well as the close cooperation between teacher education institutes (universities) and placement schools may benefit all the parties concerned. I suggest that in such cooperation professional development is not a one-way top-down process in which the schools and the student and novice teachers are the recipients but a two-way interaction from which teacher education institutes and experienced and even expert teachers may derive considerable profit.
Keywords: teacher education, language teaching, learning tasks

Introduction and Research Question

Context

The context of this experiment was the Regionale Opleidingsschool West-Friesland (ROWF; see also http://www.rowf.nl/). In this association of training schools, teacher education institutes (universities and universities of applied sciences) work closely together with seven schools in the education of student teachers. A characteristic of this cooperation is the use of tandems of university based educators (university lecturers) and school based educators (often referred to as mentor teachers), who have joint responsibility for the education of student teachers. In the ROWF student teachers are given teaching responsibilities from the very beginning of their placements.

The author is a university based educator, who works closely with the school based educators in two schools in the ROWF. The ROWF and the University of Amsterdam are the two Netherlands partners in the ETALAGE project.

The ETALAGE Project

ETALAGE stands for European Task-based Activities for Language Learning: a good practice exchange. It is a Comenius Multilateral project running from 1 December 2009 until 30 November 2011 (see also http://www.etalageproject.eu/).

The reason for this project was the inability of many language teachers to move away from traditional grammar/translation and vocabulary classes towards a more task based approach that invites learners to engage in meaningful tasks that are useful to them in daily life as opposed to the classroom, many teachers‟ lack of knowledge of the Common European Framework of Reference (CEFR) and their reluctance to integrate ICT in their classes (for task based language learning, see Ellis 2003; for integration of ICT in language learning, see Jager 2009; for the CEFR, see Council of Europe 2001).

We tried to address these three problems during our project, in which the partners collected, re-designed and adapted samples of good practice of ICT based language learning tasks for the productive skills and the four lowest levels of the CEFR (A1, A2, B1 and B2), which samples were subsequently placed in a web-based multilingual repository (for the skills and the levels in the CEFR, see Table 1).

Table 1. Skills and Levels of the CEFR

Understanding	Listening
	Reading
Speaking	Spoken interaction
	Spoken production
Writing	Writing

C2	Mastery
C1	Effective Operational Proficiency
B2	Vantage
B1	Threshold
A2	Waystage
A1	Breakthrough

The partners then produced eight national in-service teacher training courses in which teachers are trained to adapt these samples to their own classroom situation as well as an international training course (this latter course was submitted to the Comenius/Grundtvig database of courses under the title Effective use of web-based applications in task based language teaching, to be delivered in Bruges, Belgium; also see: http://ec.europa.eu/education/trainingdatabase/index.cfm). The eight countries involved were: the Netherlands, Germany, Greece, Hungary, Italy, Portugal, Turkey and the United Kingdom (Scotland). Each country was represented by a tandem consisting of an institute for teacher education and a school where student teachers were trained. The project was coordinated by the Graduate School of Child Development and Education of the University of Amsterdam. The first step in the development was for each tandem to collect, re-design or adapt samples of good practice. These samples were tried out and evaluated by end users (usually children in the school of the tandem) and, where necessary, adapted. These samples were then submitted to independent reviewers, who, on the basis of an evaluation sheet, selected the four best samples. The thirty-two samples (four samples selected for each of the eight countries) were translated in English. At the moment of writing the 32 selected samples were prepared for translation in each of the eight languages represented in the project, so that by the end of the project there would be a total of 256 samples in the web-based multilingual repository. A table with the provisional titles of the 32 English versions is found in Table 2.

Table 2. List of selected learning tasks

Country	Ranking	Provisional title in English
DE	1	Books and Modern Media
	2	Character stories
	3	London Sights
	4	I can do - My hands
EL	1	Schools Here and There
	2	Love Through Ages
	3	London Zoo
	4	TV Commercials
IT	1	Dinner invitation
	2	On a desert island
	3	Find the treasure
	4	Tourist promotion website
HU	1	Introducing a City
	2	Without Sound
	3	Stereotypes
	4	How would you finish the story?
NL	1	What do you want to be?
	2	Sell your stuff
	3	Telling people about your hobbies
	4	Introduce yourself to your host family
PT	1	Mapping directions
	2	Create a blog to promote your city/school
	3	Whodunit
	4	Making a Portuguese Gastronomy TV Show
UK	1	Birthday Party Invite
	2	Les régions françaises
	3	Les vacances
	4	Visit to Paris
TR	1	Describe your room
	2	Logbook of a century
	3	Create a Tourist Brochure
	4	Your favourite friend

Research Question

Although the ETALAGE project clearly involves in-service teacher education, the NL tandem has extended the project to pre-service teacher education. Student teachers were asked to try out the learning tasks that had been developed in their classes, which yielded interesting results (see Van der Linden and Koet 2011). The setting of the project also provided an excellent opportunity to investigate whether student teachers in initial teacher training can be relied upon to take their share in the production of language learning tasks.

The hypothesis that was formulated is:
a pair consisting of experienced professionals is better at producing language learning tasks than a pair consisting of an experienced professional and a student teacher.

Method

The experiment was carried out at the two schools of the ROWF where the author is the university based educator. Both schools are secondary schools that cater for academically more able children, who wish to proceed to university education. In school A two experienced professionals, teachers of English, one male and one female, designed language learning tasks. In school B one female experienced professional (who was also the school based teacher educator) working with a female student teacher designed language learning tasks. The language learning tasks were put in a format prescribed by the project.

The language learning tasks designed by school A and school B were uploaded in a web based digital office together with other language learning tasks produced by Netherlands authors that had been selected in the course of the project. An independent reviewer, a teacher educator and language teaching specialist from Utrecht University of Applied Sciences, who did not know the schools or the teacher or the student teachers, was asked to review the language learning tasks and assign them points in accordance with a format provided by the project; he was then asked to rank the language learning tasks in such a way that only the four language learning tasks with the highest ranking were selected.

Results and Discussion

The independent reviewer did not select a single language learning task produced by the experienced professionals in school A; the independent reviewer selected one language learning tasks produced by the experienced professional and student teacher in school B. (The language learning task of school B selected by the independent reviewer is found in

Table 3). Therefore the hypothesis that a pair consisting of experienced professionals is better at producing language learning tasks than a pair consisting of an experienced professional and a student teacher was not supported. Interestingly the results of this experiment caused the experienced professionals grave concern, so much so that they wanted to expostulate with the independent reviewer, from which course of action they were dissuaded by the author.

Table 3. The language learning task produced by school B and selected by the independent reviewer

Letter to introduce yourself to your host family and ask for additional information.			
Level: A2	Skill/skills: Writing	Duration: 60 mins	Target language: English
I can…:	• Can write a series of simple phrases and sentences linked with simple connectors like 'and', 'but' and 'because'. • Can write a series of simple phrases and sentences about their family, living conditions, educational background, present or most recent job. • Can write about everyday aspects of his/her environment, e.g. people, places, a job or study experience in linked sentences. • Can write short, simple formulaic notes relating to matters in areas of immediate need.		

	• Can copy short sentences on everyday subjects – e.g. directions how to get somewhere. • Can write with reasonable phonetic accuracy (but not necessarily fully standard spelling) short words that are in his/her oral vocabulary.
Product:	A letter of 150 words.
Product requirements:	□ A semi-formal letter in which you introduce yourself by giving global information about your interests, hobbies, family, friends and school. □ In the letter you politely ask for extra information about the host family itself and whether they can accommodate any special needs you might have.
Situation / theme:	In April we will be going to England, where you will stay with a host family for three nights. Of course, this is very exciting! You have a lot of questions and before we leave you decide you are going to write a letter to the family in which you introduce yourself so they will have an idea of who you are. You also ask for some extra information about the host family. (For instance: do they have pets? Will you have a bedroom of your own? Is it a problem that you are vegetarian?)
Process and resources:	□ Before you start writing: make a short list of information you want to give to the host family and what information you would like to receive. □ Write your letter in your own words: check your spelling in a dictionary and your grammar with your textbook. □ Recourses: Pen & Paper Lay out: **http://www.readingrockets.org/article/22319** Dictionary: (Dutch to English: **http://www.vandale.nl/vandale/opzoeken/woordenboek/**) (English: **http://dictionary.cambridge.org/**)
Division of roles (optional):	□ Individual Assignment
Consolidating activities :	-------
Success factors/evaluation criteria :	You will have done well if: □ you have written 150 words. □ you have used the lay-out correctly. □ your sentences may be short, but you have used the present tense correctly and the words in your sentences are in the correct order. □ you have spelled words you have learned this year correctly and have checked the spelling of difficult words in a dictionary.

	□ you have used the correct tone for writing to someone you have not met before, but whom you will meet soon.
Authors:	Marija Dragutinovic, Duygu Bekler

Of course it cannot be concluded that the opposite of the hypothesis is true; a pair consisting of an experienced professional and a student teacher is not necessarily better at producing language learning tasks than a pair consisting of experienced professionals only. The evidence presented here is far too anecdotal to infer this.

A number of alternative explanations might be offered. It might be argued that the professionals were not well matched; the school based educator may have been a better designer of tasks than the other experienced professionals. Also, it might be possible that school B may have been a better environment for the development of language learning tasks than school A. Finally, the student teacher may have been an exceptionally gifted developer of language learning tasks. The author has seen no evidence, however, that this was the case and that the alternative solutions offer a better explanation than the benefits of involving student teachers.

It would be interesting to repeat this experiment with a larger numbers of pairs consisting of experienced professionals only and pairs consisting of one experienced professional and a student teacher.

Conclusion

Involving student teachers as well as experienced professionals in the development of language learning tasks may yield better results than involving experienced professionals only. Close cooperation of student teachers, novice teachers and experienced language teachers in intergenerational learning groups as well as close cooperation between teacher education institutes (universities) and placement schools, may benefit all the parties concerned. In such cooperation professional development is not a one-way top-down process in which the schools and the student and novice teachers are the recipients but a two-way interaction from which teacher education institutes and experienced and even expert teachers may derive considerable profit.

References

Council of Europe. 2001. *Common European framework of reference for languages: learning, teaching, assessment.* Cambridge: Cambridge University Press.

Ellis, R. 2003. *Task-based language learning and teaching.* Oxford: Oxford University Press

Jager, S. 2009. Towards ICT-integrated Language Learning. Groningen: Groningen Dissertations in Linguistics

Van der Linden, H. and Koet, T. 2011. *Mentors Matter! "What makes a mentor teacher a successful mentor teacher?".* Paper presented at ATEE 2011 conference.

What is Mathematics and why do We Study it? The Views of Student Teachers

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Abstract

This paper examines aspects of the findings from a study of mathematical identity among pre-service teachers, drawn from Dublin (Republic of Ireland) and Belfast (Northern Ireland) all of whom were in the third year of their Bachelor of Education (Primary) programme, having chosen to specialize in mathematics. The aim of this SCoTENS (Standing Conference on Teacher Education North and South) funded project is to explore the mathematical identities of primary school student teachers. *Mathematical identity* is an overarching idea used to describe the multi-faceted relationship that an individual has with mathematics, including knowledge and experiences, perceptions of oneself and others. The research method uses narrative as a tool to access this identity, first using a questionnaire with open-ended prompts, followed by two focus groups to elicit further narrative development. The intention was that by providing an opportunity for students to tell a story about their own relationship with mathematics, identity would be articulated and themes would come to the fore giving insights into the thinking of such a select well-motivated group. This paper focuses particularly on elements of the narratives that give insight into student teachers' understanding of the nature of mathematics itself.

Keywords: mathematical Identity, pre-service teachers

Introduction

As the international view of teaching has shifted from didactic to constructivist with its image of learner as participatory, so research on teacher education has moved from a focus on the transfer of a body of knowledge to a more dynamic view of the classroom, with teachers being facilitators of learners' knowledge construction. However views on the nature of teaching are only one part in the kaleidoscope of a teacher's armoury; views on the nature of the subject being taught, why it is being taught and what is its purpose are equally influential in determining behaviour in the classroom. Thus while the generic perspective of teacher education may be changing, perspectives of mathematics itself also play a role in its teaching. Is mathematics understood, by the community as a whole and subsequently by

student teachers, as a body of knowledge to be transferred or a world of knowledge to be constructed by the learner, facilitated by the educator? Indeed, such teacher beliefs and attitudes play an important role in shaping classroom practice (Bolhuis & Voeten 2004) and there is a substantial body of evidence examining this supposed link between teachers' attitudes to and beliefs about mathematics and teaching, and classroom practice (Ernest 1988a; Bishop & Nickson 1983; Fang 1996; Macnab & Payne 2003; Dunphy 2007; Horgan & O'Loughlin 2007).

It is thus important, at the beginning of any teacher education programme, to explore the views of the student teachers concerning both teaching and the nature of mathematics, as these will be a major influence for many students on their teaching style. Often, when teacher education courses are designed, little consideration is given to the "baggage" with which students are already burdened and it is perhaps for this reason that student teachers are more likely to teach mathematics in ways in which they themselves were taught (Ball 1988; Meredith 1993).

The fact that this "baggage" carried by student teachers is multi-dimensional, in that it includes cognitive, affective and indeed meta-affective domains, makes it elude accurate identification. One way of attempting to unpack this "baggage" is through the consideration of mathematical identity, an overarching phrase used to describe the multi-faceted relationship that an individual has with mathematics, including knowledge and experiences, perceptions of oneself and others (Wenger 1998).

One emerging tool in recent years to help access identity has been that of narrative (Clandinin & Connelly 2000; Kaasila 2007). It is hoped that by allowing students to tell a story about their own relationship with mathematics, identity will emerge and themes will come to the fore that give insight into their thinking. In the study under consideration, the researchers investigated the mathematical identity of two groups of student teachers, self-selected to study mathematics in some depth as part of their undergraduate programme.

Similar to the debate between realists and relativists in science, the mathematical community has been engaged in reflection on the nature of mathematics, particularly focused on the "created versus invented" discussion (Ernest 1999). At one end of the philosophical continuum are the absolutists who view mathematics as a fixed body of truths, universal and definitive, established by proof, unambiguously true and free of cultural references (Penrose 1989; Barrow 1993; Courant & Robbins 1996). In this world view, the teaching of mathematics becomes like the creation of a bridge to take the uninitiated into the special, concrete and often abstract world of mathematics, a journey to share in the discovered truths and beauty of mathematical perfection. The applicability of mathematics to the real world is seen at best as a by-product and some, such as Hardy (1967), even rejoice in the lack of such applicability, seeing mathematics as art for its own sake. On the other side of the debate lie those such as Lakatos (1976) and Kitcher (1984) who see mathematics as a

construction or invention, more closely related to its real-world applications, and fallible, changing and culture-bound. Teachers with such views see themselves as facilitators guiding pupils on a journey of self discovery and enabling their students create their own ways of engaging with mathematics.

While the brief outlines above may be so simplistic as to be caricatures they do give a flavour of the range of views of the nature of mathematics among mathematicians or more particularly, philosophers of mathematics. A further question is to what extent are these views communicated to students of the subject, and particularly students who will go on to teach the subject? How do they absorb such world views of mathematics and how much will this impact on why they chose to study it and how they will teach it to others? Ernest (1988b) argues that teachers' views on the nature of mathematics *do* impact on its teaching and describes three distinct prevalent stances, based on Thompson (1984). Firstly, there is the Platonic view, where mathematics is a static body of knowledge waiting to be discovered and therefore teachers embracing this philosophy tend to act as instructors; secondly, the instrumentalist view where mathematics is seen as a useful set of tools or procedures and the teacher therefore ensures correct mastery of procedure without necessarily an emphasis on understanding; and finally, the problem-solving view where mathematics is a continually expanding field of human creation and the teacher's role is to pose problems and guide self-discovery in the pupils. Likewise Presmeg (2002) argues that beliefs about the nature of mathematics play an important role in supporting or constraining the learning of mathematics.

Thus, if we accept that the philosophical position concerning the nature of mathematics plays a role in influencing the teaching style of the educator, it becomes critical to allow new teachers the opportunity to reflect on what they are teaching and why, and to have the space to become aware of their own dispositions. Providing an opportunity for them to engage in narrative enquiry is a useful first step in accessing the views of the students and allowing them to articulate their place on this philosophical continuum.

Methodology

The study was carried out in February 2009 involving participants from two colleges of education, one in Dublin (Republic of Ireland) and one in Belfast (Northern Ireland). All participants were pre-service primary school teachers in the third year of their Bachelor of Education programme, having chosen to specialise in mathematics. Data was gathered using a questionnaire (with, mainly, open-ended questions) followed by focus groups, involving the same participants on each campus, five in Dublin (but only four of whom participated in the focus group) and four in Belfast. Moreover their mathematical sophistication was significantly higher than is typical amongst pre-service primary school

teachers in Ireland. These two factors afforded the opportunity to explore two mathematically motivated sub-populations in some detail, although, in this paper, no attempt will be made to distinguish between the characteristics of the two groups. An overview of the entire study has already been published (Eaton & OReilly 2009b).

Participants were prompted into revealing their mathematical identity by being asked: "Think about your total experience of mathematics. Tell us about the dominant features that come to mind." The aim of these initial sentences was to allow the most prominent recollections to emerge without giving students explicit directions as to which recollections *should* be most prominent. It was felt that had this starter contained explicit reference to events or individuals or stages of study this would suggest that respondents should focus on these. Instead, by having an open-ended initiator, it was anticipated that the most dominant feature would emerge first and that the nature of this initial response would in itself be indicative of powerful influences on mathematical identity. After completion of this initial section, lasting approximately ten minutes but allowing all respondents to complete as fully as they desired, a second page was distributed, this time with more direction to encourage students to reflect on a wider range of features:

"Now think carefully about *all stages* of your mathematical journey from primary school (or earlier) to university mathematics. Consider:

- Why you chose to study mathematics at third level
- Influential people
- Critical incidents or events
- Your feelings or attitudes to mathematics
- How mathematics compares to other subjects
- Mathematical content/topics

With these and other thoughts in mind, describe some further features of your relationship with mathematics over time."

It was expected that these prompts would encourage respondents to consider areas that may have been influential but which did not spring immediately to mind, rather than act as list of questions each of which was to be answered in turn. Those issues specifically arising from the consideration of influential people such as peers, family and teachers have been explored in a previous paper (Eaton & OReilly 2010).

The texts from the questionnaire were analysed for recurring themes and seven clusters of issues were identified to give the subsequent focus group discussions some direction:

- Reflections on the questionnaire.
- The changing nature of mathematics as experienced from early childhood to now.
- The balance between challenge and interest.

- Critical events.
- Attitudes of other people.
- Ways of studying mathematics.
- Persistence/perseverance with mathematics.

The discussion in the two focus groups (one on each campus facilitated by the researcher from the other institution) was directed largely by these issues, while maintaining an informal conversational atmosphere.

Results

The complete set of field texts consisting of questionnaire responses and transcripts of focus groups was analysed to identify common threads and themes (Clandinin & Connelly 2000). Through the stories students told it was possible to determine underlying views on the nature of mathematics and three key features emerged, as described below.

The Practical Nature

In the articulation of their views, students struggled to reconcile the abstract nature of mathematics with the importance of contextualising the subject. This fundamentally addresses the question of the purpose of mathematics: is it a tool to enable us to explore and understand our physical world or is it a subject worthy of study in its own right, regardless of its applicability? While students did not directly engage with this question their comments gave insight into their thinking. Those below clearly indicate a utilitarian view of the subject, where mathematics is a tool to enable us to better understand the world we live in. Its practicality is an asset, something to celebrate.

> *People don't realise that maths is for problem solving, for figuring out practical things, but using the symbols to do it. (D41)*

> *People think that bringing a practical aspect into secondary school would dumb it down, but I don't think it would. I think if the practical aspect was in it, then they would be able to bring maths to a higher standard rather than a lower standard. (D55)*

These students are clearly driven by the applicability of mathematics, echoing Galileo's famous sentiment that "*The laws of* nature *are written in the language of mathematics*". On the other hand, the attitude to the nature of mathematics expressed here is quite like that of Ernest's 'technological pragmatist' for whom the purpose of mathematical learning emphasises solving practical problems (Ernest 2000).

As students persisted with the study of mathematics they were introduced more and more to increasingly abstract elements. The following student reflects on how the mathematical journey through different levels of schooling took pupils away from looking at practical aspects and became more focussed on mathematics for its own sake. On the one hand students' perception of a need for pragmatism persists, yet there are explicit demands for context and, indeed, criticism when context disappears with progression from primary to secondary school.

> *You have to relate it to something. It has to be worthwhile. If it's too abstract too soon then they (pupils) just lose interest and won't even try. I think it has to have a purpose. (B53)*

> *In primary school there was always a context, whereas (in secondary school) there's not much lead in to using your equations – it's more forget the context, just do the question. (B6&7)*

There are elements here of a struggle between Ernest's authoritarian 'industrial trainer' (who operates out of a model of *social* training in obedience) and his 'public educator' who values "*empowerment of learners as critical and mathematically literate citizens in society*" (Ernest 2000).

The Uniqueness

Other students were quite clearly at the other end of the spectrum, understanding mathematics as something more than a tool to describe the physical world.

> *Maths is a separate language and a separate world, almost to everything else. (B55)*

Such views have resonance in the following quotation from Jacobi, where he argues that mathematics has a value beyond its applicability to the physical world.

> *It is true that Fourier had the opinion that the principal aim of mathematics was public utility and explanation of natural phenomena; but a philosopher like him should have known that the sole end of science is the honour of the human mind, and that under this title a question about numbers is worth as much as a question about the system of the world.*

This view of mathematics as something other led to the opinion that it was beyond the reach of some people, which has implications for the student teachers in how they deal with those struggling with the subject.

Everyone thinks that maths is this different language or something and it's only certain people (that) can understand. (D60)

I think it's just a completely different way of thinking, that you are either maths or you are not. (B42)

Believing that it is an innate ability may lead to an acceptance of weak performance and unwillingness to encourage the pupil past their perceived ability threshold.
While these students do not reject the applicable nature of mathematics and may well share their colleagues' views of mathematics as useful in practical contexts their comments indicate that they see mathematics as more than a tool to be deployed in the study of the practical world.

The Challenge

Undoubtedly mathematics was perceived by the students as a subject which provided intellectual stimulus and challenge, quite different from many other subjects studied, and regardless of its ontological nature.

Maths isn't like any other subject in my opinion. No subject can stimulate the mind as much as maths can. (DQ)

I find maths challenging at university but not beyond the realms of possibility and I enjoy it better than other modules – it provides the greatest challenge. (BQ)

This was often quoted as a reason for continuing with the study of mathematics.

I wanted that extra challenge. (D76)

I know maths is so much more work but I love the challenge and I love trying to keep up with the stuff and trying to make myself understand. (D76)

I find it's stimulating in a way that challenges me. (B65)

For these students challenge was generally considered positively but there was an acknowledgement that it was this aspect of the subject that often led to it being rejected by other students.

Conclusion

The students surveyed have all chosen to study mathematics at a higher level as part of a Bachelor of Education programme and the journey undertaken to reach that point of decision is a complex and personal one. However an analysis of the findings from this group suggests that during this journey students have absorbed views on the nature of the subject that will influence how they teach. Like Ernest's instrumentalists (1988) some see mathematics as a means to an end, as a way of engaging with this world and are determined to ensure that each lesson has some practical outworking – as one student said:

> *I would never dream of teaching a maths lesson and not having practical things to do. (D54)*

Others were more Platonic in outlook and viewed mathematics as a wondrous world of mystery yet to be discovered, as shown in the following quotation prompted by a recollection of some of the issues in number theory:

> *There is a whole other world out there with what we were doing. There is so much more to discover as well. You know, we have to find the answers yet. (B54, 55)*

As the students reflected on the importance of their own views they explicitly made links between these reflections and their own classroom practice as future teachers. This theme of how student teachers' mathematical identity can be harnessed as a tool for self-reflection thus impacting on practice is further explored in a recent study (Eaton & OReilly 2009a).

Challenge was a word used most often to describe mathematics and while often relishing the sense of satisfaction that rising to such challenge gave, the students also acknowledged that this could be a deterrent to future study for their pupils.

Through self-reflection on the nature of the subject, it was clear that the students were already identifying modes of teaching that best reflected their own understanding. The students had studied mathematics for many years and had developed a philosophy concerning the nature of mathematics that had not previously been articulated or even acknowledged.

It is important as we consider the interaction between teaching styles and the attitude to the subject that we allow students to express their views of mathematics. A clear articulation of an understanding of the nature of the subject can have a strong influence on teaching style and approach and on the enthusiasm and engagement of the pupils. Regardless of where the student teachers position themselves on the philosophical continuum and how they have come to understand the study of mathematics, the awareness of such views at least allows the students to make informed decisions about how and why they learn and teach mathematics. The question most feared by the student teacher of mathematics is "But why

do we have to learn this?" and without the opportunity to reflect themselves on what mathematics is and why they have studied it they will be seriously ill-equipped to give a reply. The opportunity to engage with such reflection, using narrative as a tool, at least affords students the opportunity to take the first steps to answering this for themselves.

References

Ball, D. 1988. Unlearning to Teach Mathematics. *For the Learning of Mathematics* 10, no. 2: 10-16.

Barrow, J. 1993. *Pi in the sky : counting, thinking, and being.* London: Penguin Mathematics.

Bishop, A.J., and M. Nickson. 1983. *A Review of Research in Mathematical Education, Part B.* Windsor: NFER-Nelson.

Bolhuis, S., and J. M. Voeten. 2004. Teachers' Conceptions of Student Learning and Own Learning. *Teachers and Teaching: theory and practice* 10, no. 1: 77-98.

Clandinin, D.J., and M. Connelly. 2000. *Narrative Enquiry: Experience and Story in Qualitative Research*. San Francisco: Wiley.

Courant, R., and H. Robbins. 1996. *What is Mathematics? An Elementary Approach to Ideas and Methods.* 2nd Ed. Oxford: Oxford University Press.

Dunphy, E. 2007. Exploring pedagogy in early years mathematics for children in the first year of primary school in Ireland: A survey of teachers' views. In *Proceedings of 2nd National Conference on Research in Mathematics Education*, MEI 2, ed. S. Close, D. Corcoran and T. Dooley, 290-307. Dublin: St. Patrick's College.

Eaton, P., and M. OReilly. 2009a. Exploring mathematical identity as a tool for self-reflection amongst pre-service primary school teachers: "I think you have to be able to explain something in about 100 different ways." In *Proceedings of 10th International Mathematics Education into the 21st Century Conference: Models in Developing Mathematics Education,* ed. Ludwig Paditz & Alan Rogerson, 153-156. Dresden: Dresden University of Applied Sciences.

Eaton, P., and M. OReilly. 2009b. Who am I, and how did I get here? Exploring the Mathematical Identity of Student Teachers. In *Proceedings of 3rd National Conference on Research in Mathematics Education: MEI3*, ed. D. Corcoran, T. Dooley, S. Close and R. Ward, 228-237. Dublin: St. Patrick's College.

Eaton, P., and M. OReilly. 2010. What other people think and why it matters? An investigation of key influences on mathematical identity. In *ATEE 2009 Annual Conference Proceedings*, ed. M. Montané and J. Salazar, 290-298. Brussels: ATEE.

Ernest, P. 1988a. The Attitudes and Practices of Student Teachers of Primary School Mathematics. In *Proceedings of 12th International Conference on the Psychology of Mathematics Education, Hungary, Vol. 1*, ed. A. Borbas, 288-295. Veszprem: OOK.

Ernest, P. 1988b. The Impact of Beliefs on the Teaching of Mathematics. Paper presented at the Sixth International Congress on Mathematical Education, Budapest, Hungary.

Ernest, P. 1999. Is mathematics discovered or invented? *Philosophy of Mathematics Education Journal* 12: 9-13.

Ernest, P. 2000. Why teach mathematics? http://people.exeter.ac.uk/PErnest/why.htm, accessed August 2010.

Fang, Z. 1996. A review of research on teacher beliefs and practices. *Educational Research* 38: 47-65.

Galileo, quoted in http://www-history.mcs.st-and.ac.uk/Quotations/Galileo.html, accessed August 2010.

Hardy, G. H. 1967. *A Mathematician's Apology*. Cambridge: Cambridge University Press.

Horgan, K., and N. O'Loughlin. 2007. Here we go again!: Researching the role of teacher attitudes toward maths as they embark on a theoretically based early numeracy intervention programme. In *Proceedings of 2nd National Conference on Research in Mathematics Education*, MEI 2, ed. S. Close, D. Corcoran and T. Dooley, 308-324. Dublin: St. Patrick's College.

Jacobi, quoted in http://www-history.mcs.st-and.ac.uk/Quotations/Jacobi.html, accessed August 2010.

Kaasila, R. 2007. Using Narrative Inquiry for Investigating the Becoming of a Mathematics Teacher. *ZDM-International Journal of Mathematics Education* 39, no. 33: 205-213.

Kithcher, P. 1984. *The Nature of Mathematics*. Oxford: Oxford University Press.

Lakatos, I. 1976. *Proofs and Refutations.* Cambridge: Cambridge University Press.

Macnab, D. S., and F. Payne. 2003. Beliefs, Attitudes and Practices in Mathematics Teaching: perceptions of Scottish primary school student teachers. J*ournal of Education for Teaching* 29, no. 1: 55-68.

Meredith, A. 1993. Knowledge for Teaching Mathematics: some student teachers' views. *Journal of Education for Teaching* 19, no. 3: 325-338.

Penrose, R. 1989, *The Emperor's New Mind*. Oxford: Oxford University Press.

Presmeg, N. 2002. Beliefs about the nature of mathematics in the bridging of everyday and school mathematical practices. In *Beliefs: A hidden variable in mathematics education?*, ed. G. Leder, E. Pekhonen and G. Torner, 293-312. Dordrecht: Kluwer.

Thompson, A. 1984. The relationship of teachers' conceptions of mathematics and mathematics teaching to instructional practices. *Educational Studies in Mathematics* 15: 105-127.

Wenger, E. 1998. *Communities of Practice: Learning, meaning and identity*, Cambridge University Press.

A Model for the Organization of Self-Evaluation Promoting the Future Teachers' Career

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Abstract

Self-evaluation is used in the organization of the study process of institutions of higher education as one of the forms of evaluation on regular basis. Analyzing self-evaluation criteria offered to the students, one can conclude that they are mainly based on the requirements defined by the teachers' professional standard on the knowledge, skills and attitudes necessary for the teacher. However, analyzing the conclusions of career theories about the factors influencing career, where the understanding of personal experience and the opportunities of its further development have been recognized as the key career components, subjectively differential evaluation is accentuated, which provides the opportunity to become aware of one's personal significance for the development of the opportunities of professional and life activities and their mutual correlation. Thus, the following questions need to be answered:

- How to promote self-evaluation where the evaluation criteria not only comply with the teachers' professional standard but also become self-accepted and personally important?
- How to ensure the acknowledgement of the correlation between the professional and whole-life (family, social activities, recreation, work) growth?
- How to ensure the development of self-evaluation habits and corresponding planning and implementation of personal growth?

The contextual conditions and procedure of the given model of the organization of future teachers' self-evaluation are based on the findings of the study of career theories (theory of personality and environment types (Holland 1985; 1997), professional self-concept or career anchor theory (Schein,1993), career development theories (Ginzberg, Ginsburg, Axelrad, Herma 1951; Super 1957; Buller 1965), social cognitive career theory (Lent, Brown, Hackett,1987) and works of separate scientists (Parsons 1909; Hall 1996; Ballout 2007; Callanan 2003; Savicka, Lent 1994), professional psychology (психологияпрофессий, психологиятруда: Толочек 2005; Зеер 2006; Пряжников, Пряжникова 2001; Романов 1983; Кибанов 2007) as well as the information on factors influencing career obtained from the survey of Latvian teachers, academics and students.

Keywords: professional development, teacher's career, self-evaluation

Introduction

The basic function of institutions of higher education in preparing specialists of certain qualifications is to ensure mastering education content consistent with the professional standard. This requirement is also attributable to teacher training. However, no teacher education institution can ensure a person with a guaranteed place of work in the future with the award of a certain qualification. Thus, an issue of the organisation of the higher education process that ensures not only acquiring the necessary knowledge and skills in the aspect of the respective qualification but also facilitates possibilities to acquire abilities, attitudes and habits necessary for future needs of an individual, becomes topical. An important future ability is successful planning, organisation and implementation of personal career that requires personal responsibility for own taken decisions. Another important ability is to take the risk, the ability that is based on known values of an individual, assessment of opportunities and forecasting the respective future (Бауман 2005). Z. Bauman writes the following about an individual in a modern society: „…the choice materializes in uncertainty of whether the chosen way would lead to the expected results, whether today's losses would turn into tomorrow's gains, whether rejection of options that seem unwanted does not hide painful losses. It is not clear whom and what to believe since one cannot see who controls overall progress of affairs, - nothing can guarantee that everything will happen in the expected way. Life in uncertain circumstances is a risky life and a person, who takes the decision, is forced to pay for the risk he / she takes" (Бауман 2005, 56). Readiness to take the risk that is based on individual's values, ability to assess and forecast the future cannot be considered only as an inherited ability or a skill that has formed under the society influence - that is a consciously acquirable ability **(**Koķe, Oganisjana 2006). Thus it can be concluded that it is not enough to know the needs of the society and to have the ability to forecast topical future events, individual's cognition of his/her own abilities, potential and assessment of own experience becomes important, which in its turn ensures a sense of security in planning further use and development of own abilities. The previously mentioned abilities and skills relate to successful career conditions that have been specified by representatives of career theories (Ginzberg, Ginsburg, Axelrad, Herma 1951; Super 1957; Buller 1965). Therefore an issue of organisation of such self-evaluation in institutions of higher education that facilitates personal career becomes topical in pedagogy research.

Conditions Influencing Career

Analysis of conditions influencing career are based on understanding person's professional and individual development throughout the life ("lifecareer") (Patton, McMahon 1997), general and dynamic development in main activities of life (work, family, recreation), as well as on understanding person's social activity (Wolfe, Kolb,1980) and efforts to achieve such a state where a person could satisfy own needs, mutual correlation of personal and professional development and to achieve a sense of life's success (Толочек 2005; Пряжников, Пряжникова 2001). Professional career develops in mutual correlation of circumstances influencing person's needs and development (Patton, McMahon 1997). Therefore concepts of "professional career" and "personal development" (Wolfe, Kolb 1980; Толочек 2005), "career" and "self-concept" (Schein 1996; Callanan 2003; Зеер 2006) are much related. Motives, values and abilities gradually combine in a "self-concept" and provide an individual with the possibility to realize "Who am I?", "Who aren't I?" and "Who would I like to be?" Therefore gradual recognition and independent planning, adjustment and implementation of own development (professional, life, personal), readiness to analyse oneself in time and constantly find personally important significance of the professional activity becomes the objective of professional self-implementation (Schein 1993; Пряжников 1996). G.Callanan similarly points out that in a modern world the key to successful career management is clear development of self-identity, then establishing career objectives and finally choosing career strategy in line with this identity (Callanan 2003).

The professional "self-concept" based on regular self-evaluation and further identifying of objectives may be considered as the most important career element (See Figure 1).

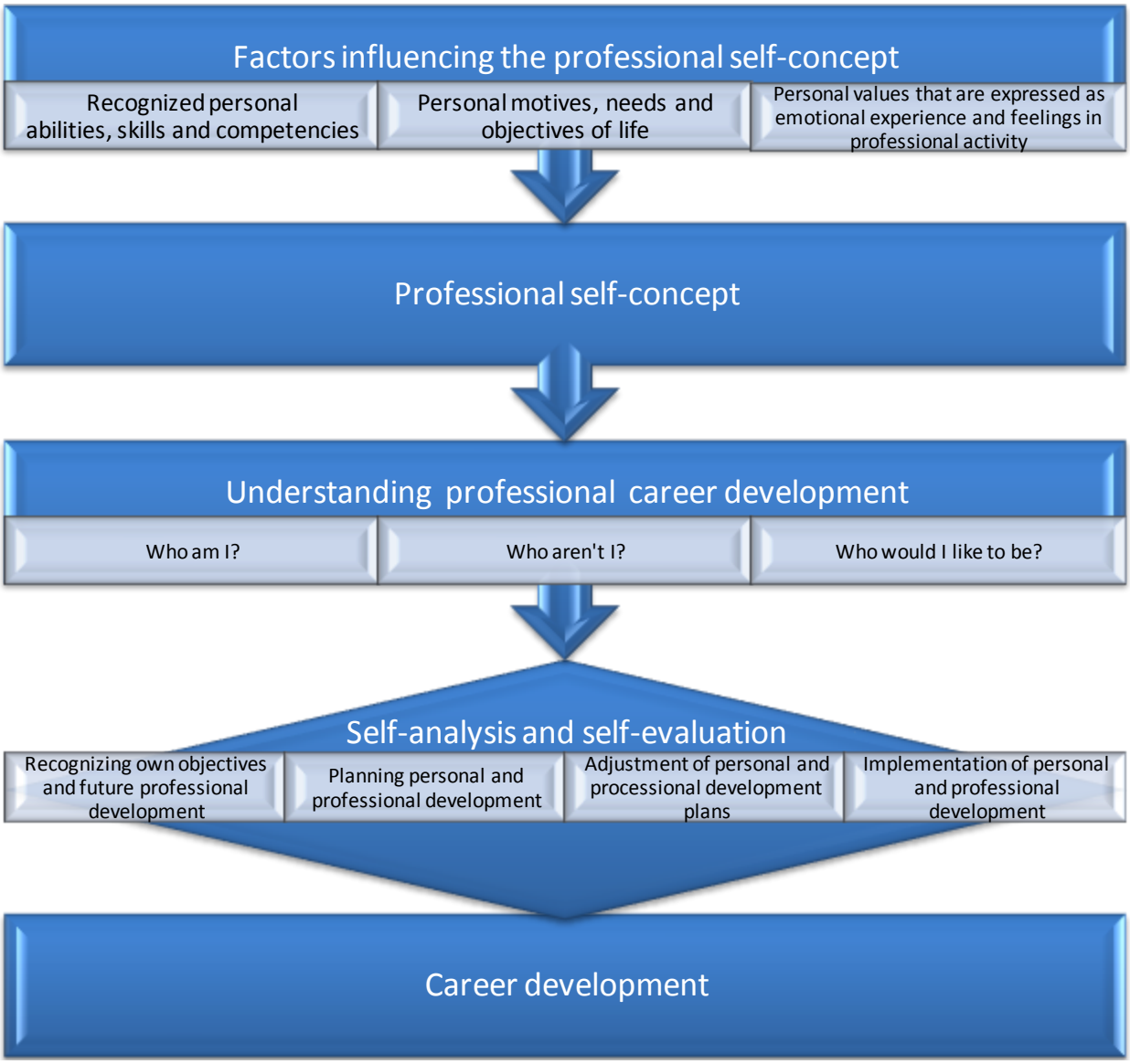

Figure 1. Correlation of the professional "self-concept" and career

Grounding for a Career-Facilitating Structural Model of Self-Evaluation

Based on analysis of career theories, criteria of career research and research on correlation of influencing factors thereof in self-analysis of 350 teachers in Latvia we propose a career-facilitating structural model of self-evaluation implementable in the study process of institutions of higher education (See Figure 2).

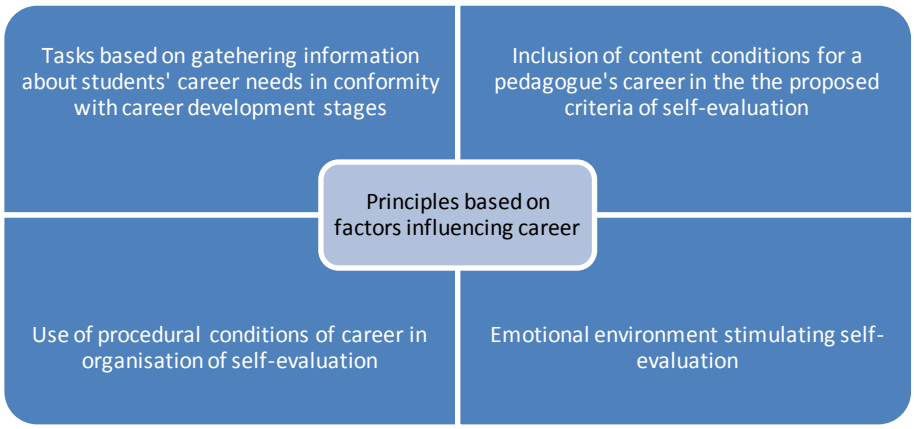

Figure 2. Career-facilitating structural model of self-evaluation in the study process of institutions of higher education

Not only young people, after having acquired secondary education, are involved in acquiring higher education; further education is acquired also by working pedagogues of various age groups whose objective is to advance in their career, both horizontally and vertically. Therefore we did not differentiate participants of the research in groups by age but took into account and analysed characteristic features of life stages of all adults. In accordance with characteristics of age periods proposed by career theories in the aspect of career development (Gibson, Mitchell 2006; Sharf 2006; Miķelsone 2008), we identified three career development stages in relation to acquiring education in institutions of higher education. It let us establish essential features characterising gradual career development and to establish qualitative career changes and their corresponding needs in each stage.

Stage 1 – Study stage. Familiarization with the profession of a pedagogue in correlation with analysis of own needs, interests, abilities and values. Initial identification with the profession of a pedagogue begins to develop. Gradual ascertaining of the needs of professional development, their particularization and prioritization of activities takes place. Research results in the trial stage when there are no important, responsible duties performed, however the main task of this very stage is to recognize professional priorities (Super, Thompson, Linderman 1988). In accordance with the realized priorities, a student tries to develop own life programme, plan, scenario, establishes ambitious objectives or leaves studies considering them unsuitable. The closest professional objectives are established towards professionalism (Пряжников, Пряжникова 2001). However, without realizing real potential, many objectives and plans are left unaccomplished. (Buller 1965).

Therefore an important task of pedagogical work in this stage is the requirement for a consciously constructive action based on assessment of own possibilities, restrictions and real circumstances, recognising the value of the profession of pedagogue in general system of values of the individual.

Stage 2 – Career recognition. Self-possessed determination is characteristic (Buller 1965). If the expected evaluation is acquired then more responsible duties are undertaken which is a condition for further career development (Super, Thompson, Linderman 1988).Next and further objectives ofthe professional career are established. Details of career objectives are found out (Ginzberg, Ginsburg, Axelrad, Herma 1951). Adequate perceptions of possible difficulties and obstacles are characteristic, as well as knowledge of own skills that would further help in implementation of plans (Пряжников, Пряжникова 2001). Initial professionalization takes place during pedagogical practice. It cannot be qualified as unprofessional activity, however on this level of development it is possible only as reproductive activity of good quality based on the acquired professional study stage. Independence in performing professional duties and assessment of personal features significant for the profession is characteristic. (Зеер 2006).

Therefore, gradual advancement towards independent self-evaluation is necessary in organisation of evaluation facilitating students' ability to develop appropriate self-evaluation criteria.

Stage 3 – Development of an individual professional style. An individual professional style gradually develops by integrating educational experience with the initial professional experience (*Зеер 2006)*. A student proposes innovative ideas in the process studies and in practice. New challenges are looked for. Determination is based on the acquired evaluation and real possibilities. There are less objectives and each of them is more thought out. Decision making process, where the individual tries to understand the optimal conformity of own readiness for career with career objectives and reality of work is characteristic. Knowledge based contemplation about other related professions and possibilities of their implementation are possible. Practical implementation of person's professional development and regular adjustment of plans in conformity with the performed self-evaluation materialises (*Пряжников, Пряжникова 2001*). One can observe identification with the profession, flexible professional working style, highly qualified activities (*Зеер 2006).*

Content perception of career and procedural conditions let us establish characteristic features of career:

1. Professional self-concept characterised by perception of own personality, finding sense of personal importance in professional activity and professional determination (Patton, McMahon 1997; Schein 1993; Пряжников, Пряжникова 2001);

2. Harmony of the professional identity (merging with personal identity), with characteristic satisfaction of the individual, achievements of life in various spheres (work, family, recreation), successes of life (Callanan 2003; Толочек 2005; Зеер 2006; Hall 1996; Llewellyn 2002);

3. Successful self-determination that is disclosed in social activity of the individual, decision making about career (determined dynamics), self-confidence and trust in the future (Ballout, 2007; Климов, Голомшток, Щедровицков, Чистякова, Пряжников 2001; Романов 1983);

4. Innovative professional activity with characteristic implemented and planned innovations and creativity in implementation of professional activities and planning the future (Толочек 2005; Вишнякова 1998).

In order to find out disclosure of characteristic features confirming career of future pedagogues an enquiry of future pedagogues of Riga Teacher Training and Management Academy was carried out. A sub-cluster representing the entire student population of teacher programmes of RTTMA n=211 was formed by the use of probable selection out of the general cluster n=1500. The questionnaire contained questions enabling identification of career characteristic features established by the analysis of career theories. Since innovations are not yet possible in students' activities, then this career-confirming criterion has been withdrawn from further research. In data processing by the use of a mathematic processing method „K-Means Cluster" in a computer programme SPSS, by which "continuous variables can be classified into qualitative categories based on the value of the distribution of this variable" (Lasmanis 2002, 91), each cluster of indicators was classified into four groups (see Figure 3 and 4), which in further analysis provided the possibility to establish correlation of career-influencing factors with the specific characteristic criteria of career.

In analysis of career indicators, students of the 1st group can be characterised by high evaluation of the obtained experience in choosing diverse professional activities, at the same time having low evaluation of the chosen profession. It can be assumed that dissatisfaction with the chosen profession has stimulated these students to consider the use of the acquirable education in other activities.

On their part, students of the 2nd group can be characterised by high evaluation of establishing personal sense in the chosen profession and, therefore, satisfaction with the chosen profession, and obviously determination in the choice of content for additional education.

Students of the 3rd group are characterised by high evaluation of all career indicators, and to the statement *I choose only those possibilities of additional education (visiting lectures, courses etc.) that are consistent with my personal objectives towards professionalism*, students of this group gave the answer: *Rather agree than disagree.* Answer *Agree* was chosen for all other statements.

Students of the 4th group attest high evaluation in regard with statements on consistence of personal qualifications with the profession of a pedagogue, social activity and determination in choice of additional education. However, these students have low evaluation of possibilities of the obtained experience in choosing diverse professional activities which can possibly be explained by the fact that satisfaction with the chosen profession does not require consideration of different use of the acquired experience.

Figure 3.Classification of career characteristics of future teachers into clusters

Initial Cluster Centres

	Cluster			
	1	2	3	4
My personal qualities, skills and current life experience provides preconditions necessary for the profession of a pedagogue	2,00	2,00	4,00	4,00
I have found personally significant sense in the chosen profession	2,00	4,00	4,00	3,00
Determination is characteristic to me	3,00	2,00	4,00	3,00
I am satisfied with the choice of the profession of a pedagogue	1,00	4,00	4,00	3,00
I often experience a sense of success and luck in my whole life (in studies, family, recreation)	3,00	2,00	4,00	2,00
I consider myself as socially active	3,00	2,00	4,00	4,00
Obtained education experience gives me the possibility to choose diverse professional activities	4,00	3,00	4,00	1,00
I choose only those possibilities of additional education (visiting lectures, courses etc.) that are consistent with my personal objectives for professionalism	1,00	4,00	3,00	4,00

Figure 4. Numeral classification of career characteristics of future teachers into clusters

Number of Cases in each Cluster

Cluster	1	41,000
	2	42,000
	3	67,000
	4	61,000
Valid		211,000
Missing		,000

In accordance with characteristic features of career and their attestant indicators, we propose certain self-evaluation content and corresponding methods for each stage of career development (See Table 1).

Table 1. Content and methods of a career-facilitatingself-evaluation

Stages of career during studies	Content of self-evaluation	Methods of self-evaluation
*Study stage:*_familiarization with the profession of a pedagogue in correlation with analysis of own needs, interests, abilities and values	Grounding for the choice of the profession of a pedagogue referring to a personal experience. Analysis of own experience based on requirements established for the profession of a pedagogue.	Applicant's conversation with the director of the programme. Written analysis of own experience in certain study subjects of the provided self-evaluation cards, where criteria of self-evaluation are related to the standard of the profession of a pedagogue and to the content of the acquirable study subject.
Career recognition stage: initial identification with the profession of a pedagogue begins to develop, professional „self-concept" is being formed and studied under the influence of the study environment (studies, practice); steady determination is characteristic. A student establishes next and further professional career objectives.	Establishment of the needs by specifying them and establishing the corresponding priorities of activity. Study of the „self-ideal". Establishment of the closest professional objectives towards professionalism. Evaluation of own possibilities, restrictions and real circumstances, study of the value of the profession of a pedagogue in the general system of personal values by assessing own knowledge, skills of presentation and communication. Establishment of details of the career objective, view of possible difficulties and obstacles as well as knowledge of own skills that will help in implementation of the planned.	Tasks where, based on descriptions of a pedagogue's personality proposed by classics of pedagogy (study course "History of Pedagogy"), requirements disclosed in the profession standard of a teacher (study course "School Pedagogy"), totality of students' own informed qualities and skills of a teacher's personality, students develop self-evaluation criteria, based on which they evaluate own activities, knowledge, skills and personal expression in seminars and practice. While evaluating group work in practical classes, self-evaluation interlinked with evaluation by co-students' should be used emphasising such questions as: What was my contribution? What did I learn from others?

		What are group's common achievements? Diary of professional development. Written self-evaluation of practice based on self-developed corresponding evaluation criteria. It is presented and grounded in the practice defence.
Development stage of the individual professional style.	Innovative ideas and innovative solutions; determination; adjustment of plans in accordance with the performed self-evaluation; flexibility in pedagogic situations.	Reflexion involving not only self-evaluation but also studying and encouraging mutual experience.

The following should be considered as most important career-influencing factors:

1. Regular self-evaluation reflecting analysis of own skills, abilities, interests, objectives, resources, restrictions and their causes; self-awareness in a situation (awareness of situational and social (the state and the closest micro-environment) factors) and its assessment; independent planning, adjustment and implementation of plans; establishment of the nearest objectives towards professionalism, adjustment of plans in accordance with the performed self-evaluation; corresponding study activities (Schein 1993; Callanan 2003; Пряжников, Пряжникова 2001; Parsons 1909; Holland 1997).

2. Awareness of the value of work in the general system of values that is related to the positive sense of self supported by family, society and colleagues at work, as well as awareness of self-development (profession, life, personality) (Schein 1993; Пряжников 1996; Ballout 2007; Hall 1996).

3. A possibility to undertake self-topical activities and tasks promoted by society evaluation, team support and correlation of individual's activities; professional correspondence with individual's needs; knowledge of requirements, conditions, achievements, preferences and drawbacks, compensation options and prospective of the profession; knowledge of other related professions, possibilities of their acquiring; ability to demonstrate results of own activity, as well as apportioning strength for the entire life (Hall 1996; Super, Thompson, Linderman 1988; Вишнякова 1999).

4. Democratic working and social environment characterised by innovative evaluation of activities, appreciation of diversity and "jigsaw"-type career development possibilities by choosing not only vertical career development but also horizontal development thus broadening possibilities of own professional activity (Толочек 2005; Savickas, Lent 1994).

In order to find out whether there is a correlation between students' self-evaluation habits and characteristic features of career, data obtained in enquiries have been processed by using Pearson's method in the SPSS system. „Correlation coefficient displays basic relationships between two variables – do variables tend to increase together or change in the opposite directions, how much?" (Lasmanis 2002,159).
In accordance with the established career criteria students were offered statements with options: *agree; rather agree than disagree; rather disagree than agree; disagree*.
Professional „self-concept" (PSC):

1. My personal qualities, skills and current life experience ensure preconditions necessary for the profession of a pedagogue.
2. I have found a personally significant sense in the chosen profession.
3. Determination is characteristic to me.

Harmony of the professional identity (merging with personal identity) (HPI):

1. I am satisfied with the choice of the profession of a pedagogue.
2. I often experience a sense of success and luck in my whole life (in studies, family, recreation).

Successful self-determination: (SSD):

1. I consider myself as socially active
2. Obtained education experience gives me the possibility to choose diverse professional activities.

Table 2. Correlation of Students' Self-Evaluation and Career Characteristics

		PSC 1.	PSC 2.	PSC 3.	HPI 1.	HPI 2.	SSD 1.	SSD 2.
I choose only those possibilities of additional education (visiting lectures, courses etc.) that are consistent with my personal objectives towards professionalism	Pearson Correlation	,336**	,115	,117	,188**	-,014	-,011	,186**
	Sig. (2-tailed)	,000	,095	,089	,006	,841	,875	,007
	N	211	211	211	211	211	211	211
I regularly analyse own skills, abilities, interests, objectives, resources, restrictions and their causes	Pearson Correlation	-,037	,062	,251**	,137*	,170*	,202**	,045
	Sig. (2-tailed)	,592	,374	,000	,047	,014	,003	,515
	N	210	210	210	210	210	210	210
Based on results of self-evaluation I selectively choose extracurricular activities for improvement of self-development	Pearson Correlation	,318**	,230**	,283**	,298**	,250**	,182**	,261**
	Sig. (2-tailed)	,000	,001	,000	,000	,000	,008	,000
	N	211	211	211	211	211	211	211
I regularly reconsider and analyse daily situations	Pearson Correlation	,054	,134	,317**	,009	,016	,039	,064
	Sig. (2-tailed)	,432	,051	,000	,892	,816	,575	,355
	N	211	211	211	211	211	211	211
I am informed of the socio-political situation in the country and the closest micro-environment and tend to consider and analyse my development possibilities in it	Pearson Correlation	,113	,008	,127	-,038	,015	-,103	,068
	Sig. (2-tailed)	,101	,903	,065	,586	,827	,137	,323
	N	211	211	211	211	211	211	211

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

As displayed in results of the processed data in Table 2 there is no statistically important correlation between career characteristics and self-awareness in a socio-political situation of the state and the closest micro-environment. Self-evaluation is considered to be the most important career-influencing feature of self-evaluation that facilitates constructive further activity (question of the enquiry "based on results of self-evaluation I selectively choose extracurricular activities for improvement of self-development").

Requirements for securing emotional environment and basic principles of self-evaluation organisation have been developed based on the previously mentioned career-influencing factors.

Taking into account significance of emotions caused by self-evaluation in further activities of an individual it is important to observe certain requirements for ensuring emotional environment:

- Support for students' self-initiative in choosing topical tasks for themselves;
- The possibility to recognize correlations of professional requirements and own needs.
- Presentation possibilities of own activity results thus developing a skill to present own achievements as well as creating sense of satisfaction about personal development.
- Freedom of choice in implementation of tasks and in choice of presentation types within the proposed timeframe. Free, independent and responsible person needs both - to know "that" and to comprehend "how" and be able to form independent judgments.
- Possibility to compare own current experience with "yesterday's" and "tomorrow's" experience thus facilitating dynamics of individual development. Therefore, evaluation criteria proposed for a pedagogue should help see and evaluate the dynamics providing the chance to get satisfaction about own skills and at the same time seeing a way for further development and trust in own potential.

Evidence on career characteristics, their indicators, and career-influencing factors received in theoretical analysis let us presume the following organisational basic principles of self-evaluation:

1. Principle of regularity – regular organisation of self-evaluation in study subjects and in pedagogical practice.
2. Principle of succession – gradual improvement of self-evaluation habits; gradualness and succession in implementation of decisions made as a result of self-evaluation.
3. Principle of constructivism – self-evaluation serves as means for modeling further activities.
4. Principle of values – the content of self-evaluation provides a chance to identify the value of the acquirable profession within the general system of student's values.
5. Principle of democracy – a possibility to choose study tasks and solutions of own topical issues within the framework of a variable offer in accordance with self-evaluation.
6. Principle of totality – analysis of experience in studies, extracurricular activities and personal life is included in the content of self-evaluation.

In order to establish regularity of students' self-evaluation and grounding for its necessity, a statement "I regularly perform evaluation of my study activities and their results because ..." was included in the questionnaire with the options for answers: *"it is a requirement of lecturers; it ensures high quality of activity and its results; I have such a habit."* Out of a general cluster n=211 of all enquired students, a sub-cluster n=100 was formed by the use of probable selection, and results of 25 enquiries from each year were included in the sub-cluster. Acquired data from the enquiry (see Table 3) attested that all students had confirmed regularity of self-evaluation. Mostly there was an indication to the option: „*it ensures high quality of activity and its results*".

Table 2.Conditions influencing regularity of students' self-evaluation
I regularly perform self-evaluation of my study activities and their results because ...
** Year Cross-tabulation*

			Year				
			1 Year 1	2 Year2	3 Year3	4 Year 4	Total
I regularly perform self-evaluation of my study activities and their results because ...	1 it is a requirement of lecturers	Count	7	9	4	2	22
		% within I regularly perform self-evaluation of my study activities and their results because ...	31,8%	40,9%	18,2%	9,1%	100,0%
		% within Year	28,0%	36,0%	16,0%	8,0%	22,0%
	2 it ensures high quality of activity and its results	Count	14	12	18	18	62
		% within I regularly perform self-evaluation of my study activities and their results because ...	22,6%	19,4%	29,0%	29,0%	100,0%
		% within Year	56,0%	48,0%	72,0%	72,0%	62,0%

	3 man I have such a habit	Count	4	4	3	5	16
		% within I regularly perform self-evaluation of my study activities and their results because ...	25,0%	25,0%	18,8%	31,3%	100,0%
		% within Year	16,0%	16,0%	12,0%	20,0%	16,0%
Total		Count	25	25	25	25	100
		% within I regularly perform self-evaluation of my study activities and their results because ...	25,0%	25,0%	25,0%	25,0%	100,0%
		% within Year	100,0%	100,0%	100,0%	100,0%	100,0%

Conclusions

1. In development of the content, forms and methods of self-evaluation organisation it is important to repose on qualitative changes in career and the corresponding needs thereof in each stage of career development.

2. Analysis of career theories let us identify the following characteristic features of career: professional self-concept, harmony of the professional identity, successful self-determination and innovative professional activity.

3. The following are to be considered factors facilitating career: regular self-evaluation; positive sense of self supported by family, society and colleagues at work; knowledge of requirements, conditions, achievements, preferences and drawbacks; ability to demonstrate results of own activity; possibilities of "jigsaw" (vertical and horizontal) career development; professional consistence with the needs of an individual.

4. It is important to observe principles of regularity, succession, constructivism, values, democracy and totality in organising self-evaluation.

5. Self-evaluation is the most important career-influencing feature that facilitates constructive further activity by selectively choosing the respective further activity for enriching personal experience.

6. In organising self-evaluation it is important to create appropriate emotional environment providing a possibility to get satisfaction of own skills at the same time forecasting own further development and recognising own potential.

7. Regularity of self-evaluation is related to students' understanding of the influence of self-evaluation on high quality further study activities and their results.

References

Ballout, H. I. 2007. Career success: The effects of human capital, person-environment fit and organizational support. *Journal of Managerial Psychology,* 22(8): 741-765.

Buller, Ch. 1965. *Meaningful in the nature years*. Aging and leisure. New York.

Callanan, G. A. 2003. What price career success*? Career Development International*, 8 (3): 126 – 133.

Gibson, L.R., Mitchell, H.M. 2006. *Introduction to career Counselling for the 21st Century.* Pearson, Merrill Prentice Hall, upper Saddle River, New Jersey, Colombus, Ohio.

Ginzberg, E., Ginsburg, S.W., Axelrad, S. & Herma, J.L. 1951. *Occupational choice: An approach to general theory*. New York: Columbia University Press.

Hall, D.T. 1996. Protean careers of the 21st century. *The Academy of Management Executive*, 10 (4): 8-16.

Holland, J.L. 1985. *Making Vocational Choices: A Theory of Personality and Work Environments.* 2nd ed. Englewood, Cliffs, NJ: Prentice-Hall.

Holland, J.L. 1997. *Making vocational choices: a theory of vocational personalities and work environments.* 3rd ed. Odessa, FL: Psychological Assessment Resources, 303p.

Koķe T., Oganisjana K. 2006. Vai gatavība uzņemties risku ir iemācāma prasme? *Pedagoģija un skolotāju izglītība. LU Raksti 700.sējums*, 103.-114.

Lasmanis A. 2002. *Datu ieguves, apstrādes un analīzes metodes pedagoģijas un psiholoģijas pētījumos*. 2. grāmata. Rīga, SIA "Izglītības soļi".

Lent, R. W., Brown, S. D., & Hackett, G. 1994. Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behaviour*, 45: 79-122.

Llewellyn, R. N. 2002. The four career concepts. *HR Magazine,* 47, 121 - 124.

Mikelsone, I. 2008. Karjeras attīstība cilvēku dzīves ciklos. *Karjeras attīstības atbalsts*. Valsts Izglītības attīstības aģentūra. 9.-40.

Parsons, F. 1909. *Choosing a vocation.* Boston: Houghton Miffin.

Patton, W., & McMahon, M. 1997. *Career development in practice: A systems theory perspective*. Sydney, Australia: New Hobson Press.

Savickas, M. & Lent, R. 1994. *Convergence in Career Development Theories.* Palo Alto, California: Consulting Psychologists Press.

Schein, E. H. 1993. *Career anchors: Discovering your real values*. San Francisco: Pfeiffer, 87p.

Schein, E. 1996. Career Anchors Revisited: Implications for Career Development in the 21st Century*. The Academy of Management Executive,*10 (4): 80 – 88.

Sharf, R. 2006. *Applying Career DevelopmentTheory to Counseling*. Belmont, CA: Thomson, Brooks/Cole.

Super, D., Thompson, A., Lindeman, R. 1988. *Adult career concerns inventory: Manual for research and exploratory use in counselling,* Consulting Psychologists Press, Palo Alto, CA.

Super D.E. 1957. *The psychology of careers*. New York: Harper&Brothers.

Super, D. E. 1990. A life-span, life-space approach to career development. In *Career choice and development* (2nd ed.), D. Brown & L. Brooks. 197–261. San Francisco: Jossey-Bass.

Wolfe, D.M.,& Kolb, D.A. 1980. Career development, personal growth, and experimental learning. In *Issues in career and human resource development, ed.* J.W.Springer, 1 –11. Madison, WI: American Society for Training and Development.

Бауман, З. 2005. *Индивидуализированное общество.* Москва, Логос.

Вишнякова, Н. 1998. *Креативнаяакмеология,* Минск.

Зеер, Э.Ф. 2006. *Психология профессий.* Москва: ФондМир.

Кибанов, А.Я. 2007. *Основы управления персоналом:*Учебник. – 2-е изд., перераб. и доп.,Москва: ИНФРА, с.281.

Климов, Е.А. 1996. *Психология профессионального самоопределения.* Ростов: Феникс.

Пряжников, Н. 1996. *Професиональное и личностное самоопределение*. Москва, Воронеж.

Пряжников, Н.С., Пряжникова Е. Ю. 2001. *Психология труда и человеческого достоинства.* Москва: Академия.

Романов, А.Н. 1983. *Оценка коммерческой деятельности предпринимательства.* Опыт зарубежных корпораций. Москва: Финансы и статистика.

Толочек, В.А. 200*5. Современная психология труда*. Москва: Питер.

TEACHERS' LEARNING AND COMPETENCE BUILDING

Beginning a Career of Learning about Learning: a Case Study of Student Teachers in an Initial Teacher Education Programme in Ireland

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Abstract

The concept of *teachers as lifelong learners* is a key component in considering teachers' life cycles, starting with their introduction to the profession via initial teacher education and continuing via professional development throughout their careers. The project reported in this paper addresses the first stage of the cycle: initial teacher education. It presents a case study of three groups of student teachers – one group of language students, one of music and one of mathematics – who during their teaching methodology courses experienced a novel aspect of their disciplines and were required to reflect on their experience. The findings suggest that, regardless of discipline, a learning experience together with reflection on it expands student teachers' metacognitive awareness of themselves as learners, and that this translates to a greater empathy with and greater accommodation of learners in their own classrooms.

Keywords: Initial teacher education, reflection on learning, experiential learning, disciplinary learning

Introduction

The concept of *teachers as lifelong learners* is a key component in considering teachers' life cycles, starting with their introduction to the profession via initial teacher education (ITE) and continuing via professional development throughout their careers. The project reported in this paper addresses the first stage of the cycle: initial teacher education. It is based on three hypotheses drawn from research on student teachers' learning and reflection. First, the experience of being novice learners in their own discipline, and reflecting upon this, helps student teachers to develop the metacognitive skills necessary to explore their own learning and to understand themselves as learners; secondly, this can give them a broader practical understanding of other learners, particularly those in their own classrooms; and, thirdly, it may create a disposition towards lifelong learning in their own disciplines as well as with regard to teaching others.

The project addresses the education of secondary teachers, in particular of student teachers studying for their Postgraduate Diploma in Education (the professional teaching qualification for secondary teachers) in Ireland. It reports a case study of three groups of student teachers – one group of language students, one of music students and one of mathematics students – who during their teaching methodology ('pedagogy') courses experienced a novel aspect of their disciplines. The language teachers studied a language they had not previously encountered. The music teachers studied a genre in which they were not proficient. The mathematics teachers undertook an approach to problem solving with which they were not familiar. As part of their assessment, the students were required to report reflections on their experiences, indicating how these experiences might affect their future teaching.

The paper presents an analysis of the rich qualitative data obtained, focusing specifically the student teachers' insights into being learners, and on their reports of how these insights transferred or may transfer to their classrooms. It highlights comparisons and contrasts between reports from students in the three disciplines.

Theoretical framework

The theme of reflection underlies all of this work both theoretically and operationally. The focal point is an exploration of how reflection is an essential component of the moments of transformation which can constitute turning points for both learners and teachers. The general context assumes a notion of the teacher as reflective practitioner (Schön 1983), which is part of the code of practice for teachers in a number of jurisdictions, and is prominent in teacher education programmes in Ireland and elsewhere as a means of drawing together theory and practice.

There is a large body of research on reflection in initial teacher education where student teachers learn through reflecting on their teaching (see Burton (2009) for an overview). The focus here is on the learning dimension of the teaching-learning process as expressed by Williams and Burden (1997, 5):

> *The successful educator must be one who understands the complexities of the teaching-learning process and can draw upon this knowledge to act in ways which empower learners both within and beyond the classroom situation.*

Fundamental to this paper is an exploration of how reflection on learning rather than teaching can inform student teachers' growing understanding of their impact on learners. Mayer-Smith and Mitchell (1997) note that the students' learning experiences are a good starting point in exploring their preconceptions about teaching. The literature in this area can broadly

be divided between studies that look to the past and those that look to the present (learning on the ITE programme itself) as the source of reflection. A number of studies have used student autobiographies and narratives to explore the impact of the student teachers' past 'apprenticeship of observation' as Lortie(1975) terms it. Brookfield (1995) and Bailey and others(1996) argue for the learner autobiography as a tool for professional development which allows teachers at any point in their careers to explore their preconceptions about teaching and learning, while Greer (2001) explores the place of visual narratives in teacher education. There is a broad literature on fostering reflection on learning experiences during ITE (Hatton and Smith 1995; Moon 1999; Martin 2005). Students are supported in reflecting on different aspects of their learning about teaching during seminars, teaching practice and so forth, and are encouraged to develop insights that they can extrapolate to their own classes and which they can then adopt into their own practice. This is in effect an experiential learning meta-cycle (Kolb 1984), where the experience is *learning*; reflection and conceptualisation are on *learning*; and the application is to their own teaching. Korthagen and others(2006, 1026) emphasise that this reflection on their own learning experiences 'needs to be specifically linked to the learning of their students when they are in the role of the teacher' in order for student teachers to generalise from their experiences rather than discount them. Furthermore, they advocate an inductive approach to theory where students derive their own insights and theorise from these, since '[t]he kind of theory resulting from student teachers' own reflections on practical problems is much more linked to their own situations and concerns, and thus has much greater emotional significance for them'(Korthagen et al. 2006, 1027).

An extension of this approach focuses on students' learning in their own discipline during ITE. Devitt and Czak's(1981) work on student language teachers' developing understanding of language learning and teaching during a language learning experience on an ITE programme is a precursor of the present study. They found that student teachers' sensitivity to pupils' problems in the classroom was heightened as a result of the course, as was their awareness of the role of the teacher in mitigating or exacerbating these problems, and some student teachers reported some changes to their practice as a result. Finney and Philpott(2010) take a related approach to embedding informal music learning in an ITE programme for music teachers. They stress the need for reflexive action (which they call 'excavating the learning') to draw out the value of the learning experience. A similar philosophy underpins work in mathematics education, in relation to implementing the intended focus on problem solving that is characteristic of many mathematics curricula since the 1980s. On the assumption that teachers are unlikely to implement problem-solving or allied approaches effectively unless they have experienced them as learners, student teachers are asked to undertake problem-solving activities and to reflect on their experience

(Lester et al. 1994; Cooney 2001; Ponte 2001). In this context, Lester and others (1994), in particular, note the importance of engagement in reflective writing.
This paper builds on the work reported here in a shared approach across three disciplines, in order to open student teachers' 'apprenticeship of observation' to more reflective and critical scrutiny and to develop their understanding of what it means and how it feels to learn in their own discipline.

Methodology

As indicated above, the project was conducted across three subject disciplines, Modern Languages, Music and Mathematics, in an initial teacher education programme in Ireland. It is worth noting that the student teachers carry out their teaching practice alongside attending lectures for the full academic year and so the students' dual role as both teachers and learners is a consistent feature of the ITE programme. The approach taken is of a qualitative case-study where participant student teachers took part in a learning experience in their own discipline and completed reflections on that experience with respect to their own learning and their own teaching. The key element of the learning experience is that the students were asked to participate in learning some novel aspect of their major discipline that may encapsulate some of the essence of that discipline and/or of teaching and learning in that discipline. The main research questions identified for the study are the following:

- What do student teachers learn about themselves as learners during the experience of learning a novel area of their own discipline?
- Does the learning experience together with reflection on it transfer to their own classrooms by developing more insight into and empathy with their own pupils?
- Does the learning experience together with reflection on it make them more open to learning experiences in the future?

Approach

In total 38 student teachers participated in the research project in 2010-11. Owing to constraints of appropriateness and time, the study was conducted somewhat differently for each discipline, as outlined below. However, in all cases the reflections were semi-structured in that they allowed for free expression but also included targeted questions on particular topics, specifically, whether and how the experience impacted on the students' teaching or intentions regarding teaching. This model aimed to foster at least descriptive reflection through open questions on the experience which called to a certain extent for a rationale, alternative viewpoints or evidence for statements made. Furthermore, the importance of time and distance for reflection was respected by building in a number of days

between the experience and the completion of the written reflections. The latter in general constituted some of the students' assessment for their pedagogy courses (see Discussion). The researchers undertook a thematic analysis of the data collected, with an initial identification of material relevant to the three questions above being followed by an analysis of sub-themes that emerge within each area. The following sections outline the key characteristics of the project for each of the three disciplines.

Modern Languages

The language learning experience has been a component of the Modern Languages pedagogy course for a number of years. In this instance, the 14 participants completed a seven-week course in Chinese for beginners, with one two-hour session per week in the first semester. They were taught by a native speaker of Chinese; teaching was almost exclusively in and through the target language. The students completed weekly semi-structured reflective journals after each session with a short unstructured reflection some days later. In addition, the students completed a group reflective report based on their and others' journals after the course was completed. The goal of the group report is to encourage dialogic reflection between students in a non-competitive environment, and to foster some critical reflection by situating their learning and reflection within the broader context of the ITE course and through this the socio-political context of their chosen career.

Music

Twelve participants – most of them classically trained – completed an eight-week course (half an hour per week) in the first semester, addressing a novel aspect of music: Irish traditional music, 'tin whistle for beginners'. This was the second time the course ran as part of the Music pedagogy course. The participants' previous learning of classical music had involved individual instrumental tuition, which relied heavily on the replication and reproduction of a written score. Traditional music, on the other hand, is transmitted aurally in group situations, relying heavily on participation and collaboration. While classical music requires an incremental acquisition of theoretical knowledge and technical skills, traditional music encourages trial and error and facilitates learning in mixed ability groups.

Each week the participants were taught a new traditional tune on their tin whistles by a renowned Irish traditional tin whistle player. After each lesson the participants completed semi-structured reflective journals, in which they recorded their responses to the lesson and described the learning strategies they were using in relation to practising and learning the tune at home over the week. At the end of the eight-week session, each student completed an individual synthesis report on the experience. In addition, there was a group discussion, which probed their learning even more and attempted to extract their views and consolidate

their thoughts on the experience, particularly in relation to what they learned about how others learned.

Mathematics

Twelve students specialising in mathematics participated in the mathematics element of the study. However, the Mathematics pedagogy lectures were attended also by a larger group of students for whom mathematics was their minor subject. To cater for their differing needs, the organisation was somewhat different from that for language and music.

The comparable work took place in the second semester. Over a period of four weeks – hence, during four two-hour lectures – the students undertook four problem-solving exercises of the genre known as 'investigations'. Investigations involve typically rather loosely formulated problems that not only can be solved in many ways (perhaps having a variety of acceptable solutions), but also can be extended, ideally in directions chosen by the students, to obtain more general results than those initially emerging. The activity reflects the nature of 'real' mathematics, in that it focuses on the process of problem-solving and the generation of new results – new to those investigating, in any case – rather than on the routine execution of previously taught techniques. Such activities have been used in the Mathematics pedagogy course for many years, in line with the literature cited earlier, but previously the students were not asked to record their reflections in writing. In 2010-11, all the students wrote short reflections immediately after completing investigations, and the mathematics specialists submitted semi-structured reflective essays at the end of the second semester. Dialogue around the exercise related to discovery learning in the investigations, as contrasted with expository teaching.

Findings: the students' voices

The reflective writings contained many passages relevant to answering the three research questions. The findings are presented below in three sections, under headings that correspond broadly to the three questions. In each section, emerging themes are identified and illustrated by examples.

Students' metacognitive awareness of themselves as learners

Themes identified with regard to students' metacognitive awareness of themselves as learners include a focus on feelings or immediate reactions to the learning situation; insights into their own learning styles or other characteristics of their learning; and awareness of the extraneous factors that impinged on their learning or attitudes to learning in the sessions.

Firstly, many students' reports of their experiences illustrated their feelings or reactions, positive or negative and the two-way relationship this had with their learning.

I really enjoyed this investigation. It was fun but surprisingly challenging at some instants. There was a nice competitive atmosphere between the members of my group…. [Mathematics; immediate reflection]

… feeling a bit down about the whistle. I find playing by ear so challenging and pretty much from the minute the teacher left the class I forgot the entire tune. … I haven't been able to practise hardly at all. [Music; journal]

I feel so enthused & motivated to learn. Initially, I wasn't very keen to learn Chinese. I feared it would be very difficult, especially in a class full of language students. I was afraid I wouldn't be able to keep up... I was pleasantly surprised at my own progress... I am looking forward to the next class. [Modern Languages (ML); journal]

Secondly, some students provided insights into their own learning styles and characteristics, and related these to their learning.

I am hindered in investigative work by a relatively poor spatial awareness and am easily 'frustratable'…. Give me a set of instructions and I will prosper … otherwise, expect gnashing of teeth and bad language. [Mathematics; final reflection]

I consider myself an active, visual and intuitive learner…. I enjoy discovery learning, and I like working in groups, as I find it a good opportunity to get different perspectives of the same problem…. I also like expository teaching, as I think the pace of the class is quicker … particularly if the concepts are not too difficult to grasp. [Mathematics; final reflection]

Despite the fact that she did manage to remain engaged in Chinese classes, she discovered that her attentiveness and motivation to learn was higher in Russian classes, simply because there was more physical movement.[ML; group report]

Thirdly, students identified extraneous factors that impinged on their attempts to take part in the learning activity. In particular, many of the Mathematics students commented on the fact that they were tired when coming into the Mathematics Pedagogy lectures; these occupied a 'graveyard slot' from 4 p.m. to 6 p.m. on a day on which the students spend the morning teaching in their teaching practice schools and the earlier part of the afternoon attending other lectures in college. A typical example was the following:

I would rate my enthusiasm for doing [investigations] as 9 [out of 10]. The one point lost is due primarily to the time of the day that our lectures take place. [Mathematics; final reflection]

For ML students in particular, the realisation of the degree to which extraneous factors could impinge on engagement was central in building empathy towards their own pupils as examples in the following section illustrate.

Students' metacognitive awareness related to developing understanding of their own students

Three themes were particularly noticeable. These are: identification of extraneous factors that impact on learning; recognition of the fact that learning can be overwhelming and difficult; and awareness that learners differ from each other.

One theme emerging was the way in which extraneous factors not only affected the student teachers during the sessions (as noted above), but also alerted them to the way in which their students' lives might impact on their learning, making it easy for the students to disengage.

We now understand we cannot expect students to study methodically for each and every lesson that we teach. Other factors intervene in one's life which we have to take into account. [ML; group report]

… this was the most valuable and frightening conclusion. Before entering the classroom there are real-world factors which affect a student … we can now relate to and empathise more with our own pupils… they too get tired, distracted, overwhelmed. [ML; group report]

I was very annoyed during the lesson with my peers who did not practice. … I found I was totally frustrated during the lesson. The reality is we will all have students … who will not practice... We cannot sacrifice their enthusiasm for the hope that we will re-engage the less focused students… I want to be the teacher who finds ways to re-engage those students but at the same time keeps the enthusiasm of the rest of the students.[Music; journal]

Secondly, several of the reports linked the students' experiences of the learning activity, in particular their negative experiences of learning as overwhelming, with their developing understanding of their own students and their engagement or disengagement with learning.

… the feeling of finding Chinese overwhelming. At the beginning it was enjoyable … [but it] became progressively more difficult… we each found that we shut off if we couldn't engage in or relate to what was going on in class. Our motivation wavered. We became frustrated…. It is an aspect we are much more conscious of now that we have experienced those feelings at firsthand. [ML; group report]

We used the target language only … [this] led us to mirroring our own students' blank faces. When asked to exercise the target language orally, we froze. We felt embarrassed to speak aloud in front of our peers… As a result we have more of an insight into how and why our students are often reluctant to engage in oral communication. [ML; group report]

It is interesting to realise that there may be students in the classes I teach who like me are disengaged from the learning process but stay quiet and appear to be getting on with their work. It would be so easy to miss the fact that they are not learning effectively because they may give no obvious sign of this. [Music; journal]

Thirdly, the group reports from the language students reveal insights in particular into the fact that learners are not a homogeneous group but in fact all learn differently, and that they (the student teachers) would need to make provision for this in their own classrooms.

…it made us aware of the diverse response of students to the same learning experience … we hope that we will now tailor our lessons to suit the different [needs]…. [ML; group report]

The learning experience here has made us more aware of the multiple variables in a classroom (and making accommodation for them). We realised that our views of the possible challenges our students would encounter were mostly/often based on our own skills... We must be aware of the many levels of ability and the different types of learner in a class. [ML; group report]

… all language learners learn differently… In our group we discussed some of the classes we felt we learned well or not well in and they often differed from each other. We decided that this meant there were not necessarily any bad teaching methods in our classes, only methods which suited some of us more than others. [ML; group report]

Reported changes to practice based on insights

Some reports not only recognised insights such as those described above, but also revealed that the students had already tried to implement these in their own classrooms. The implementation often related to specific methods but sometimes to more general approaches.

The first instance builds on the previous set of examples; it comes from students who have registered the importance of recognising students' differing needs, and have reported that they are already trying to cater for them during their teaching practice.

> *The most salient finding was that every student learns in a very different and distinctive way… We had never before been so aware of all the different needs that must be catered for… This is something we have … brought into our own classroom and consider on a daily basis when planning classes and devising creative approaches. [ML; group report]*

A second theme illustrated that the students were engaging profoundly with the nature of their subjects and/or of learning these subjects and were endeavouring to bring their understanding into their classrooms. In the three examples that follow, key phrases on the nature of the subjects are underlined.

> *Materials that were current and relevant to us were valuable in our learning… We are constantly being told in the Modern Languages pedagogy lectures that staying relevant and a teacher's 'with-it-ness' are important and we now understand why! ….<u>The language enters your world and you can engage with it in a genuine way.</u> We were surprised to discover that many of the famous people we had previously referenced were not relevant to our young students. [ML; group report]*

> *I was excited about teaching investigations…. I found that <u>the students were very much focused on what is the right answer and not on the process</u>. I myself need to get more practice at leading this type of class. [Mathematics; final reflection]*

Since beginning the [Postgraduate Diploma in Education] course in September, my views on mathematics have changed greatly. Throughout my schooling, mathematics was always presented to us as an unrelated set of rules…. Mathematics was seen as a finished product….Mathematics should be seen as a continuingly unfolding area of human question, where the invention of new creative ideas is central. To help students reach this view of mathematics, they should be challenged to think and reason … [and] should be actively involved with complex situations, by formulating their own meaning of the content. [Mathematics; final reflection]

The latter student tried an investigation in her class 'and found it to be very successful.'

Discussion and conclusions

These findings suggest that, regardless of discipline, a learning experience together with reflection on it does expand student teachers' metacognitive awareness of themselves as learners, and that this does translate to a greater empathy with and greater accommodation of learners in their own classrooms. With regard to the research questions above, all groups reported evidence that the students had reflected on their own learning, whether gaining new insights into their own learning or applying existing insights to the situation. Very many students noted how these insights could be generalised to learners in their own classrooms and some indicated intended or actual efforts to change their practice in order to accommodate these insights. As regards the final research question regarding developing a positive disposition towards learning, some music students expressed in informal discussions a desire to learn other musical genres. However, it would be premature to judge whether this experience resulted in a more positive disposition towards learning in the long term. Nonetheless, the fact that a number of students reported implementing changes to their practice as a result of their learning on this course may suggest an open attitude towards learning.

A common thread that runs through the findings above and previous studies is the notion of *transformation*, where in some contexts, for some students, the experience of learning and reflecting on it result in a transformative learning experience (Mezirow 1978; Mezirow and Taylor 2009) with regard to their understanding of teaching and learning. Among the most 'epiphanic' moments were those relating to the Modern Language student teachers: they radically changed their view of the varied nature of learning. This was largely driven by the collaborative group report which involved providing a synthesis of individual reflections. The mathematics student who wrote the final quotation above also seems to have experienced an epiphany with regard to her changed view of the nature of her subject. Transformative learning is 'predicated on the idea that students are seriously challenged to assess their

value system and worldview and are subsequently changed by the experience'(Quinnan 1997, 42). This work aims to foster the conditions in which students are genuinely challenged, and troublesome concepts that are fundamental to teaching in their discipline, such as how different learners can be, emerge from their own experiences and reflection in an inductive fashion. The degree of common points of learning for students and the depth of their reaction to the experience and this learning across the three disciplines have led us to consider this experience as a means of exploring and enumerating *threshold concepts* for learning in teacher education (Meyer et al. 2010). The students grappled with concepts which are troublesome, transformative and to a certain degree irreversible, and these can be said to be common across the disciplines.

A further point to note is the impact of the tools on the findings. Firstly, the kinds of reflections the students completed varied both within and across the disciplines. While all tools provided some support for descriptive reflection, they differed as to degree to which they made an attempt to promote dialogic and critical reflection. For this reason, the reflections quoted above could be positioned at quite different points on a continuum, from descriptive, personalised accounts to critical re-conceptualisations of issues. The potentially transformative nature of the experience for students relies on depth and criticality of reflection in which students engage, and this will vary across individuals. However, in this study it may also vary due to the tools used. A case in point is the more frequent moments of epiphany in the Modern Languages group reports, which called for dialogic reflection between critical peers. This aspect of study design is something that we need to address in future iterations of the project. A second issue regarding the tools arises in all three disciplines where the reflections were part of the student teachers' assessment for the year. This presents a number of problems, not least the good respondent problem or what Schumann and Presser (1981) term the 'acquiescence quagmire'. In an attempt to offset the effects of students responding for assessment rather than as they genuinely feel, the questions asked for evidence of examples from the lessons or their own teaching to support statements of effects or insights from the course. Assessment is however an open issue and one that will require careful management.

In conclusion, this iteration of the research study has produced promising results with regard to the impact on students' insights and practice. We aim to explore this further in a focus group interview during the summer but also with a further analysis of the journal and report data according to Hatton and Smith's (1994) and/or Mezirow's(Mezirow and Taylor 2009) criteria for the recognition of different types of reflective writing. Further analysis would explore the depth and quality of reflection engaged in across the reflective toolsets used in the three disciplines in order to crystallise findings but also to optimise future iterations of the project.

References

Bailey, K. M., B. Bergthold, B. Braunstein, N. Jagodzinski Fleischman, M. P. Holbrook, J. Tuman, X. Waissbluth, and L. J. Zamboet al. 1996. The language learner's autobiography: Examining the 'Apprenticeship of Observation'. In *Teacher Learning in Language Teaching*, ed. D. Freeman and J. C. Richards, 11-29. Cambridge: Cambridge University Press.

Brookfield, S. D. 1995. *Becoming a critically reflective teacher*. San Francisco, CA: Jossey-Bass.

Burton, J. 2009. Reflective Practice. In *The Cambridge Guide to Second Language Teacher Education*, ed. A. Burns and J. C. Richards, 298-307. Cambridge: Cambridge University Press.

Cooney, T. J. 2001. Considering the paradoxes, perils and purposes of conceptualizing teacher development. In *Making sense of mathematics teacher education*, ed. F.-L. Lin and T. Cooney, 9-31. Dordrecht: Kluwer.

Devitt, S., and I. V. Czak. 1981. An experiment in the teaching of Russian to future language teachers (Republished by ERIC as EJ253874). *Canadian Modern Language Review/ La Revue canadienne des langues vivantes* 38, no. 1: 43- 57.

Finney, J., and C. Philpott. 2010. Informal learning and meta-pedagogy in initial teacher education in England. *British Journal of Music Education* 27, no. 1: 7-19.

Greer, C. J. 2001. A cautionary tale: A dialogic re-reading of a student teacher's visual narrative. *Narrative Inquiry* 11, no. 2: 451-478.

Hatton, N., and D. Smith. 1995. Reflection in teacher education: Towards definition and implementation. *Teaching and Teacher Education* 11, no. 1: 33-49.

Kolb, D. 1984. *Experiential learning.* Englewood Cliffs, NJ: Prentice-Hall.

Korthagen, F., J. Loughran and T. Russell. 2006. Developing fundamental principles for teacher education programs and practices. *Teaching and Teacher Education* 22: 1020-1041.

Lester, F. K. Jr., J. O. Masingila, S.T. Mau, D.V. Lambdin, V.M. dos Santon, and A. M. Raymond. 1994. Learning how to teach via problem solving. In *Professional development for teachers of mathematics*, ed. D. B. Aichele and A. F. Coxford, 152-166. Reston, VA: NCTM.

Lortie, D. 1975. *Schoolteacher: A sociological study*. Chicago: University of Chicago Press.

Martin, M. 2005. Reflection in teacher education: How can it be supported? *Educational Action Research* 13, no. 4: 525-542.

Mayer-Smith, J. A., and I. J. Mitchell. 1997. Teaching about constructivism: Using methods informed by constructivism. In *Constructivist Teacher Education: Building a World of New Understandings*, ed. V. Richardson, 129-153. London: Taylor and Francis.

Meyer, J. H. F., R. Land and C. Bailie. 2010. *Threshold concepts and transformational learning*. Rotterdam and Taipei: Sense Publishers.

Mezirow, J. 1978. *Education for perspective transformation: Women's reentry programs in community college.* New York: Center for Adult Education, Teachers College, Columbia University.

Mezirow, J., and E. Taylor, eds. 2009. *Transformative learning in practice*. San Francisco: Jossey-Bass.

Moon, J. 1999. *Reflection in learning and professional development*. London: Kogan Page.

Ponte, J. P. 2001. Investigating mathematics and learning to teach mathematics. In *Making sense of mathematics teacher education*, ed. F.-L. Lin and T. Cooney, 53-72. Dordrecht: Kluwer.

Quinnan, T. 1997. *Adult students 'at risk': Culture bias in higher education*. Westport, CT: Bergin and Garvey.

Schön, D. A. 1983. *The reflective practitioner: How professionals think in action.* New York: Basic Books.

Schumann, H., and S. Presser. 1981. *Questions and answers in attitude surveys: Experiments on question form, wording and context.* New York, NY: New York Academic Press.

Williams, M., and R. L. Burden. 1997. *Psychology for language teachers: a social constructivist approach*. Cambridge: Cambridge University Press.

Raising Teachers and Learners' Competitiveness Through an Entrepreneurial Study Environment

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Abstract

The concept of competitiveness has always been related to entrepreneurship. Therefore the problems of raising teachers' as well as their students' competitiveness go hand in hand with the development of their entrepreneurship skills, attitudes, behaviour, thinking habits and ways. The peculiarities of the promotion of students' entrepreneurship have been widely researched within economics, management and business, which are traditionally acknowledged to be close to this topic. However a great deal of researches has revealed that entrepreneurship can't be developed in full measure only within the framework of specialised disciplines, if entrepreneurship training isn't practiced in a broad multidisciplinary context. That means that the development of students' entrepreneurship should be considered as a broader educational topic.

The pedagogical means for promoting entrepreneurship and entrepreneurial mindsets and dispositions were studied in the PhD research "The development of students' enterprise in study process" conducted by Karine Oganisjana under the supervision of Tatjana Koke in the University of Latvia in 2005-2009. The research has built a bridge between the experience of entrepreneurship education from the viewpoints of economics, entrepreneurship, business and management on the one hand, and pedagogy on the other hand. Scholars argue that the study environment can be entrepreneurship restraining or entrepreneurship promoting. Various aspects of an entrepreneurship promoting study environment, such as teacher's role and status; student's role, status, activity and expectations; study methods and forms of delivery; study ethos, emphasis, aims and outcomes; forms of assessment and cooperation among students, teachers and people outside the educational institution have been analysed. It was concluded that the best results can be achieved when teaching and learning take place in an multidisciplinary study environment in which both teachers and students are to identify opportunities available in the environment or generate opportunities themselves and apply their knowledge acquired in studies for solving real life problems and realizing these opportunities into new values. A multidisciplinary teaching and learning methodology as well as a number of interdisciplinary issues which connect physics, literature, languages, biology, music, sports, geography, chemistry and other disciplines in a multifaceted holistic picture of the reality have been elaborated within this PhD research.

This teaching and learning methodology and the multidisciplinary issues provided the basis for the recent European Commission project “Raising of Teaching Staff and School Competitiveness in Accordance with EU 2020” implemented by the authors in Ita Kozakēviča Polish Secondary School. The main goal of this workplace learning project was to provide experience for teachers to identify hidden inner links between apparently unrelated things, phenomena and events within 10th grade study curriculum and connect them together in order to identify, create and develop opportunities, thus enhancing their competitiveness. The creation and solution of multidisciplinary tasks were the means for achieving this goal.

The paper presents the theoretical analysis of the peculiarities of entrepreneurial study environment for prompting competitiveness and major findings of the project.

Keywords: competitiveness, entrepreneurship, entrepreneurial study environment, multidisciplinarity

Introduction

Researchers in entrepreneurship education have come to a common conclusion that there are two principally different types of education: 1) so called "less enterprising", "traditional", "supply oriented" or "container education" which restrains entrepreneurship in whole and on the contrary 2) "more enterprising", "demand oriented" or "evolutionary education" which promotes students' entrepreneurship (Gibb 1993; Braun 2008; Kearney 1999). Researchers in entrepreneurship education have come to a common conclusion that there are two principally different types of education: 1) so called "less enterprising", "traditional", "supply oriented" or "container education" which restrains entrepreneurship in whole and on the contrary 2) "more enterprising", "demand oriented" or "evolutionary education" which promotes students' entrepreneurship (Gibb 1993; Braun 2008; Kearney 1999). The comparative analysis of these two kinds of learning and teaching approaches has been conducted concerning the components of study process: the teacher, the student, subject matter and environment, as well as various aspects of interactions among them. Having combined the findings of Allan Gibb (1993); Gerald Braun (2008) and Paul Kearney (1999) confirmed as well with the conclusions made by other researchers and practitioners of entrepreneurship education (Hannon, et al. 2005; Rae & Carswell 2000; Heinonen 2007; Johnson, et al. 1987; Jones 2006; Fiet 2000; Shacklock, et al. 2000; Löbler 2006; Wing Yan Man 2006; Hjorth & Johannisson 2006; Heinonen & Poikkijoki 2006; Robinson 1996; Tan & Frank 2006; Antones & Van Vuuren 2005) table 1 was created in order to show all the scope of aspects covered in the researches.

Table 1. "Entrepreneurship restraining" versus "Entrepreneurship promoting" education according to Allan Gibb (1993); Gerald Braun (2008) & Paul Kearney (1999)

Aspect	*Entrepreneurship restraining*	*Entrepreneurship promoting*
1. Emphasis	Knowledge/knowing that	Capability/knowing how
2. Delivery/approach	Content-driven	Process - driven
3. Method	Didactic/instructional	Experiential/reflective
4. Control	Teacher-directed	Student-directed/negotiated
5. Teacher's role	Expert	Facilitator/colleague/coordinator
6. Student's role	Passive/receptive	Active/generative/inquisitive
7. Students' activity	Working alone	Working in small groups
8. Students' discretion	Limited	Wide
9. Student's status	Deficit/needs help	Asset/can help
10. Student's expectation	Dependence	Independence
11. Ethos	Impersonal/formal/competitive	Social/democratic/collaborative
12. Lessons	Programmed	Flexible/opportunist
13. Mistakes	To be avoided/not to be made	To be learned from
14. Types of assessments	Exams/tests	Profiles/results
15. Assessment by	Teacher	Collaborative process
16. Assessment for	Reporting and credentialing	Learning and recognition
17. View of the world	Right/wrong	Uncertainty, shades
18. Determined by	Exam boards	Local needs
19. Staffed by	Subject experts	Cross curriculum team
20. Working with others	Left to chance/rare	Planned/frequent
21. Aim	Theory into practice	Practice into theory
22. Outcomes	Short term	Lifelong

Table 1 shows that there is certain correspondence of "Entrepreneurship restraining" education to the elements of the authoritarian education; the latter has turned out to be unviable, causing a gap between the needs of lifelong learning education and the reality (Oganisjana & Koke 2008). Therefore the educational paradigm was shifted to the ideas of humanism and pragmatism (Koke 2003; Zogla 2006; Rubene 2006; Bluma 2001). The careful study of Table 1 brings to light a lot in common between the aspects of

"Entrepreneurship promoting" education (see the third column of table 1) and the characteristics of the pedagogy of humanism and pragmatism stated by Carl Rogers & Jerome Freiberg (1994), Erich Fromm (1976) and John Dewey (1974).

The characteristics of an entrepreneurial study environment

Students' role

An entrepreneurial study environment encourages students to be generative and inquisitive, able to help themselves and others (Gibb 1993; Braun 2008; Kearney 1999; Johnson, et al. 1987; Politis 2005; Ravasi & Turati 2005). It's not the teacher who is to be active but the student; only in this way students will be able to overcome boredom in studies (Jones 2006; Fiet 2000; Heinonen 2007), learn and think based on their experience and seek new ideas which will help them to understand current issues and find new forms of behaviour in similar situations in the future (McGill & Beaty 1992).

Passive "students who live in the mode of "having" have but one aim: to hold onto what they "learned" either by entrusting it firmly to their memories or by carefully guarding their notes. They do not have to produce or create something new. In fact, the having-type individuals feel rather disturbed by new thoughts or ideas about a subject, because the new puts into question the fixed sum of information they have. The process of learning has an entirely different quality for active students who are in the mode of relatedness to the world. "They do not go to the course lectures as *tabulae rasae*. They have thought beforehand about the problems the lectures will be dealing with and have in mind certain questions and problems of their own. Instead of being passive receptacles of words and ideas, they listen, they *hear*, and most important, they receive and respond in an active, productive way" (Fromm 1976, 25).

Teacher's role

An entrepreneurial study environment is provided by the teacher who is a coordinator, colleague and facilitator (Gibb 1993; Koke 2005; Braun 2008; Kearney 1999; Fiet 2000; Hannon, et al. 2005; Shacklock, et al. 2000; Heinonen 2007; Hynes 1996). The teacher is in dialogue with students and learns together with them (Leitch & Harrison 1999), supporting their autonomy and not solving problems for them (Löbler 2006).

The subject matter and topic

In the entrepreneurial study environment subject matter and the topic are opportunistic and negotiated, driven by outcomes and flexibly chosen taking into account students' needs and demands of the context (Wing Yan Man 2006; Braun 2008; Gibb 1993; Kearney 1999). According to John Dewey, anything which can be called a study must be derived from materials which at the outset fall within the scope of ordinary life experience. Educators have to select those things within the range of existing experience that have the promise and potentiality of presenting new problems which by simulating new ways of observation and judgement will expand the area of further experience. This is not a simple task as "books, especially textbooks, are chief representatives of the lore and wisdom of the past; they impose adult standards, subject-matter and methods upon those who are only growing slowly toward maturity. The gap is so great that the required subject-matter, the methods of learning and behaving are foreign to the existing capacities of the young. Learning here means acquisition of what already is incorporated in books and in heads of the elders. Moreover, that which is taught is thought of as essentially static. It is taught as a finished product, with little regard either to the ways it was originally built up or to changes that will surely occur in the future. It is to a large extent the cultural product of societies that assumed the future would be much like the past, and yet it is used as educational food in a society where change is the rule, not the exception" (Dewey 1974, 18-19). In our dynamic life in which the only constant is continuous change, the solution of this contradiction for educators should be not only in transmitting students the cultural heritage contained in books as the final truth but in helping them understand that achievements of the past provide them the means for understanding the present and become the ground for further experiences in which new problems are presented.

The value of education should be in the widening of opportunities for students: to be engaged and explore issues, enhance their self-esteem and power of expression; to learn to do – to carry out different types of activities concerning an issue, both studying it theoretically and trying to apply these theories in practice; participate in community life "armed" with the knowledge, skills and experience gained (Koke & Oganisjana 2005).

The study ethos and atmosphere

An entrepreneurial study environment is social, democratic, flexible, inspiring and not predictable; there students are encouraged and motivated to cooperate (Taylor & Thorpe 2004; Löbler 2006; Johnson, et al. 1987; Gibb 1993; Braun 2008; Hjorth & Johannisson 2006; Kearney 1999; Caird 1993; Fiet 2000; Heinonen & Poikkijoki 2006); they feel real excitement from activities which are associated with the creation of a new enterprise

(Robinson 1996; Tan & Frank 2006). Non-competitive study environment and cooperation among students can bring to significant academic and social results. Schools must not beget losers (Rogers & Freiberg 1994). The teacher should provide students with the opportunity to work in small groups since subjective satisfaction with study outcomes in small groups is higher than in big groups. This enables students to cooperate with other group-mates and create their relationship with the group as with real human beings. It's an experience of participation and community that first brings about the complete realization of inner strength and possibility. The outcomes of each student depend on the social atmosphere and the dominant group who creates a subtle background and specifies and forms the character of the student's joint reactions to study situations (Fromm 1955). Students cooperate not only with each other but as well with the teacher. However it is the question of the teacher's competence and intelligence to allow the suggestions made to develop into a plan and project by means of the further suggestions contributed and organised into a whole by the members of the group, thus making the study plan a co-operative enterprise, not the teacher's dictation (Dewey 1974).

The unity of theory and practice

An entrepreneurial study environment implies the connection of students' academic knowledge to its application in real life, therefore students always see the perspectives of utilizing theories in practice (Jones 2006; Bikse 2009; Wing Yan Man 2006; Heinonen 2007; Hjorth & Johannisson 2006; Heinonen & Poikkijoki 2006; Timmons & Stevenson 1985; Tan & Frank Ng 2006; Antones & Van Vuuren 2005). The study process must be organised and realized on the basis of students' practical needs by transforming what has been learnt into practice (Wing Yan Man 2006) taking into account the historical moment (Jones 2006) in order to research (Hannon 2006) and solve real life problems (Revans 1971; Tan & Frank 2006; Johnson, et al. 1987), combining experience with activities of formal education (Timmons & Stevenson 1985; Oganisjana 2006) and developing skills required in labour market (Rae 2007). The teacher should build bridges between different aspects of students' everyday life and their activities in study process (Rogers & Freiberg 1994), otherwise, if no application is found for theoretical knowledge and students' interests, it will lead to stagnation (Fromm 1955).

As genuine education is not merely acquisition of what is incorporated in books but it comes about through experience, it's almost useless if special skills are acquired by means of automatic drill so that students' power of judgment and capacity to act intelligently in new situations are limited. In this case all what students have learnt remain foreign to the situations of life outside the school as they give them no power of control over the latter (Dewey 1974). Knowledge acquired in studies should interact with students' life situations

and environment in order to let this knowledge influence the process of creation of students' experience thus making students' learning vital and enabling them to become active participants in community life (Koke & Oganisjana 2005).

Therefore, the closer to real life are the problems solved while teaching and learning, the higher is the entrepreneurial potential of both teachers and students. As real life is not divided into separate subjects, the studies which are close to it shouldn't be divided into separate disciplines either. This inference played a crucial part in the elaboration the multidisciplinary strategy of the European Commission project "Raising of Teaching Staff and School Competitiveness in Accordance with EU 2020" mentioned in the abstract.

Multidisciplinarity as a crucial prerequisite for the growth of competitiveness: some findings of the project "Raising of Teaching Staff and School Competitiveness in Accordance with EU 2020"

In the result of the qualitative content analysis of fifty interpretations of entrepreneurship and enterprise within the PhD research "The development of students' enterprise in study process", the nine components of enterprise were determined and combined in the definition of enterprise: "Enterprise is a dynamic system of individual's causally interrelated personality traits, motivation, cognition, needs, emotions, abilities, learning, skills and behaviour, on the basis of which an individual or a group of individuals interact with the context for identifying, generating and realizing opportunities into new values" (Oganisjana 2010b, 66). It shows that opportunity identification and generation are key elements of enterprise which encompasses and concerns all spheres of an individual's activities and entrepreneurship – concerning economics (Kearney 1999). So, the entrepreneurial disposition and competitiveness in the dynamically changing contemporary society depend on how effectively people are able to identify opportunities offered by the environment or generate new opportunities themselves, thus changing from dependent consumers into independent creators.

Using the "Random entry" technique of lateral thinking, Edward de Bono offers to combine two apparently independent things or phenomena in order to create new ideas and opportunities (1992). Applying this approach to study process, it becomes obvious that multidisciplinarity has a great creativity potential as it "pushes" its participants to find new links between disciplines and themes which traditionally seem causally independent. Speaking of the multi and cross-disciplinary contexts of entrepreneurship education Allan Gibb argues that entrepreneurship should be "taken out of the locker room of economics", and based "within a wider interdisciplinary context taking a pluralistic and diffused view of society" (Gibb 2002).

Taking into account all these arguments the project was realized and the research was conducted in three main stages:

A. The introduction of the idea and analysis of the essence of multidisciplinary studies and problems which were created in the course of many years and presented to teachers and researchers in education and pedagogy of Latvia and other countries of Europe and the world (Oganisjana 2011, 2010a, 2009).

B. The creation of multidisciplinary problems by the teachers in groups with their colleagues who teach other disciplines. The authors as the leaders of the project, asked the teachers to form mixed groups from teachers of diverse disciplines. However it was the teachers' free choice to get grouped in the way they see it.

- Group 1 consisted of six teachers of different languages and a teacher of biology;
- Group 2 was formed by teachers of mathematics, handicraft, native language, sports, physics, music and social sciences, one teacher from each discipline.
- Group 3 was represented by teachers of mathematics, native language, foreign languages, history and philosophy, economics, geography and dancing.

Each group within two-week time period was to create their own multidisciplinary task based on 10^{th} grade study curriculum. In the end of this stage, all the three groups were supposed to demonstrate their tasks to the other participants of the project and analyse them together.

C. The solution and analysis of the teachers' multidisciplinary problems together with their students.

The whole project was filmed in order to research and create a methodical material on using multidisciplinarity for raising teachers and learners' competitiveness. Each stage of the project was provided with survey and reflection of the teachers or students on what they acquired in the course of teaching and learning in the multidisciplinary study environment.

Conclusions

Having summarized all the findings made in the course of the processing of the qualitative and quantitative data, the following conclusions were made:

1. Multidisciplinary teaching and learning are an appropriate means for raising both teachers and their students' competitiveness developing their skills, habits and ways of thinking to identify and create opportunities by discovering hidden links between apparently unrelated things, phenomena and events from different study disciplines.

2. Multidisciplinary teaching and learning create an entrepreneurial study environment as they provide all the conditions which characterise the latter (see chapter 1): students' active role in the acquisition of knowledge and solving real life problems; teachers' cooperation with students in the mode of dialogue; the themes and topics chosen taking into account students' interests and needs; social, democratic, flexible and inspiring study ethos and atmosphere; the unity of theory and practice.
3. In order to provide multidisciplinary teaching and learning environment, a new level and character of cooperation among teachers of diverse study disciplines should be established in schools.

Recommendations

Based on the findings of the research conducted within the European Commission project "Raising of Teaching Staff and School Competitiveness in Accordance with EU 2020", the following recommendations were elaborated in order to raise teachers and their students' competitiveness:

1. Teachers-to-be students of higher educational institutions should be prepared for work in a multidisciplinary study environment.
2. The didactic aspects of multidisciplinary teaching and learning should be elaborated on, and based on study curriculum and should be implemented in all the stages of education started from primary school till higher and further education.
3. The experience of developing teachers and learners' competitiveness in multidisciplinary study environment should be researched on, shared and disseminated widely.

References

Antonites, A. J. & Van Vuuren, J.J. 2005. Inducing entrepreneurial creativity, innovation and opportunity – finding skills. *SAJEMS NS,* 8(3): 255–271.

Bikse, V. 2009. *Petijums "Latvijas progress uznemejdarbibas izglitibas attistiba pec iestajas Eiropas Savieniba / Research "The progress of the development of entrepreneurship education in Latvia after joining the European Union".* Riga: University of Latvia, Faculty of Economics and Management, Mission of the European Commission in Latvia.

Bluma, D. 2001. Shift of paradigms in the qualification of university lecturers. *Scientific Papers, University of Latvia Volume 635. Pedagogy and Teachers' education,* pp. 29–34. Riga: University of Latvia.

Bono, E. 1992. *Serious Creativity: Using the Power of Lateral Thinking to Create New Ideas.* Harper Business.

Braun, G. 2008. Evaluating international entrepreneurship education programmes: Lessons from experience. In *Evaluating, experiencing and creating entrepreneurial and enterprising networks,* eds. G. Braun, P. Kyrö & S. Speer, 93–112. Tepere.

Caird, S. P. 1993. What do psychological tests suggest about entrepreneurs? *Journal of Psychology,* 8(6): 11–20.

Dewey, J. 1974. *Experience and education*. (First edition in 1963). New York: A Division of Macmillan Publishing Co., Inc., London: Collier Macmillan Publishers.

Fiet, J.O. 2000. The pedagogical side of entrepreneurship theory. *Journal of Business Venturing*, 16(2): 101–117.

Fromm, E. 1976. *To have or to be?* New York: Bantam.

Fromm, E. 1955. *The sane society*. New York: Henry Holt.

Gibb, A.A. 2002. Creating conductive environments for learning and entrepreneurship: Living with, dealing with, creating and enjoying uncertainty and complexity. *Industry & Higher Education,* 19 (3): 135–148.

Gibb, A.A. 1993. The enterprise culture and education: Understanding enterprise education and its links with small business. International Small Business Journal, 11(3): 11–34.

Hannon, P.D. 2006. Teaching pigeons to dance: sense and meaning in entrepreneurship education. *Education and Training,* 48 (5): 296–308.

Hannon, P.D., Collins, L.A., & Smith, A.J. 2005. Exploring graduate entrepreneurship: A collaborative, co-learned based approach for students, entrepreneurs and educators. Industry & Higher Education, 19 (1): 11–24.

Heinonen, J. 2007. An entrepreneurial-directed approach to teaching corporate entrepreneurship at university level. *Education and Training,* 49(4): 310–324.

Heinonen, J., & Poikkijoki, S. 2006. An entrepreneurial-directed approach to entrepreneurship education: mission impossible? *Journal of Management Development,* 25(1): 80–94.

Hjorth, D., & Johannisson, B. 2007. Learning as an entrepreneurial process. In *Handbook of research in entrepreneurship education,* ed. A. Fayolle, Vol. 1: 46–67. Cheltenham, UK: Edward. Elgar Publishing.

Hynes, B. 1996. Entrepreneurship education and training – introducing entrepreneurship into non-business disciplines. *Journal of European Industrial Training,* 20(8): 1–10.

Johnson, C., Marks, S., Matthews, M., & Mike, J. 1987. *Key skills: Enterprise skills through active learning*. London: Hodder & Stoughton Educational.

Jones, C. 2006. Constructive alignment: A journey for new eyes. *Journal of Enterprising Culture,* 14 (4): 291–306.

Kearney, P. 1999. *Enterprising ways to teach & learn. Book 1. Enterprise principles*. West Hobart, Australia: Enterprise Design Associates Pty Ltd.

Koke, T., & Oganisjana, K. 2005. Educational experience as a path to active citizenship. In*Adult Learning for Civil Society. International Perspectives in Adult Education 51,* eds. L. Jõgi, E. Przybylska & M. Teresevičiené, 39–50. Bonn-Kaunas-Warsaw: Institute for International Cooperation of the German Adult Education Association.

Koke, T. 2003. Conceptualisation and outline of literature review on learning society in Latvia. In *ATEE. Spring University. Teacher of the 21st Century: Quality Education for Quality Teaching,* 13–20. Riga: University of Latvia, Department of Education of the Faculty of education and Psychology.

Leitch, C.M., & Harrison, R.T. 1999. A process model for entrepreneurship education and development. *International Journal of Entrepreneurial Behaviour & Research,* 5(3): 83–109.

Löbler, H. 2006. Learning entrepreneurship from a constructivist perspective. *Technology, Analysis & Strategic Management,* 18(1): 19–38.

McGill, I., & Beaty, L. 1992. *Action learning: a practitioner's guide*. London: Kogan Page.

Oganisjana, K. 2011. *"Discoprovita" & 360 degree holistic study for developing students' entrepreneurial attitudes.* Presented in the WE-ASC Education Culture Congress, World Education - Arts, Sciences and Education Culture, 12th - 15th January 2011, New Delhi, India. Retrieved 10 May 2011 from http://www.we-asc.org/karine

Oganisjana, K. 2010a. Konstruktivistiskā mācīšanās integrētu multidisciplināru uzdevumu risināšanā dabaszinātnē (fragments no prakses). LU 68. zinātniskā konference. Rīga: Latvijas Universitāte. Retrieved from: http://priede.bf.lu.lv/grozs/Didaktika/LU_68_2010/Karine_Oganisjana.pdf

Oganisjana, K. 2010 b. The development of students' enterprise in study process (PhD thesis under the scientific supervision of Tatjana Koke). Retrieved from: http://luis.lanet.lv/pls/pub/luj.fprnt?l=1&fn=F1648681065/Karine Oganisjana 2010.pdf

Oganisjana, K. 2009. Skolēna zināšanu praktiska izmantošana: spēle „Discoprovita" – mācīties dzīvei. LU 67. zinātniskā konference. Rīga: Latvijas Universitāte. Retrieved from: http://priede.bf.lu.lv/grozs/Didaktika/LU_67_2009/Oganisjana.pdf

Oganisjana, K., & Koke, T. 2008. Developing students' enterprise: The gap between the needs and the reality. In *Qualitative Psychology in the Changing Academic Context. Qualitative Psychology Nexus 6,* eds. I. Maslo, M. Kiegelmann & G. L. Huber, 218–233.

Oganisjana, K. 2006. Entrepreneurship or enterprising through schooling. In *Globalisierung der Wirtschaft-Internationalisierung der Lehrerbildung 3,* eds. A. Kruze, I. Mortag & D. Schulz, 45–61. Leipzig: Leipziger Universitätsverlag.

Politis, D. 2005. The process of entrepreneurial learning: a conceptual framework. *Entrepreneurship Theory and Practice,* 29(4): 399–424.

Rae, D. 2007. Connecting enterprise and graduate employability. Challenges to the higher education culture and curriculum? *Education and Training,* 49(8/9): 605–619.

Rae, D., & Carswell, M. 2000. Using a life-story approach in researching entrepreneurial learning: the development of a conceptual model and its implications in the design of learning experiences. *Education and Training,* 42(4/5): 220–227.

Ravasi, D., & Turati, C. 2005. Exploring entrepreneurial learning: a comparative study of technology development projects. *Journal of Business Venturing,* 20(1): 137–164.

Revans, R. 1971. *Developing effective managers*. Longman, UK: Harlow.

Robinson, P.B. 1996. The MINEFIELD exercise: "the challenge" in entrepreneurship education. Simulation and Gaming, 27(3): 350–355.

Rogers, C., & Freiberg, J. 1994. *Freedom to learn* (3rd Ed.). New York: Merrill, cop.

Rubene, Z. 2006. Problems of pedagogy in the situation of postmodernism. *In ATEE. Spring University. Teacher of the 21st Century: Quality Education for Quality Teaching,* 270–277. Riga: The University of Latvia, Department of Education of the Faculty of education and Psychology.

Shacklock, G., Hattam, R., & Smyth, J. 2000. Enterprise education and teachers' work: Exploring the links. *Journal of Education and Work,* 13(1): 41–60.

Tan, S., S., & Frank Ng, C. K. 2006. A problem-based learning approach to entrepreneurship education. *Education and Training,* 48(6): 416–428.

Taylor, D.W., & Thorpe, R. 2004. Entrepreneurial learning: A process of co-participation. *Journal of Small Business and Enterprise Development,* 11(2): 203–211.

Timmons, J.A., & Stevenson, H.H. 1985. Entrepreneurship education in the 1980s – what entrepreneurs say. In *Entrepreneurship – what it is and how to teach it,* eds. J.Kao & H.H. Stevenson, 115–134. Cambridge, MA: Harvard Business School Press.

Wing Yan Man, T. 2006. Exploring the behavioural patterns of entrepreneurial learning. A competency approach. *Education and Training,* 48(5): 309–321.

Žogla, I. 2006. Guidance needed to introduce changes in teacher education. *In ATEE. Spring University. Teacher of the 21st Century: Quality Education for Quality Teaching,* 378–386. Riga: The University of Latvia, Department of Education of the Faculty of education and Psychology.

Development of Concept of Division – From Intuitive Models to Division of Fractions

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Abstract

The teaching of mathematics that emphasized the practice of procedures marked teaching of mathematics in history. We are trying to replace such teaching, which emphasizes only the procedural knowledge with no systematic development of conceptual knowledge, with a teaching emphasis on the mutual development of both components of knowledge: procedural and conceptual. In the definition of concept, Vergnaud states that, among other things, concepts require situations that make the concept meaningful, and Greer has classified the different situations that we associate with the concept of division. This paper shows research on class and models of division for situations which students and teachers associated with division of whole numbers and division of fractions.

Keywords: teaching of mathematics, children, learning, division, mathematics teachers

Introduction - What we want our children to acquire by learning mathematics

The modern approach to mathematics in school, in most countries today, emphasizes the development of conceptual knowledge controlled within the teaching process, but also does not ignore procedural knowledge. Indeed, Kilpatrick and others (2001) symbolically show the acquisition of mathematical proficiency as the construction of rope from five strands, which are developed in parallel. Strands of mathematical profciency are conceptual understanding, procedural fluency, strategic competence, adaptive reasoning and productive disposition.

At first, they emphasized conceptual understanding and procedural skills. Since the development of procedural knowledge is not a strange process in teaching mathematics, because for years it was nurtured within the school mathematics, Kilpatrick and others describe the conceptual approach to mathematics teaching at elementary level in all aspects, but also point out that we should take into account the procedural knowledge.

All contemporary mathematics curricula emphasize skills and values as the backbone of the teaching mathematics, and emphasize the optimal balance between the development of conceptual and procedural knowledge as parts of mathematical ability.

Being proficient in mathematics implies the ability to use a flexible application of knowledge learned in appropriate situations. The combination of knowing facts, knowledge of procedures and conceptual understanding is what we want our students to gain from the teaching of mathematics in schools. Mathematics becomes easy to learn and apply, if students connect new knowledge with existing, in an understandable and clear way (Schoenfeld 1988). Well connected and conceptually grounded ideas can be use in new situations (Skemp 1976). On the one hand, practised algorithms in mathematics without conceptual understanding are often quickly forgotten or remembered incorrectly. On the other hand, understanding of the concepts, without fluency in performance of algorithms, may present an obstacle in solving problems. The aim is therefore to achieve fluency in arithmetic, but also the existence of conceptual understanding of numbers, mathematical operations and algorithms.

Thus, Ma (1999) described the development of deep understanding of fundamental mathematics as a well-organized package of mental well-connected concepts and procedures, and in discussion of algorithms claimed that children need to know how, but also why. In fact Hiebert and Lefevre (1986) described conceptual knowledge as knowing why and procedural knowledge as knowing how. Since by definition, conceptual knowledge involves interconnected and meaningful knowledge, procedural knowledge can not be associated with other forms of knowledge that may or may not have meaning. Linking conceptual and procedural knowledge may be useful to the acquisition and application of both conceptual and procedural knowledge.

Baroody and others (1986) felt that there was interaction between skills and concepts, and that conceptual knowledge can lead to the development of skills. Ma and many others agree with the fact that the amounts of time that are spend on the teaching of procedural and conceptual knowledge are not equal. Also, many teachers are influenced by traditional teaching, which emphasizes practising algorithms. Many mathematics educators and researchers in this field agree that it is achieving the necessary balance in content and themes that builds conceptual and procedural knowledge.

This research will explore the state of conceptual understanding of division for children in elementary school, students, and mathematics teachers. Assuming that most people in Croatian schools are taught mathematics traditionally, we examined the quality of their concept of division, as well as misconceptions that they may have.

The concept of division is just one of many concepts in mathematics which must be approached in a contemporary way, and it is chosen because all previous studies have shown that students have the most problems with division. When the intention is to observe

the construction of conceptual knowledge and the development of concepts, it is necessary to first ask ourselves what is the concept and what it means to have built a quality concept and in particular a mathematical concept.

Children's informal knowledge of division and concept of division

When children are faced with computational tasks, they use their intuitive knowledge in an effort to resolve them. Often they seem insistent in using that knowledge rather than traditional methods explained by teacher. The teacher encourages the child if he give the exact answer, but often remains unaware of the fact that the child is using another method then the one he taught him. These methods in fact after a while become ineffective and discourage children, and they conclude that mathematics is not what they thought it is. For instance, when a teacher teaches the division algorithm, he/she start with simple examples 24: 2, 69: 3, 842: 2, etc., where each digit is divisible by the divisor. Although the teacher emphasizes that the number 24 has 2 tens and 4 units, the child concludes that it is enough to divide 2 by 2 and 4 by 2, and the results are merged into a new number. Such a child's method gives the correct result for this type of task, and if the teacher just checks the results, he/she can conclude that the child succeeded. But when the tasks become more complex, and no longer is each digit is divisible by the divisor, children are faced with failure.

This is just one example where children rely on their intuitive knowledge and it is proven (Booth 1981) that this does not depend on the age of the child. Research conducted in British secondary schools have shown that many children do not use classical mathematical methods that have been taught, but rather rely on their intuitive methods largely involving counting, instead of mathematical operations.

The existence of such informal methods certainly should not be ignored; they should be detected and used in the development of new methods. Helping children to learn formal mathematical procedure means (Booth 1981) recognizing methods actually used by children and helping them understand the connection between what they are doing and what the teacher is presenting, so that they point out the limitations of their methods. The ways in which children devise and solve the tasks can be divided into informal methods and algorithms invented by child. In both cases the child may have a correct or a false solution, and the accuracy of the results may depend on the number used in the task. Thus, for instance, Steffe (1994) cites the example of a boy who was asked to multiply $20 \cdot 20$. The boy pronounced a series with 20, 40, 60, 80..., 380, 400, in parallel with lifting a finger that indicated how many times 20 was added, up to the 20th. After that they set him the task $20 \cdot 30$, where he continued a series of 420, 440..., 600, again following the procedure of raising fingers. This method is accurate and logically correct, but it shows that with this boy is not developing multiplicative thinking.

A similar example is that of the girl in the third grade of elementary school, who achieved great success in mathematics. When she was solving problems given in the textbook, she successfully used learned algorithms and correct operations. But when the problem task was given to her outside the school context she use more primitive strategies. Consider the problem task offered to the girl:

> *"Mama sent Lucija to the store and gave her 100 kuna, to buy two cakes, and 3 packages of eggs. Each cake cost 15 kunas, a package of eggs, 11 kunas. Lucija wanted to buy a chocolate egg, which cost 3 kunas. Mama told her that with the remaining money she can buy whatever she wants. How many chocolate eggs can Lucija buy?*

Although she had successfully mastered the division algorithm, in a situation that is not associated with school mathematics she used basic strategies and intuitive knowledge (Figure 1). First she added 15+15, and counted how much was left after buying cakes; then she added 11 three times, without using multiplication. She then subtracted 33 from 70 and concluded that after the compulsory purchase there remained 37 kuna. Further she did not associate the situation with division; instead she relied on the basic strategy of counting and one-to-one correspondence. She wrote the numbers from 1 to 37, then she crossed through every three, and for every line she added one egg into a bag. When it came to an end, the number 37 was left alone. The girl commented that there remained one kuna which will buy a sucker, and she drew it. At the end she counted the eggs and concluded that with the rest of the money she would buy 12 chocolate eggs and a sucker.

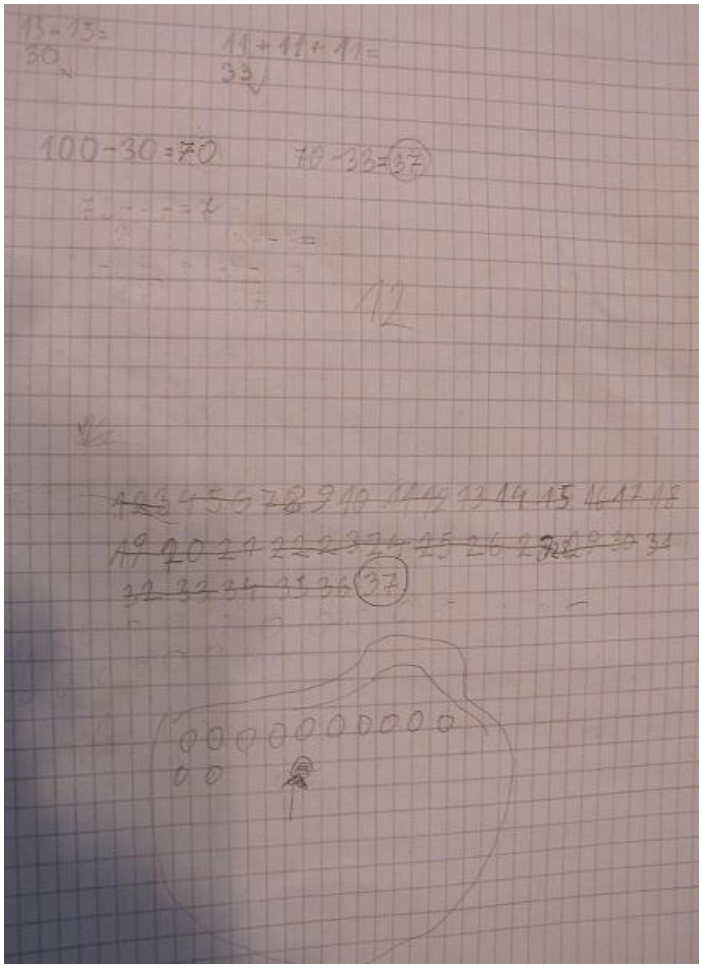

Figure 1. Child's work on problem task

Theories and research on multiplicative thinking have developed in the past 30 years, beginning with the work of Fishbein, Deri, Nella and Marina (1985), who studied children's informal knowledge of multiplication and division. Children's informal knowledge of division included the so-called intuitive (implicit, tacit, informal) models.

Researchers (Carpenter, Ansell, Franke, Fennema and Weisbeck 1993) have shown that even young children can solve many different types of problem-solving tasks with direct modelling of problem situations, actions and relationships to the task. The preparation of a model or visualisation of the problem situations is one of the most fundamental processes in solving problems. Many tasks can be solved by direct presentation of the critical features of the problem situations with the help of physical, pictorial, concrete representations.

Fishbein and others have argued that all basic arithmetic operations are associated with an unconscious primitive intuitive model, which mediates in search of arithmetic operations needed to solve a mathematical problem. They point out that there are two intuitive models that children use when the situation requires a division problem. These are a partitive model and a measurement (quotative) model. On the other hand Fishbein and others argue that intuitive models can impede, discourage or even prevent a child from solving a mathematical

problem. The basis of their hypothesis is the fact that children have difficulties in solving problems in which they deal with fraction or decimal numbers, because they are not able to interpret the situation logically. If the numerical expression 12: 3 is presented to the child, he connects it to the problem situations in which a group of 12 elements (eg, candy or apples) should be shared among 3 children. If the numerical expression 12: $\frac{1}{2}$ is presented to the child, his intuitive model is opposed to the term, because he can not imagine how 12 apples can be shared with half of the child. In further consideration the child concludes that the division of rational numbers is not the division he knew and he fined mathematics strange and abstract. The results obtained by Fishbein and others were obtained in Italian schools, and matching results were obtained in English schools, where division (division, division) is connected with sharing (condivisione, divide), but the words are different. In the Croatian language division and sharing use the same word – „dijeljenje“, but sharing in every day life does not always imply fair sharing. In continuation of this work, results of research will be presented, pointing precisely to such a linguistic barrier in the formation of a quality concept of division. Many researchers have dealt with the development of multiplicative thinking in children (Greer 1992, 1994; Harel and Confrey 1994; Vergnaud 1994; Steffe 1994) based on the children's errors related to multiplication and division, studying the ways in which children solve problem tasks.

On the other hand Gerard Vergnaud (1994) emphasized that it was not enough for a child to develop isolated mathematical concepts, but to connect them together into one unit, together with the different situations wich led to the development of these concepts.

Vergnaud considers that problem situations are essential to acquiring conceptual knowledge. It is also the attitude of cognitive scientists, to teach mathematics starting with problem-tasks. Here we will only briefly mentioned Vergnaud's definition of the concept as a theoretical background for this study.

Definition: concept is a three-uple of three sets : C = (S,I,R)

S: the set of situations that make the concept useful and meaningful

I: the set of operational invariants that can be used by individuals to deal with these situations

R: the set of symbolic representations, linguistic, graphic or gestural that can be used to represent invariants, situations and procedures.

Since the problem situation is one of the basic elements of the definition of the concept, it is important to classify different situations involving division. Examples of classifications include those given by Greer (1992), Nesher (1988) and Vergnaud (1983). Greer gave the classification most used in the analysis and development of studies of multiplicative thinking, so it will be listed here and used in the research analysis.

Table 1. Greer's classification of multiplicative situations

Class	Multiplication problem	Partitive division	Measurment division
Equal groups	3 children each have 4 oranges. How many oranges do they have altogether?	12 oranges are shared eqally among 3 children. How many does each get?	If you have 12 oranges, how many children can you give 4 oranges to?
Equals measures	3 children each have 4,2 liters of oranges juice. How much orange juice do they have altogether?	12,6 liters of orange juice is shared eqally among 3 children. How much does each get?	If you have 12,6 liters of orange juice, to how many children can you give 4,2 liters?
Rate	A boat moves at a steady speed of 4,2 m/s. How does it move in 3,3 secondes?	A boat moves 13,9 meters in 3,3 secondes. What is an average speed in meters per second?	How long does it take a boat to move 13,9 meters at a speed of 4,2 m/s?
Measure conversion	An inch is about 2,54 cm. About how long is 3,1 inches in centimeters?	3,1 inches is about 7,84 cm. About how many centimeters are there in an inch?	An inch is about 2,54 cm. About how long in inches is 7,84 cm?
Multiplicative conversion	Iron is 0,88 times as heavy as copper. If a pice of copper weights 4,2 kg, how much does a piece of iron of the same size weight?	Iron is 0,88 times as heavy as copper. If a piece of iron weights 3,7 kg, how much does a piece of copper the same size weight?	If equally sized piece of iron and copper weight 3,7 kg and 4,2 kg respectively, how heavy is iron relative to copper?
Part/whole	A college passed the top 3/5 of its students in an exam. If 80 students did the exam, how many passed ?	A college passed the top 3/5 of its students in an exam. If 48 students passed, how many students sat the exam?	A college passed the top 48 out of 80 students who sat an exam. What fraction of the students passed?
Multiplicative change	A piece of elastic can be streched to 3,3 times its original lenght. What is a lenght of a piece 4,2 meters long when is fully streched?	A piece of elastic can be Stretched to 3.3 times its original length. When fully stretched it Is 13.9 metres long. What was its original length?	A piece of elastic 4.2 meters long can be streched to 13.9 meters. By what factor is it lengthened?
Cartesian product	If there are 3 routes from A to B, and 4 routes from B to C how many different ways are there of going from A to C via B?	If there are 12 different routes from A to C via B, and 3 routes from A to B, how many routes from B to C are there?	

Rectangular area	What is a area of rectangle 3,3 m long by 4,2 m wide?	If the area of rectangle is 13,9 m^2 and the lenght is 3.3 m, what is the width?
Product of measures	If a heater uses 3,3 kW of electricity for 4,2 hours, how many kWh is that?	A heater uses 3,3 kW per hour. For how long can it be used on 13,9 kWh of electricity?

Since the mastering of problem situations is crucial for the development of a quality concept of division, we were interested in types of situations that students and teachers associated with division.

Problem situations invented by elementary school children for division of whole numbers

Method

The subjects for the study consisted of 135 elementary school children from 8 to 10 years old and in this range: 37 children in second grade, 58 in third grade and 40 in fourth grade. All children are from four elementary schools in Zadar. All four schools served diverse populations. Students were asked to write three problem tasks for which solutions will contain numerical expressions 12: 3, 45: 3 and 72: 12. The example was offered to them in the form:

> *If you would like me to write a problem task for numerical expression of 5 + 8, I'd write, for example, "Marica has 5 apples and Ivica has 8 apples. How many apples have they altogether?"*

Results

Analyzing written problems situations, we have tried to determine the following:

- How many children know to write a correct problematic situation?
- If the problem situation is exact, which classes of situation and which division model do students choose?
- If the child does not choose an adequate problematic situation, where does he/she make mistakes?

The following table provides an overview of research results with regard to the following elements:

- The amount of adequate problematic situations
- The amount of inadequate problematic situations
- Empty (no response)
- The amount of partitive model tasks in adequate problematic situations
- The amount of measurement model tasks in adequate problematic situations
- The amount of partitive model tasks in inadequate problematic situations
- The amount of multiplicative tasks in inadequate problematic situations
- The amount of addition tasks in inadequate problematic situations
- The amount of subtraction tasks in inadequate problematic situations

Table 2. Children's problem situations for division of whole numbers

	True	False	Empty	True		False			
				Partitive	Measurement	Partitive	·	+	-
12:3	65,9	28,9	5,2	96,6	3,4	41	0	5,1	41
45:3	59,3	33,3	7,4	86,5	1,1	46,6	4,4	2,2	31,1
72:12	50,4	34,1	15,5	95,6	1,5	39,1	2,2	2,2	43,3

The table shows that the partitive model of division is significantly dominant in students' division tasks. Interestingly, the students who make mistakes also tried to apply partitive division, but often used wrong numbers or in the final part of the task wrote questions involving subtraction. For example, a student wrote this kind of task:

> *"Mum has 72 apples and shares them among 12 children. How many apples will be left to mum?"*

There is a significant impact of subtraction on the concept of division, as is evident by amount of subtraction tasks in inadequate problematic situations. The reason for this is probably a linguistic influence. As said earlier, in the Croatian language sharing and division have the same word - dijeljenje. But the term "dijeljenje" in everyday life does not always mean fair share.

Correlation between students' age and accuracy for the first task indicates, although not significantly, a negative trend (Pearson -0.062). The youngest children in this group are second-grade elementary school students who in the period of conducting the research learnt division within the multiplication table. But it is interesting that the correlation between age and accuracy for the third task, and the correlation between age and accuracy for the second task, also showed negative trends (- 0.05, -0.03). The second and third tasks go

beyond teaching in the second and third grade, so the task 72: 12 is familiar only to the oldest students, 30% of them. The explanation of this result lies in the relationship of learning conceptual and procedural knowledge. The second grade of Croatian elementary schools focuses on using a multiplication table for the problem situations where the children evoke the concept of division and that explains why 12: 3 = 4, while in the third and fourth grade the focus is on procedural tasks and the adoption of the algorithm of division.

Problem situations invented by elementary school children for division of fractions

Method

The subjects for the study consisted of 241 elementary school children in 6th grade. All children are from four elementary schools in Zadar. All four schools served diverse populations. Students in the 6th grade of elementary school in Croatia are faced for the first time with division of fractions, while the notion of fractions is taught in the 5th grade. During the research the students have finished learning about the division of fractions and have taken tests of knowledge, which showed adequate results. Students were asked to write one problem task for which solutions will contain the numerical expression 12: $\frac{1}{2}$. The example is offered to them in the form:

> *If you would like me to write a problem task for numerical expression of 5 + 8, I'd write, for example,"Marica has 5 apples and Ivica has 8 apples. How many apples have they altogether?"*

Results

Analysis of results was similar to analysis of tasks in the previous group, so results will be displayed in the same table.

Table 3. Children's problem situations for division of fractions

	True	False	Empty	True		False			
				Partitive	Measurement	Partitive	·	+	-
12: $\frac{1}{2}$	5,8	42,3	51,9	0	5,8	13,5	16,7	0	30,4

Although the test of knowledge for all students in the sample showed no significant misunderstanding or lack of attainment, a very small number of students (5.8%) wrote an adequate problem task. Most students did not write anything, and errors are mostly tasks with no particular meaning, like:

- No sense multiplicative conversion

  "Ana has 12 liters of juice. John has a $\frac{1}{2}$ *liter times less. How much juice does John have? "*

- Subtraction tasks

  "Grandma has 12 apples. Half of the apples she shared with her neighbours. How much apples will be left to her? "

- Tasks in which the partitive model seeks to implement a given task, thereby transforming numbers or changing the role of the dividend and the divisor

  "12 people share half of the cake. How much will each get? "

These results show that children did not create the concept of division of fractions, but adopted a procedure without the need for a meaningful explanation. They also indicate the method of problem solving, identifying key words and numbers inside the task, rather than coverage of the problem task as a meaningful whole and meaningful situation that would be a key element in building the concept of division.
Moreover, the question arises whether these results are a consequence of teaching? For this purpose, a similar test was conducted among teachers of mathematics in primary schools, who teach exactly that material, and also among students of teacher studies.

Problem situations invented by elementary school mathematics teachers for division of fractions

Method

The subjects for the study consisted of 122 elementary school mathematics teachers from different schools in southern Croatia (Split and Zadar County) amongst whom are beginners. Unlike students from sixth grade, the teachers were required to write three problem situations for three different division problems: 12: 3, 12: $\frac{1}{2}$, $\frac{1}{2}:\frac{3}{4}$.

Results

The analysis is shown in the table as in previous groups, for easier comparison.

Table 4. Teachers' problem situation for division of whole numbers and fractions

	True	False	Empty	True		False			
				Partitive	Measurement	Partitive	·	+	-
12:3	83,6	9	7,4	90,2	7,8	63,6	0	0	0
12: $\frac{1}{2}$	53,3	22,1	24,6	1,5	86,1	48,1	26	7,4	3,7
$\frac{1}{2} : \frac{3}{4}$	6,6	38,5	54,9	50	25	12,7	48,9	2,1	4,2

Although it would be expected that teachers would have no problem with setting a single task, this is not the case. The third task was done just as badly as sixth-grade students did their task. This is an indication that in teaching division of fractions, teachers do not start from the realistic situation that involves division of fractions, but only by showing an algorithm for division of fractions. That is why it is not surprising if students in upper primary schools believe that mathematics is not understandable or applicable in everyday life. Also the overall analysis shows that in Croatian schools the traditional way of teaching mathematics, which give priority to training in the algorithms, is still in effect, instead of the conceptual development of mathematical concepts.

As stated in the introduction, a turning point for different teaching can be made by teacher studies that educate future teachers.

Problem situations invented by prospective elementary school mathematics teachers for division of fractions

Method

The subject for this study consisted of 173 prospective teachers from University of Zadar and University of Split. Students were required to write three problem situations for three different division problems: 12: 3, 12: $\frac{1}{2}$, $\frac{1}{2} : \frac{3}{4}$, just like teachers.

Results

The analysis is shown in the table as for all previous groups, for easier comparison.

Table 5. Prospective teachers' problem situation for division of whole numbers and fractions

	True	False	Empty	True		False			
				Partitive	Measurement	Partitive	·	+	-
12:3	91,3	8,1	0	97,5	2,5	28,5	7	0	21
12: $\frac{1}{2}$	18,5	47,4	34,1	0	100	65,8	3,7	2,4	3,7
$\frac{1}{2} : \frac{3}{4}$	0,6	17,3	82	100	0	0	43,3	3,3	10

For future teachers of mathematics the situation is worse than for teachers of mathematics. According to Ma (1999), a milestone in changing ways of teaching mathematics oriented to the balance of conceptual and procedural knowledge is in the teacher study. From the point of this research, the recommendation is for developing conceptual knowledge among students on Teacher Studies programmes.

Conclusion

Finally we look at the class situation (using Greer's classification), noting which classes were used by the subjects of research.

		Measurement model					Partitive model					Rectangular area
		Equal groups	Equal measures	Multiplicative	Rate	Total	Equal groups	Equal measures	Multiplicative comparing	Rate	Total	
2nd - 4th grade	1	0,7	1,5	0	0	2,2	45,9	5,9	11,1	0	62,9	0,7
	2	0,7	0	0	0	0,7	40	4,4	12,6	0	57	1,5
	3	0,7	0	0	0	0,7	28,1	3,7	16,3	0	48,1	1,5
6th grade	1	2,9	2,9	0	0	5,8	0	0	0	0	0	0
students	1	1,2	0,6	0,6	0	2,4	86,1	2,3	0,6	0	89	0
	2	17,9	0,6	0	0	18,5	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0,6	0	0
teachers	1	0	6,6	0	0	6,6	67,2	5,7	2,5	0	75,4	1,6
	2	32	13,9	0	0	45,9	0	0	0	0,8	0,8	6,6
	3	0	0	0	1,6	1,6	0	0	2,5	0	2,5	1,6

It can be seen that no one group of subjects showed all classes of situation. Instead of this they faced difficulties in dealing with division of fractions. In all groups with the problem task for 12: 3, most subjects chose the partitive model of division, whereas few subjects chose the measurement model of the task. Not even the teachers provide reasonable and meaningful situations that will explain the meaning of division of fractions.

The influence of the partitive model on building the concept of division is great. This influence we can say is even negative, because the partitive model cannot be applied to division of fractions in beginning to learn division of fractions. The question which arises from this research is whether the frequent use of the measurement model of division would allow students to develop better understanding of division of fractions. Besides the use of various classes and models of division, teachers have a responsibility to model activities that lead students to understand the concept of division of fractions based on connections with division of whole numbers. According to the results presented in this study, the mathematics teachers who were part of the research for teaching the division of fractions use only the algorithm for division of fractions.

References

Baroody, A. J., K. E. Gannon, R. Berent, and H. P. Ginsburg. 1984. The development of basic formal mathematics abilities, *Acta Paedologica* 1 no. 2: 133-150.

Booth, L. R. 1981. Child Methods in Secondary Mathematics. *Educational Studies in Mathematics* 12: 29-40.

Carpenter, T.P., E. Ansell, M. L. Franke, E. Fennema and L. Weisbeck. 1993. Models of problem solving: a study of kindergarten children's problem solving processes. *Journal for Reasearch in Mathematics Education* 24**:** 428-441.

Fishbein, R., M. Deri, M. Nello and M. Marino. 1985. The role of implicit models in solving verbal problems in multiplication and division. *Journal for Research in Mathematics Education* 16: 3-17.

Greer, B. 1994. Extending the meaning of multiplication and division. In *Development of Multiplicative Reasoning in Learning Mathematics*, ed. G. Harel and J. Confrey, 61-87. New York: State University of New York Press.

Greer, B. 1992. Multiplication and division as model of situation. In *Handbook of Research on Mathematics Teaching and Learning*, ed. D. A. Grouws, 276-295. New York: Macmillan Publishing Co.

Harel, G., and J. Confrey (eds.) 1994. Introduction. In *Development of Multiplicative Reasoning in Learning Mathematics*, ed. G. Harel and J. Confrey, vii. New York: State University of New York Press.

Hiebert J., and P. Lefevre. 1986. Conceptual and procedural knowledge in mathematics: An introduction analysis. In *Conceptual and procedural knowledge: The case study of mathematics*, ed. J. Hiebert, 1-27. Hillsdale, NJ: Lawrence Erlbaum Associates.

Kilpatrick, J., J. Swafford and B. Findell (eds). 2001. *Adding it up. Helping children learn mathematics*. Washington DC: National Academy Press.

Ma, L. 1999. *Knowing and teaching elementary mathematics*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Nesher, P. 1992. Solving multiplication word problems. In *Analysis of arithmetic for mathematics teaching*, ed. G. Leinhardt, R. Ratnam and R. A. Hattrap. Hillsdalle, NJ: Erlbaum, 1992.

Schoenfeld, A.H. 1985. *Mathematical problem solving*. New York: Academic Press.

Skemp, R.R. 1976. Relational understanding and instrumental understanding. *Mathematics Teaching* 77: 20-26.

Steffe, L. 1994. Children's multiplaying schemes. In *Development of Multiplicative Reasoning in Learning Mathematics*, ed. G. Harel and J. Confrey, 3-40. New York: State University of New York Press.

Steffe, L. P., and H. G. Wiegel. 1996. On the nature of a model of mathematical learning. In *Theories of mathematical learning*, ed. L. Steffe, P. Nesher, P. Cobb, G. Goldin and B. Greer, 477-498. Hillsdalle, NJ: Lawrence Erlbaum Associates.

Vergnaud, G. 1997. The nature of mathematical concepts. In *Learning and teaching mathematics: An international perspective*, ed. T. Nunes and P. Bryant, 5-28. Hove, England: Psychology Press.

Vergnaud, G. 1994. Multiplicative Conceptual Field: What and Why? In *Development of Multiplicative Reasoning in Learning Mathematics*, ed. G. Harel and J. Confrey, 41-60. New York: State University of New York Press.

Vergnaud, G. 1996. The theory of conceptual fields. In *Theories of mathematical learning*, ed. L. Steffe, P. Nesher, P. Cobb, G. Goldin and B. Greer, 219-240. Hillsdalle, NJ: Lawrence Erlbaum Associates.

Verschaffel, L., and E. De Corte. 1997. Word problems: a vehicle for promoting authentic mathematical understanding and problem solving in the primary school? In *Learning and teaching mathematics: An international perspective,* ed. T. Nunes and P. Bryant, 69-97. Hove, England: Psychology Press.

The Missing Third: Accounting for Prior Learning in Teacher Education Program Admissions

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Abstract

Teacher development can be conceptualized as a three-stage process: the learning and experiences that occur prior to the professional program; the actual teacher education program itself; and, finally, ongoing in-service teaching and professional development. This progression provides an analytic framework through which the relative impact of each stage can be examined, understood, and accommodated. The theme of this conference focuses explicitly on the latter two thirds of the developmental model just described. It is our contention and current research focus that the experiences of prospective teachers prior to entering a teacher education program are at least as important as the program itself.

Tom Russell, a leader in the study of teacher education in Canada, believes that the formal education prospective teachers receive during and after their teacher education programs barely scratches the surface of the core pedagogic beliefs of teacher candidates (2009). A range of factors, what Lortie refers to as the 'apprenticeship of observation' (1975), do in fact contribute to educators' pedagogic frameworks. Teacher education admissions processes that do not account for and accommodate the highly resistant views and perspectives of prospective teachers is both short-sighted and limiting. As Sears (2009, 145) states, "a central feature of the cognitive revolution during the twentieth century is that prior learning matters."

In this paper, we first turn to the theoretical literature surrounding constructivist notions of prior learning while highlighting the ways that prior knowledge influences professional learning and teaching practice. Based on research that is situated within a constructivist theoretical framework, it is evident that early learning experiences construct pre-existing, deeply embedded, and lasting cognitive frameworks that influence conceptions about teaching and learning, even when confronted with new ideas and ways of knowing. We then turn our attention specifically to the teacher education program admissions process. In pursuing this area of inquiry, we first elucidate factors influencing why current and, in our view superficial, program admissions processes overwhelmingly fail to acknowledge or account for candidates' preconceptions about teaching and learning. Against this backdrop, we argue that admissions processes can and should make explicit applicants' existing cognitive frameworks, understandings, and points of reference in two core areas: subject area content knowledge and

pedagogical knowledge. There may also be a third core area, cognitive flexibility and the openness to pursuing new lines of knowledge and inquiry, but this is beyond our current focus and thus remains something we wonder about and wish to pursue in the future.
Keywords: in-service professional development; constructivist notions of prior learning**;** admissions models; subject area content knowledge; pedagogical knowledge

Introduction

What is the starting point in the education of a prospective teacher? Is it when they walk through the doors of an education faculty for the first time? Is it when they make the decision to become a teacher? Is it when they are thrust into the classroom with the 'teacher' title? How far back into the lives of prospective teachers should one look to find the experiences that influenced the 'teacher to be'? One thing seems certain, beginning teachers are not tabula rasa; they have experiences that will influence their teacher development that originated prior to their enrolment in a teacher education program. Can this 'prior learning' be accounted for and used to create teacher education programs that build upon these conceptions and experiences? Can admissions processes be tuned to draw upon these experiences, thus increasing the likelihood that the best candidates are being selected for teacher education programs?

Teacher development can be conceptualized as a three-stage process: the learning and experiences that occur prior to the professional program; the actual teacher education program itself; and, ongoing in-service teaching and professional development. This progression provides an analytic framework through which the relative impact of each stage can be examined and understood in terms of how each relates to the developing teacher. The theme of this conference focuses explicitly on the latter two thirds of the developmental model just described. It is our contention and current research focus that the quality and effectiveness of both teacher education programs, and teachers within the education system as a whole, are heavily influenced by the knowledge and experiences acquired long before entry to a formal learning program. We further posit that accounting for this prior learning from the beginning, as part of the program admissions process, can provide a central and effective means by which to ensure the best possible candidates gain program entry.

There is now a long-standing and well-established body of research demonstrating the ways in which pre-service teachers' background knowledge and experiences significantly influence their conceptions of teaching and learning during their teacher education program studies (Russell 2009; Dulude, et al. 2005; Falkenberg 2010; Lortie 1975). Much of this literature has looked to the ways and means by which prior knowledge and epistemological beliefs can be used effectively to enhance the teacher education program learning experience. Yet,

there is a remarkable lack of research on how these prior understandings are used in the design of teacher education admissions processes (Tenore, et al. 2010). Our interest here is to consider how that prior knowledge might be used to inform program candidate selection toward ensuring the best potential educators are chosen for our education systems.

To situate and frame our argument, we first turn to the theoretical literature surrounding constructivist notions of prior learning while highlighting the ways that prior knowledge influences professional learning and teaching practice. Based on research that is situated within a constructivist theoretical framework, it is evident that early learning experiences construct pre-existing, deeply embedded, and lasting cognitive frameworks that influence conceptions about teaching and learning, even when confronted with new ideas and ways of knowing. We then turn our attention specifically to the teacher education program admissions process. In pursuing this area of inquiry, we first elucidate factors influencing why current and, in our view superficial, program admissions processes overwhelmingly fail to acknowledge or account for candidates' preconceptions about teaching and learning. Against this backdrop, we argue that admissions processes can and should make explicit applicants' existing cognitive frameworks, understandings, and points of reference in two core areas: subject area content knowledge and pedagogical knowledge. There may also be a third core area, cognitive flexibility and the openness to pursuing new lines of knowledge and inquiry, but this is beyond our current focus and thus remains something we wonder about and wish to pursue in the future.

Constructivist Theory and the Influence of Prior Learning

It is now widely understood that the process of becoming a teacher does not simply begin upon entry to teacher education degree study. Through their own experiences as school and university students, beginning teachers have already observed thousands of hours of teaching such that they have already acquired powerful and deeply embedded beliefs and dispositions about teaching and learning (Munby and Russell 1994; Clark 1988). Smylie (1989), for instance, in interviews with teachers about factors influencing their pedagogical practice, highlighted post-secondary education related to their instructional content areas among the more significant. Lortie (1975) coined this learning process the "apprenticeship of observation" (p. 62) to, in essence, describe students' engagement in a wide array of classroom learning experiences that coalesce to perpetuate and reinforce an historical, well developed, and comfortably familiar perception of knowing how to teach.

The constructivist philosophical tenets that define contemporary orientations to education have largely evolved from socio-cognitive conflict theories and the early ideas of influential thinkers like Dewey, Piaget, Vygotsky, and more recent cognitive psychologists like Howard Gardner and long-time collaborators Bereiter and Scardamalia. Though social constructionist

theories of learning as co-created, socially situated, and context-dependent have equally become a significant though more recent influence (Lave and Wenger 1991), it is the cognitive and psychological literatures that motivated education's cultural shift from behaviouristic '*tabula rasa*' and 'empty vessel' conceptions of learners to positioning knowledge as cumulative, evolutionary, and actively acquired phenomena.

Dewey, for instance, early and influentially postulated that knowledge and learning are actively acquired through individuals' interactions and transaction with their environment, and that many such actions and interactions are highly repetitive–serving in the role of student over many years is one such example. Such repetition leads to habit, and habits of mind in turn become deeply embedded to function at the subconscious level. When we encounter new ideas and experiences, we rely on prior experience as the critical reference point for deciding either to reject, or accept and pursue, new lines of knowledge and inquiry. Such determinations are largely made unconsciously and driven by an innate desire to maintain cognitive harmony and intellectual continuity (Dewey 1998; Kivenen and Ristele 2003).

Like Dewey (1998), Piaget (1985) proffered that harmony and continuity constitute a state of cognitive equilibrium. When new experiences do not fit with existing cognitive schemes, they disrupt organized and established mental and world views. It is the state of disequilibrium derived from new learning opportunities that subsequently drives our willingness to examine, analyze, at the very least consider, new ideas and ways of knowing before opting either to accept or reject that new knowledge into our pre-existing schema. Acquiring new knowledge, then, is thus evolutionary and subject to change as we assimilate and accommodate (Piaget 1985) new beliefs and ways of thinking and knowing. For the most part, the process of appropriating new beliefs and ways of knowing is neither easily nor willingly embraced. As Dewey and Piaget contend, suspending one's judgement and reconstructing existing world views tends to be an uninviting and disagreeable process.

These conceptual understandings about how we learn have a significant bearing on teacher education in many ways. Preconceived notions about teaching and learning can lead to a familiarity with and trust in ideas and practices that are misguided and misunderstood, and thus mislead beginning teachers to preclude that they have mastered critical aspects of the educational process (Feiman-Nemser and Buchmann 1983). Lortie (1975) long ago cautioned that, in the first instance, beginning teachers' cognitive frames about teaching and learning are incomplete since they are witness only to the classroom and therefore the overtly public or 'performance' (Clark 1988) perspectives of teaching. There is thus no early enculturation to or awareness of the many unseen influences ranging from policies and curricula to the personal and systemic philosophical and theoretical ideals that drive classroom practice.

Still further, early and embedded conceptions largely remain intuitive, what Breault (1991, 5) refers to as 'implicit theories', and teaching is therefore imitative rather than deliberately and

consciously enacted. Early and implicit theories, Breault contends, create inner conflict when juxtaposed against pedagogical training and professional practice which, when left unacknowledged or addressed, in turn causes new teachers to revert to their preconceived, default model of teaching and learning (Lortie 1975). Even internship experiences, on which a great deal of program emphasis and faith are placed for providing powerful learning and teaching opportunities, risk doing little more "than confirm to novice student teachers their own prejudices and biases" (MacLellan and Soden 2004, 256).

By extension, then, the research clearly indicates that, to be truly effective, teacher education programs must intentionally create the kind of cognitive dissonance, intellectual conflict, and points of confusion that facilitate making students' epistemic knowledge clearly explicit, identifiable, and understood (MacLellan and Soden 2004). Only then can preconceptions and embedded assumptions be deliberately challenged toward cognitively integrating, clarifying, and consequently modifying, prior knowledge about teaching and learning (Hollingsworth 1989). Ultimately, the habit of mind we ought to seek to create in pre-service teachers is one where they are open to questioning, reflection, and revision, and to recognizing that conceptual and practical ideas of teaching and learning are neither static nor universal in their application. This in turn educates teachers to see schools and classrooms as realities represented in many different ways, to be flexible in their thinking, and to make choices that are adaptive and responsive to the multiple situated teaching and learning realities they will encounter.

Admissions Models and Accounting for Pre-Program Experiences

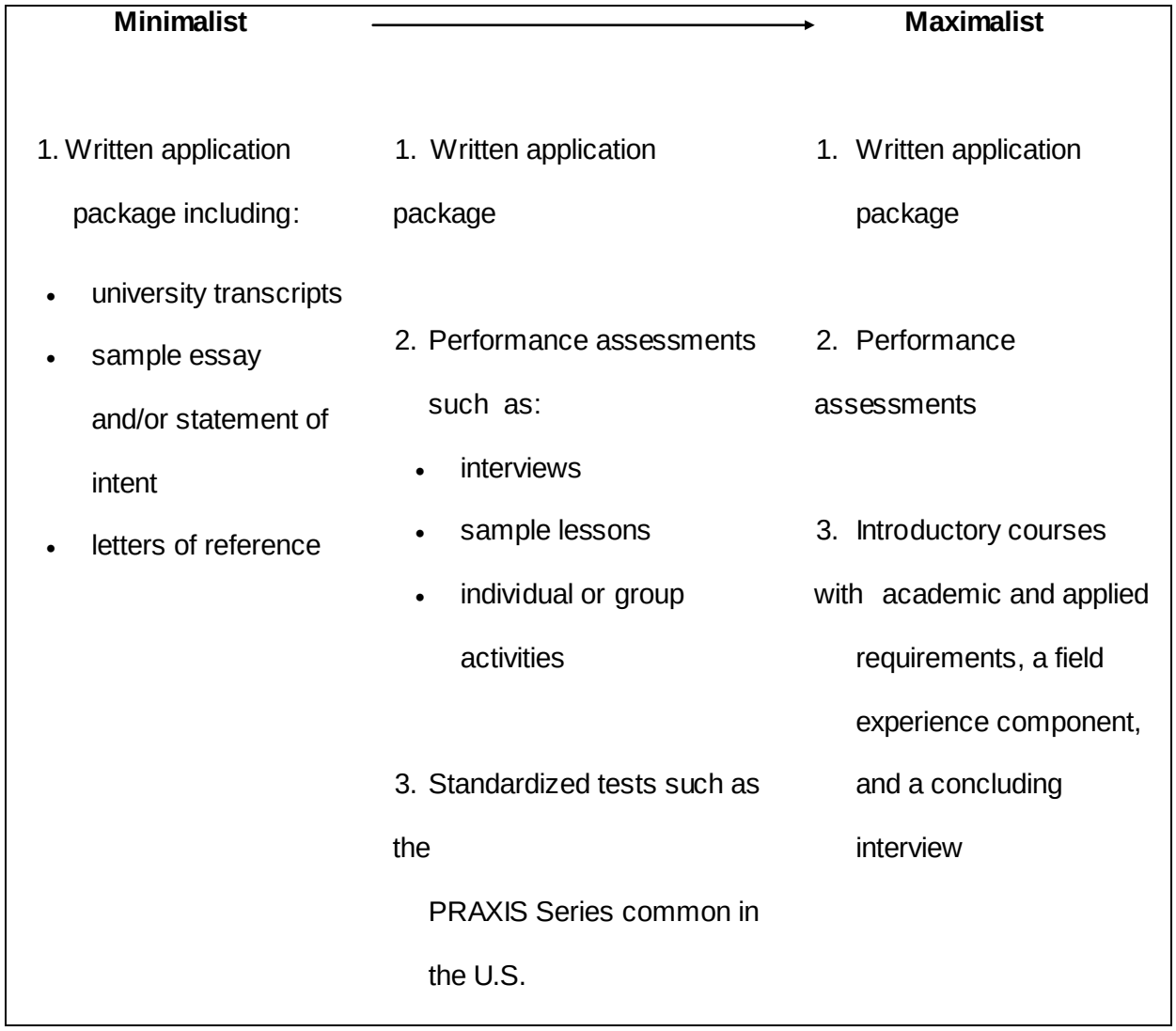
A range of factors including lack of success in teacher education programs, high attrition rates in the early years of teaching, low student test scores, and persistent reports of poor teaching have led teacher educators in North America and Europe to examine the criteria used to vet applicants to teacher preparation programs (Turner and Turner 2000; Casey and Childs 2007; Valli and Johnson 2007; Brown, Brown and Brown 2008). While the particular concerns are different across jurisdictions (for example, Americans tend to be concerned about poor teaching as measured by student outcomes on standardized tests, while Europeans are more concerned with attrition in the profession), the basic empirical question is the same: "What initial qualities in applicants make it more likely for those admitted into a program to be successful in it relative to the desirable outcomes?" (Falkenberg 2010).

In response to these concerns teacher education institutions have developed an array of criteria to be assessed and a range of mechanisms for assessing the degree to which applicants meet them. Approaches to vetting applicants vary across a range from minimalist to maximalist (see Figure 1). Most, however, use two primary criteria to determine whether to admit a student into the program – academic potential as reflected in prior academic

record (GPA), and statements either from the teacher candidate or references that speak to the personal characteristics and orientations of the individual. This potential of the applicants is assessed, the best candidates are admitted and then they are exposed to a series of courses and experiences that for the most part operate on the assumption that they have little teacher knowledge and skills; what Oberski et al. (1999) describe as a deficit model of instruction.

The institution where we work, for example, takes a minimalist approach assessing applicants via written application packages alone. These contain a fairly standard array of documents including university transcripts for previous degrees, a short statement outlining why the applicant wants to be a teacher, several letters of reference, and a record of previous experience working with children and young people. The University of Jyväskylä in Finland moves further along the scale toward a maximalist approach beginning with an application package containing similar materials to those outlined above but moving on to an "entrance examination" including a "demonstration lesson, interview, and group task" (Valli and Johnson 2007, 495). The Faculty of Education at the University of Lethbridge in Alberta, Canada, goes even further in requiring potential applicants to their Bachelor of Education program to take a full course as part of their university work prior to applying to the faculty. The course includes both university seminars and school placements and "has four purposes: to explore contemporary education, to help each student to assess the personal suitability of teaching as a career, to assist the Faculty of Education, in partnership with the teaching profession, to evaluate students' potential for teaching and for admission to the B.Ed. program and to assist the student in beginning to make the transition from student to professional educator" (Butt, Grigg and McConahy 2010, 2). Following completion of the course, students meet individually with an instructor to discuss their suitability for the teaching profession and in addition to a grade receive an assessment ranging from Highly Recommended for Admission (HR) to Not Recommended for Admission (NR).

Figure 1. Selection Procedures for Teacher Education Programs



As Casey and Childs (2007) point out, whatever the approach being used by a teacher education program, there are enduring problems in the area of assessing the suitability of candidates for teacher education programs. First, *"the relationship of admissions criteria to the knowledge, skills, and attitudes beginning teachers need and to the preparation provided by the programs are rarely made explicit"* (p.2). And, second, what counts as success is very hard to pin down. Ultimately, it should be tied to significant accomplishment as a teacher but that is measured differently in diverse jurisdictions and very few studies follow graduates into their careers for any length of time. Consequently, *"most studies of teacher education program admission criteria have used success in the program itself as indicators of the probability of future success"* (p. 10).

We find it peculiar that virtually none of the processes (including those where we work) make a serious attempt to map the cognitive frames of applicants to uncover the structure of their ideas about teaching and learning. Even in maximalist approaches the emphasis is on more

tangible (some might say more superficial) elements such as level of comfort working with children and peers, or technical aspects of lesson delivery such as organization of material, pacing, and voice modulation. Candidates are sometimes asked about their conceptions of teachers and teaching but this evidence seems to be treated anecdotally and not analysed systematically for what it might reveal about the cognitive schema of applicants. This is particularly curious given the fact that academics in education around the world seem to have largely accepted key findings from the "cognitive revolution" of the twentieth century including the compelling evidence that "prior knowledge matters" (Sears 2009, 145).

Conceptual frames are not limited to children but, if anything, become more entrenched and harder to change with age (Gardner 2006a). If it is true, then, that candidates come to teacher education programs with well-entrenched conceptions or scripts about what a teacher is and what it means to teach, and that these mental representations or cognitive frames are very difficult to change, it makes sense that selection processes should make some attempt to assess this prior knowledge and give preference to applicants whose cognitive frames are more consistent with contemporary approaches to teaching and learning. Teacher education programs are of limited duration and as Russell (2009) argues, they "barely scratch the surface" of prospective teachers' conceptions of teaching derived over a lifetime of learning in different venues. Selecting candidates most disposed to thinking about teaching in ways consistent with contemporary approaches has the potential to enhance successful transition into the profession.

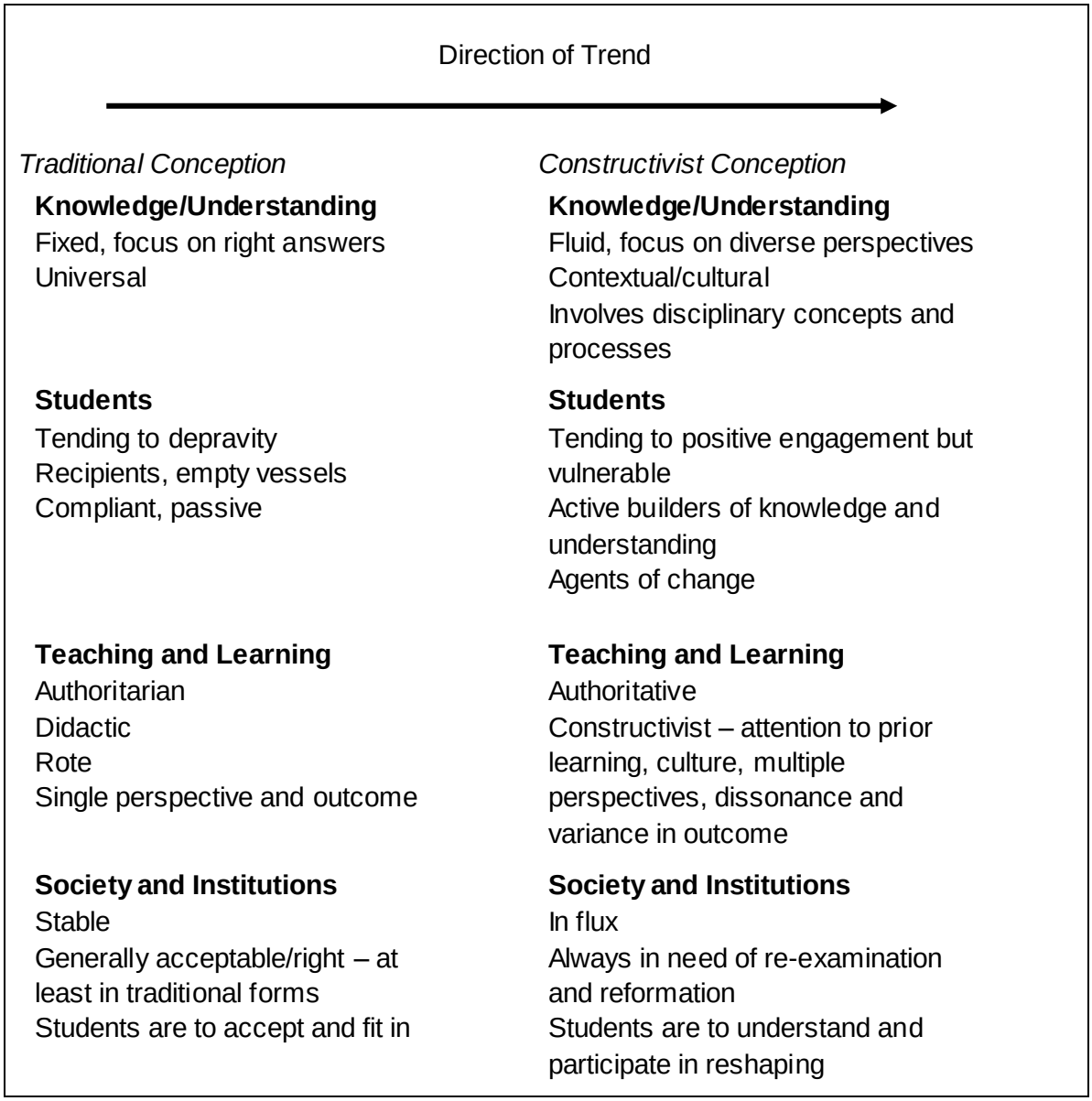
Two possible reasons why little, if any, attention has been paid to the cognitive frames of applicants to teacher education programs are the perception that there is little consensus about what good teaching is (and therefore how it should be conceived), and the belief that cognitive frames would be very difficult to assess. We do not believe these obstacles are as significant as they seem and will turn now to presenting some ideas for how they might be addressed.

Pedagogical Knowledge Frames

First, we argue there is a fair degree of consensus about good teaching. Casey and Childs (2007, 4) make the point that "although researchers have focused on different aspects of what it means to be a good teacher, four qualities related to teachers' needs appear repeatedly in the literature: content knowledge, pedagogical knowledge, pedagogical skills, and attitudes." Beyond these common elements is a fair degree of agreement about how to think about them. An examination of literature and curricula on citizenship education from democratic jurisdictions around the world, for example, reveals very significant consensus about content, pedagogy and the nature of learners (see, for example, Hughes and Sears 2008; Hughes, Print and Sears 2010; Reid, Gill and Sears 2010). Figure 2 outlines the key

elements of this consensus. It should be pointed out that while we draw on citizenship and history education for our examples of constructivist teaching we believe other subject areas have similar degrees of consensus about elements of good teaching.

Figure 2. Consensus in Citizenship Education



Content Knowledge Frames

Over the past 30 years educational researchers have been working to build bodies of knowledge about how children and young people understand the key concepts and processes in a range of subject areas. Sears (2011a, 349), for example, points out that in the area of history education *"researchers around the world have made a substantial start at building a knowledge base for how both students and professional historians understand historical ideas and processes and the implications of these understandings for policy and practice."* The same is true for a range of subject areas including mathematics, science, and literacy. This work is all premised on the belief that *"If one wants to educate for genuine understanding . . . it is important to identify these early representations, appreciate their power, and confront them directly and repeatedly"* (Gardner 2006b, 77).

While examples of views of citizenship as well as the content and recommended pedagogy in citizenship education exist across this spectrum, the overwhelming consensus reflected in policy and curriculum across the democratic world is toward the constructivist conception. We argue both that similar consensus exists across subject areas and that it is quite possible to assess the cognitive frames of candidates for teacher education. Space does not permit a detailed examination of how the latter might be done but we will explore two brief examples here: assessing conceptions of subject matter and good teaching.

Currently, candidate's subject matter knowledge is accessed almost exclusively based on the number of university courses they have in a particular discipline. The one exception to this is the U.S. where, in addition to university background, applicants to teacher education programs are often required to take a standardized test, parts of which assess basic content knowledge (Brown, Brown and Brown 2008). We believe these are wholly inadequate measures. Part of the constructivist consensus in education holds that students should not simply be learning the subject matter of particular disciplines but important disciplinary concepts and processes as well. Unfortunately, undergraduate university education does not always include attention to these disciplinary understandings and standardized tests certainly do not. As Sears (2011b, 11) points out about students of history at universities

> *Many, even those with majors in history, have little or no firsthand experience with the processes of doing history. They haven't struggled to define a "significant" and un (or under) explored question about the past to study; sat with a pile of diverse sources trying to weigh their relative merits and build an argument; or tried to make judgements about the moral actions of historical agents in particular times and places. They haven't, in other words, had to think historically but rather have been relatively passive observers of others' attempts to do so.*

Fortunately, as pointed out above, a growing body of international work exists on how students understand disciplinary ideas and processes in a number of subject areas. In history education, studies have examined students' understandings of historical significance, historical empathy, how historians use sources, and other aspects related to historical thinking (Sears 2011a). A number of research approaches have been used in this work, including interviewing students; observing students engaged in historical problem-solving activities; assessing student products such as essays, drawings, and lists; and engaging students in metacognitive reflection on their work with historical sources. We believe these approaches (and those from other subject areas) provide a rich array of possible activities for assessing the cognitive frames of prospective teachers.

Gardner (2006a, 138, emphasis in the original) makes the point that *"the disciplines represent the most advanced ways to think about issues consequential to human beings. Yet from a disciplinary point of view, the ways in which most of us think about these issues are fundamentally flawed."* He goes on to write*, "both disciplinary content and disciplinary habits of mind may be deeply counterintuitive."* If disciplinary understanding is fundamental to good teaching and hard to acquire, we believe it is vital to select candidates for teaching that are already disposed to think about their subject areas in disciplinary terms.

Many aspects of the constructivist consensus laid out in Figure 2 apply generally across teaching areas. In other words, they describe generic qualities of good teachers. For example, we argue that all good teachers regard learners not as passive recipients of fixed bodies of knowledge but as active builders of knowledge and understanding. Again, there is a rich body of research from which to draw methods for assessing applicants' cognitive frames with regard to these aspects of teaching. For example, a number of studies have used concept mapping as a means for describing how teachers think about their profession (see, for example, Vincente, et al. 2008; Seezink, Poell and Kirschner 2009). The techniques used to collect data in these studies could be employed fairly easily in assessment processes for selecting teacher education candidates.

In spite of years of emphasizing more constructivist and critical approaches to teaching in academic literature and teacher education programs, there is considerable evidence that fairly traditional, transmissive practices continue to dominate classrooms (Goodlad 1984; Tyack and Cubin 1995). A considerable part of the resistance to change may be attributable to deeply held conceptions of teachers and teaching that are inconsistent with constructivist and critical approaches to teaching and learning. Selecting candidates for the profession who are disposed to think in these ways might help in the process of teacher identity formation.

In proposing that assessing the cognitive frames of teacher education candidates for compatibility with contemporary conceptions of subject matter, teaching, and learning, we are not arguing that everyone in education should think the same way. In his seminal work on

communities of practice, Etienne Wenger (1998) argues that professional communities function best as sites of learning when there is the right degree of creative tension between reification and participation. Reification, or the setting out of explicit policies and procedures, is necessary because it gives shape and consistency to professional practice, but an emphasis on it alone can squelch growth and contribute to the stagnation of practice. Wenger argues that members of a community of practice must be able to participate in shaping and reshaping policies and practices if the community is to be a dynamic site of professional learning and growth. We believe constructivist approaches to teaching and learning have reached the status of reification across most Western education systems. Consequently, they form a basis for judging both conceptions of teaching and teaching practice. We recognize and affirm the fact that participants in the profession (and those outside of it since it is a public enterprise) will participate in challenging and reshaping these conceptions and practices over time.

Conclusion

In this paper we have argued that the cognitive frames of prospective teachers gained prior to their entry into teacher education programs is largely being ignored in the admissions process, despite an acknowledgement in the literature that prior learning 'matters'. In the process we recognize that by increasing the specificity of what we are looking for in candidates and the ability of programs to determine what cognitive frameworks teacher candidates possess, we risk not admitting students who would grow to become successful teachers in the course of the teacher education program. Nonetheless, we believe that knowing more about these prospective teachers prior to their entry into the program increases the likelihood that they will flourish as teachers and remain in the profession, as well as increases the likelihood that the program can build upon these cognitive frameworks.

Are teacher education programs the "gatekeepers" (Goodwin and Oyler 2008, 470) for the school system? Should they be? Certification agencies and teacher education programs have a tacit agreement – governments list the qualities they expect in teachers; teacher education programs agree to follow these. When teachers complete their programs, it is assumed that they meet the requirements for certification. Since the vast majority of teacher education students successfully complete the programs, the only real check on who becomes a teacher is not their behaviour while in the program (except in extreme examples), but rather, who is getting into the program in the first place or who is being hired by the school systems after students graduate.

An increasing number of States in the U.S. now require a Pre-Professional Skills Test (PPST) in order to be admitted to teacher education programs and a PRAXIS series at graduation. These tests are not the only assessment devices used though there are required

minimum scores before being admitted to a teacher education program or certified to teach (respectively), and thus the tacit agreement described above is seemingly not as sacrosanct as it once was (Goodwin and Oyler 2008). Even without questioning the validity of using tests to measure the potential of prospective teachers, such assessments do undermine the flexibility of teacher education programs to admit students who are exemplary in categories other than their state-mandated test scores.

In this era of accountability and attempting to determine who should be a classroom teacher and what they need to succeed, we make teacher education programs responsible for the quality of teachers in classrooms. Toward this end, teacher education programs are increasingly being inspected and reformed. This conference is an exemplification of this renewed focus on teacher education programs and in-service professional development. We conclude with a simple question: without some attempt to determine and influence what cognitive frames students walk through the doors of education institutions with in the first place, how do teacher education program and in-service professional development models know how much impact they are having?

References

Breault, R. 1991. Educational Reform since 1945 and its Implications for Teacher education. *Opinion Position paper drawn from unpublished Doctoral Dissertation*, Northern Illinois University, DeKalb. (ED341679).

Brown, J. R., Brown, L., J., and Brown, C. L. 2008. Signs, signs, everywhere there's signs . . . and the sign says": You got to have a PRAXIS II membership card to get inside. *Teacher Education Quarterly,* 35 (1): 29-42.

Butt, R., Grigg, N., and McConaghy, G. 2010. *Predicting Success in Teacher Education Through a Workplace Learning Selection Process*. Paper presented at the 2nd Paris International Conference on Education, Economy and Society.

Casey, C. F., and Childs, R. A. 2007.Teacher Education Program Admission Criteria and What Beginning Teachers Need to Know to be Successful Teachers. *Canadian Journal of Educational Administration and Policy*, 67: 1-24.

Clark, C. 1988. Teacher Preparation: Contributions of Research on Teacher Thinking. *Educational Researcher,* 17 (2): 5-12.

Dewey, J. 1998. *How we think: A restatement of the relation of reflective thinking to the educative process (Rev. Ed.)*. Boston: Houghton Mifflin. (Original work published 1933)

Dulude Lay, C. Pinnegar, S. Reed, M. Young Wheeler, E. and Wilkes, C. 2005.The positioning of preservice teacher candidates entering teacher education. In *Learning from Research on Teaching: Perspective, Methodology, and Representation*, eds. Jere Brophy and Stefinee Pinnegar, 235-252. Netherlands: Elsevier.

Falkenberg, T. 2010. Admission to teacher education programs: The problem and two approaches to addressing it. *Canadian Journal of Educational Administration and Policy,* 107: 1-35.

Feiman-Nemser, S. and Buchmann, M. 1983. Pitfalls of experience in teacher preparation. *Occasional Pape*r No. 65, Michigan State University. Retrieved from http://www.eric.ed.gov/PDFS/ED237504.pdf

Gardner, H. 2006a. *Changing Minds: The Art and Science of Changing our Own and Other People's Minds*. Boston: Harvard Business School Press.

Gardner, H. 2006b. *The Development and Education of the Mind: The Selected Works of Howard Gardner*. London and New York: Routledge.

Goodlad, J. I. 1984. *A place called school: prospects for the future*. New York: McGraw-Hill Book Co.

Goodwin, A. and Oyler, C. 2008. Teacher educators as gatekeepers: Deciding who is ready to teach. In *Handbook of Research on Teacher Education: Enduring Questions in Changing Contexts,* eds. M. Cochran-Smith, S. Feiman-Nemser, and D.J. McIntyre, 468-489. New York, NY: Routledge.

Hollingsworth, S. 1989. Prior beliefs and cognitive change in learning to teach. *American Educational Research Journal*, 26: 160-189.

Hughes, A. S., Print, M., and Sears, A. 2010. Curriculum capacity and citizenship education: A comparative analysis. *Compare,* 40 (3): 293-309.

Hughes, A. S., and Sears, A. 2008. The Struggle for Citizenship Education in Canada: The Centre Cannot Hold. In *The Sage Handbook of Education for Citizenship and Democracy,* eds. J. Arthur, I. Davies and C. Hahn, 124-138. London: Sage.

Kivinen, O., and P. Ristele. 2003. From constructivism to pragmatist conception of learning. *Oxford Review of Education,* 29 (3): 363-375.

Lave, J. and Wenger, E. 1991. *Situated learning: Legitimate peripheral participation.* Cambridge, U.K.; New York, N.Y.: Cambridge University Press.

Lortie, D. 1975. *Schoolteacher: A sociological study.* Chicago: The University of Chicago Press.

Maclellan, E., and R. Soden. 2004.The Importance of epistemic cognition in student-centered learning. *Instructional Science*, 32: 253-268.

Munby, H., and Russell, T. 1994. The authority of experience in learning to teach: Messages from a physics methods class. *Journal of Teacher Education*, 45(2): 86-95.

Oberski, I., Ford, K., Higgins, S., and Fisher, P. 1999. The importance of relationships in teacher education. *Journal of Education for Teaching,* 25 (2): 135-150.

Piaget, J. 1985. *The equilibration of cognitive structures: The central problem of intellectual development*. Chicago: University of Chicago Press.

Reid, A., Gill, J., and Sears, A. (Eds.). 2010. *Globalization, the Nation-State and the Citizen: Dilemmas and Directions for Civics and Citizenship Education*. New York and London: Routledge.

Russell, T. 2009, October. *Is Innovation in Teacher Education Possible, and Can Self-Study Help?* Paper presented at the Inspiration and Innovation in Teaching and Teacher Education (EDGE) Conference, St. John's, NFLD, Canada.

Sears, A. 2009. Children's Understandings of Democratic Participation: Lessons for Civic Education. In *Civic Education and Youth Political Participation,* eds. M. Print and H. Milner, 143-158. Rotterdam/Boston/Taipei: Sense.

Sears, A. 2011a. Historical Thinking and Citizenship Education: It is Time to End the War. In *New Possibilities for the Past: Shaping History Education in Canada,* ed. P. Clark, 344-364. Vancouver: UBC Press.

Sears, A. 2011b. *Moving from the Periphery to the Core: The Possibilities for Professional Learning Communities in History Teacher Education*. Paper presented at the THEN/Hier Symposium, The Many Faces of History Teacher Education.

Seezink, A., Poell, R. F., and Kirschner, P. A. 2009. Teachers' individual action theories about competence-based education: The value of the cognitive apprenticeship model. *Journal of Vocational Education and Training,* 61(2): 203-215.

Smylie, M. 1989. Teachers' views of the effectiveness of sources of learning to teach. *The Elementary School Journal,* 89(5): 543-558.

Tenore, F., Dunn, A., Laughter, J., and Milner, H. 2010. Teacher candidate selection, recruitment, and induction: A critical analysis with implications for transformation. In *Transforming Teacher Education*, eds. Valerie Hill-Jackson, and Chance W. Lewis, 93-118. Virginia: Stylus.

Turner, S., and Turner, T. 2000. Who succeeds? A case study of science graduates following postgraduate certificate in education (secondary) courses. *European Journal of Teacher Education,* 23(2): 159-174.

Tyack, D. B., and Cuban, L. 1995.*Tinkering toward utopia: a century of public school reform*. Cambridge, Mass.: Harvard University Press.

Valli, R., and Johnson, P. 2007. Entrance examinations as gatekeepers. *Scandinavian Journal of Educational Research,* 51(5): 493-510.

Vincente, M., Bermejo, M. L., Blanco, L. J., and Ruiz, C. 2008.The classroom practice of a prospective secondary biology teacher and his conceptions of the nature of science and of teaching and learning science. *International Journal of Science and Mathematics Education,* 6(1): 37-62.

Wenger, E. 1998. *Communities of practice: learning, meaning, and identity*. Cambridge, U.K.; New York, N.Y.: Cambridge University Press.

Reflective Practice in Pre-Service Teachers' Practicum

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Abstract

Practicum is part of the teacher education curriculum that offers pre-service teachers integrate theory they have learnt into pedagogical practice developing, practising and improving competences necessary for the profession.

When self-assessing practicum it is important to adequately assess achievements and shortcomings of one's pedagogical practice. An essential precondition for adequate self-assessment of practicum is pre-service teachers' reflective practice during it. Reflective practice is based on reflection that encourages pre-service teachers to make well-grounded decisions that are important to them by looking at particular practicum situations from different perspectives and trying to find the most appropriate solutions and implementing necessary changes in their action in order to ensure better learning outcomes of their learners. Through reflection, pre-service teachers reach newfound clarity, on which they base changes in action and future improvement. Thus effective reflective practice for pre-service teachers in their practicum means an ability to continually reframe their professional knowledge, analyse their action, a skill to set the practicum environment and to respond to this setting constructively.

The aim of the article is to theoretically study the essence of reflective practice in pre-service teachers' practicum and to identify how it improves pre-service teachers' practicum.

The research method used in the article is the analysis of scientific literature on reflective practice in pre-service teachers' practicum.

Pre-service-teachers' incomplete understanding of reflective practice in self-assessing practicum with an aim to improve it and the fact that pre-service teachers' reflective practice is not purposeful often create difficulties for pre-service teachers in making adequate self-assessment of their practicum.

Teacher educators can help pre-service teachers understand the essence of reflective practice and become aware of ways how it can improve their practicum and how it can enhance the process of self-assessing practicum. It can be done throughout the entire period of pre-service teachers' studies by encouraging them to structure, assess and integrate the affective and meta-cognitive aspects of their own learning, gradually arriving at understanding of reflective practice in practicum and the process of its self-assessment acknowledging it to be personally relevant to their professional growth.

Keywords: reflection, reflective practice, practicum

Introduction

The concept of reflection is known since the beginning of the previous century being explained by J. Dewey (1910) as a particular way of thinking that is characterised by a person's intellectual and emotional involvement in the thinking process. Reflective thinking starts with some doubt, perplexity and hesitation in taking decisions in personally relevant contexts. In the process of reflection one searches for further information that either confirms or denies the suggested belief, and it is the beginning of reflective practice (Dewey 1910; Osterman and Kottkamp 1993; Loughran 2002). In many professional fields, and especially in education and medicine, reflection is looked on as a valuable source of professional knowledge for specialists who intend to improve the quality of their work, which is possible if one does adequate self-assessment of pedagogical practice resulting in finding solutions for productive changes in future action. An essential precondition for adequate self-assessment of practicum is pre-service teachers' reflective practice during it. Reflective practice is based on reflection that encourages pre-service teachers to make well-grounded decisions that are important to them by looking at particular practicum situations from different perspectives and trying to find the most appropriate solutions and implementing necessary changes in their action in order to ensure better learning outcomes of their learners. Both pre-service and also in-service teachers often have an incomplete understanding of the essence of reflective practice in self-assessing professional practice that is why their reflective practice is not conscious and purposeful, which creates difficulties in self-assessing it adequately.

M. van Manen (1995) maintains that reflection is central to the life of educators because the concept of teachers as pedagogues suggests that teachers are not interested only in the growth and welfare of children but they also pay attention to ethical and affective considerations the profession entails. Therefore in the 21st century – 'an era of accountability' when reflective growth has to be enhanced in educators at all levels (Snow-Gerono 2008, 1502) and when 'developing a reflective approach to practice is viewed as one of the key activities in the development of the professional' (Killeavy and Moloney 2010, 1070), reflection and reflective practice have been paid attention in different studies. Researchers in the field of teacher education and pre-service and in-service teachers' professional practice continue to specify and explain the essence of *reflective thinking*, *reflective teaching* and *learning* and *reflective practice* giving their understanding of these terms, because even though in educational studies reflection is described as a valuable tool in teacher education and professional practice, not always its concept is clear as it has developed a variety of meanings over the time (Osterman and Kottkamp 1993; Loughran 2002; Rodgers 2002; Jay and Johnson 2002; Birmingham 2004; Pedro 2005; Davis 2006; Husu, et al. 2008; Wolfensberger, et al. 2010).

The aim of the article is to theoretically study the essence of reflective practice in pre-service teachers' practicum and to identify how it improves pre-service teachers' practicum.

The research method used in the article is the analysis of scientific literature on reflective practice in pre-service teachers' practicum. Research papers and scientific publications analysed in the article comprise works written in the 20th and 21st century (for example, C. Grant and K. Zeichner (1984), M. van Manen (1995), J. Moon (2001), J. Loughran (2002), A. Graham and R. Phelps (2003), H-J. Lee (2005), E. A. Davis, (2006), J. Harford and G. MacRuairc (2008), F. Korthagen and A. Vasalos (2009)). The authors of the studied works mainly represent Europe, the USA, Canada and Australia.
At the beginning the essence of the concept of reflection as the basis of reflective practice is looked upon, and then reflective practice in practicum is analysed.

Reflection as the basis of pre-service teachers' reflective practice

In order to understand the essence of pre-service teachers' reflective practice in practicum first of all we look at explanations of the concept of reflection provided by different authors.
In the dictionary of education *reflection* is viewed as 'a process of careful consideration' which 'needs to be conducted in an informed way to be of real value' (A Brief Critical Dictionary of Education) meaning that it 'is a conscious, active process of focused and structured thinking which is distinct from free floating thoughts' (Gelter 2003, 337). This view is similar to that of J. Dewey, who is regarded to be the first one who at the beginning of the 20th century started to emphasise the role of purposeful reflection in education. He equals *reflection* with *reflective thought* which is 'active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends' (Dewey 1910, 6). He also argues that the main precondition for saying that a thought is reflective is the fact that every belief is justified by an argument which in its turn is tested as being appropriate or inappropriate in the particular situation. Therefore *reflective thought* is a smooth and logical flow of thoughts in which every previous thought is a basis for the next one thus giving appropriate evidence for changing future action (Dewey 1910), which means reflection can simultaneously be retrospective as well as tended towards future, and its task is to help the reflecting person to create a thread of meaningful thoughts as a result of which one can give arguments for one's actions.
On one hand, reflection is explained as a cognitive process which is aimed at looking for well-grounded and rational solutions to situations which create doubt, perplexity, or outline problems, while on the other hand – there are authors who emphasise the close link between the reflective thought and emotions. For example, J. Moon (2001) writes that reflection is based on the analysis of a person's knowledge, comprehension and existing emotions. The presence of emotions in the process of reflection makes it become a personally relevant activity which is of key importance for a person to carry out rationally made decisions in accordance with one's opinions and belief. In this case reflection is a pre-service teacher's

dialogue with oneself, but it is significant to mention that 'a dialogue' can be internal, facilitated by thinking or writing or external, facilitated by cooperating with others (Killeavy and Moloney 2010). This view corresponds to the idea of J. Husu et al. (2008) who state that reflective analysis has to be learnt in a way of a dialogue with the help of a particular method and J. R. Ward and S. S. McCotter (2004) who stress that the process of dialogue and questioning are at the heart of reflection.

Reflection is linked with people's learning and that how people learn to learn from their experience. J.Dewey (1910) claims that if people's learning process went on without a presence of a reflective thought and they were able to learn doing things just by copying as parrots do, they would never find out the meaning of the learnt things. Therefore, if people strive for personal growth at any stage of their life, it is important that they comprehend and appreciate the role of reflection in this process as reflection is viewed as a 'genuine way of fostering change in teachers' professional action' (Husu, et al. 2008). Based on that we can conclude that learning with comprehension can be not only a tool for teaching, but also an aim of education, which means that teachers and learners, if engaged in reflection, can make their practice better as reflection provides the right conditions for learning (van Manen 1995; Moon 2001). Teachers can improve their professional practice, while learners can work on their study skills. Thus reflection constitutes the basis for every human-being's learning and development – be it a child or adult. That regards also pre-service and in-service teachers' professional development, basis of which is reflection (Osterman and Kottkamp 1993; Moon 2001; Ward and McCotter 2004; Snow-Gerono 2008; Korthagen and Vasalos 2009; Killeavy and Moloney 2010). The explanation of reflection given by N.Hatton and D. Smith and D. Boud supports the previously mentioned opinion by describing it as a process of deliberate thinking about action and exploring experience with a view to improvement and a possibility to learn new things from the experience (Hatton and Smith 1995 in Ward and McCotter 2004; Boud 2001). A. R. Freese (2006) complements the role of reflection in the process of learning with definite skills that characterize reflective teaching and learning, and these are observation, analysis, interpretation and decision making. Using the mentioned skills a teacher tries to substantiate one's professional practice and students' learning process.

Since 1980ies many teacher education programmes both in the world and Latvia are structured in the way so that pre-service teachers would enhance the development of reflection on their practicum. According to J. J. Loughran (2002), C. Birmingham (2004), J. Y. Pedro (2005), H.-J. Lee, (2005) that is a reaction to the statement that previous teacher education programmes did not prepare new teachers for future generations of students adequately. In study programmes that provide pre-service teachers with an opportunity to practise their reflective skills by taking part in the offered reflective activities, they can improve their skills as reflection 'can be practised, assessed and perfected', just it 'takes time to do well' (Rodgers 2002, 844, 864). Teacher educators can encourage pre-service

teachers learn how to reflect by giving them an opportunity to participate in various reflective tasks as the expected outcome of their reflection is pre-service teachers' 'self-assessment and self-regulation that is insightful and future oriented' (Berrill and Whalen 2007, 868).

As reflection can be learnt, practised and improved authors of different studies mention different levels of reflective thinking that can be performed as a result of practice. H.-J. Lee (2005, 702-703) has given an overview of a variety of levels of reflective thinking proposed by eminent researchers in the field. He has based the review on such authors as M. van Manen (1977), G. M. Sparks-Langer and A. B. Colton (1991), J, Mezirow (1991), G. L. Taggart (1996) and developed his approach to reflective thinking by defining three levels of the depth of reflective thinking:

- recall level – a description of events that is based on recalling one's experiences without looking for alternative explanations, and attempts to imitate previously observed or taught models of action;
- rationalisation level – an attempt to link different experiences; the situation is interpreted by looking for answers to the question 'why' and trying to generalise experiences, or coming up with guiding principles;
- reflectivity level – experience is looked at with an aim to change/improve the future; it is analysed from different viewpoints. Teachers in this level are able to see the influence of their cooperating teachers on their students' values, behaviour, achievement.

E. A. Davis (2006) proposes a division of reflection in two parts - unproductive or productive, claiming that if not assisted and supported, pre-service teachers mainly engage in unproductive reflection which is not consistent and analytical, and may lack focus. On the whole, reflection can be superficial and little more than descriptive or can be deep and transformative (Moon, 2001). In particular, lower levels of reflective thinking are about reflection in which a person does not see oneself as an agent of changes and does not take responsibility for what has been done and mainly describes or sets the 'problem'. In higher levels of reflective thinking, however, the person sees oneself in the process and takes responsibility for what has been done thus considering fundamental questions that regard the particular situation and proposes necessary changes in future, and it is done in the light of multiple perspectives the result of which is a cognitive change (Yost, et al. 2000; Jay and Johnson 2002; Ward and McCotter 2004; Parkes and Kajder 2010).

In order to reach higher levels of reflective thinking and make it productive, pre-service teachers' reflection should be enhanced in their study programmes. Researchers (Kottkamp 1990; Fund, et. al. 2002; Jay and Johnson 2002; Harford and MacRuairc 2008), talk about different strategies for fostering reflection. The suggested ideas take form of reflective

practice. These, for example, are micro-teaching, practicum and reflective seminars during which reflective tasks are carried out in written, oral, video or audio-taped forms both individually and cooperatively. In the 21st century one of the proposed forms for developing reflection among professionals in education is also Web 2.0 technologies, including electronic journals and e-portfolios (Killeavy and Moloney 2010; Parkes and Kajder 2010). Irrespectively of the chosen method for fostering reflection, it, as stated by D. Boud (2001), can be an informal personal activity or as a part of a structured course. But in any case, in educational contexts reflection is of moral value (Birmingham 2004) as preconditions for it to yield best results are moral dispositions of wholeheartedness – being brave and ready to fairly and critically evaluate ourselves, children, school and society; open-mindedness – being ready to have a look at more than one side of an issue and consider alternative issues; and responsibility – being willing and ready to apply found information to problem situations (Dewey 1910; Grant and Zeichner 1984; Yost, et al. 2000) which have to be incorporated in all methods that are used for developing reflective thinking.

J. K. Jay and K. L. Johnson (2002, 76) describe reflection as: "... a process, both individual and collaborative, involving experience and uncertainty. It is comprised of identifying questions and key elements of a matter that has emerged as significant, then taking one's thoughts into dialogue with oneself and with others." To the mind of the mentioned authors, a person evaluates insights gained from this process with reference to:

- additional perspectives,
- one's own values, experiences, and beliefs,
- the larger context within which the questions are raised.

Through reflection, a person reaches newfound clarity, on which one bases changes in action or disposition. New questions naturally arise, and the process spirals onward.

C. Rodgers (2002 845) formulates reflection as a multidimensional phenomenon:

- it is a meaning-making process that moves a learner from one experience into the next with deeper understanding of its relationships with and connections to other experiences and ideas;
- it is a systematic, rigorous, disciplined way of thinking, with its roots in scientific inquiry;
- it needs to happen in community, in interaction with others;
- it requires attitudes that value the personal and intellectual growth of oneself and of others.

Characterising pre-service teachers' reflection it could be said that it is a specific way of thinking about pedagogical situations which cause confusion and perplexity, and emotions. In order to solve these challenging situations pre-service teachers come up with possible solutions and ideas on how their pedagogical practice can be improved in future based on

the analysis of their previous experience and alternative solutions, which sometimes can be performed individually, but sometimes in cooperation with others. Solutions are sought for purposefully with an aim to become more effective teachers who are concerned with their professional development by taking responsibility for their practicum, by self-assessing how learners benefit from it. Reflective skills can be learnt and improved if they are practised, they develop in reflective practice.

Reflective Practice to Improve Pre-Service Teachers' Practicum

Reflective practice develops as a result of reflection and is one of the main preconditions for qualitative practicum and its self-assessment.

Reflective practice is an extension of reflection that aims at linking thought and action by purposefully solving problems and trying to implement changes that would improve the quality of action in future. K. F. Osterman and R. B. Kottkamp (1993) and J. A. Raelin (2002) explain that reflective practice is a process in which professionals face challenges, they have to put effort into it to get the best result that is often most successful as a collaborative not individual effort. It is a process of inquiry in which professionals raise awareness of the essence of the impact of their performance on changes in the environment of action, their own and others' action in future. It allows noticing details that stay unnoticed during the action itself. Moreover, professionals develop awareness of their professional growth that is one of the aims of reflective practice.

D. Schön, an American philosopher, began to talk about *reflective practice* at the end of the 20th century. He was concerned with the situation in his country at that time. Namely, he was worried that professionals of different areas failed to satisfy the needs and expectations of the society, for example, they did not provide appropriate input for the development of people's social well-being. D. Schön wrote that it was due to the fact that 'first, professionals do not live up to the values and norms they espouse, and second, because they are ineffective' (1991, 11). Therefore, in the words of M. K. Smith (2001), D. Schön's interest was to find out what could determine professionals' ability 'to think on their feet' in order to improve their professional activity and become effective. Thus D. Schön proposed the concept of reflective practice and separated the process of reflection into two parts each of which was meant to serve a particular purpose to make a professional's practice better (Husu, et.al. 2000; Akbari, et.al. 2010):

- *reflection in action* – it concerns revealing one's knowledge in action, it takes place duing action, for example, teaching, and a person is mainly unable to make it verbally explicit;
- *reflection-on-*action – it concerns making sense and learning from the situation after it has occurred.

As regards teacher education, mainly the process of *reflection-on-action* is used and it might be exercised collectively together with others (teacher educators, mentors peers), while *reflection-in-action* is mainly individual (Akbari, et.al. 2010) and in this process of reflection reflective practitioners might be intimidated by the fact that 'they cannot say what they know how to do, cannot justify its quality or rigor' (Schön 1991, 69), and others might see it as their non-professionalism, which is not appropriate for learning purposes. It has to be taken into account that for pre-service teachers it is of utmost importance to be able to explain and argument why they are doing those things they are doing, especially in their teaching practice, which means they have to carefully plan and be prepared for everything they are going to do in a lesson. That was the reason why D. Schön's approach to reflective practice was complemented with the third part of reflection:

- *reflection-for-action* – it concerns defining one's goals for the following activity in order to be ready for it.

Different authors in the field of education and nursing offer different names for this part of the partnership of reflection and action: 'reflection-before-action' (Reed and Procter 1993 in Burton 2000; Greenwood,\ 1998), 'reflection-for-action' (Eraut 1995 in Husu, et.al. 2008), 'anticipatory reflection' (van Manen 1995; Boud 2001; Loughran 2002; Freese 2006), or 'prospective reflection' (Conway 2001; Urzua and Vasquez 2008). The emphasis in this process of reflection is not on retrospection which sometimes might be seen as making the ones involved in reflection become 'passive respondents to events' (Boud 2001, 12), but rather on ability to imagine and visualise what, why and how something is going to be done. The essence of *reflection-for-action* as a result of the emphasis on reflective practice in teacher education programmes (van Manen 1995) is to help pre-service teachers prepare for becoming reflective practitioners by first of all being reflective pre-service teachers who, according to R. Akbari et.al. (2010), critically examine their practice, put forward ideas on how to improve their practicum so that learners would reach the best results and, most importantly, apply the proposed ideas practically. However, it can be done if teacher educators not only expect student teachers be automatically ready to reflect on their practicum, but instead help pre-service teachers visualise and make opinions on what their real first teaching behaviour and professional future could look like by activating their anticipatory reflection even before hands-on experience. That would encourage pre-service teachers not to be afraid of their first practicum which is admitted to be among key aspects of teacher education programmes (Beck and Kosnik 2002; Shkedi and Laron 2004; Wilson and l'Anson 2006) and during which they are expected to demonstrate reflective practice as 'practice is a central feature of the practicum' and it is then a space that potentially provides pre-service teachers with opportunities to understand their own pre-conceived notions of teaching (Wilson and l'Anson 2006). It means that becoming a reflective practitioner requires a realignment of the pre-service teacher's orientation and attitude toward the role of

professional teachers. In particular, having experienced school environment from the perspective of the student, pre-service teachers have to learn to view the classroom from the perspective of the teacher (Parkison 2009). The mentioned change of the position of a pre-service teacher – from the role of a school and university student to a teacher – is one of the essential results of pre-service teachers' reflective practice which lets them get used to the new situation in which they are responsible for the process.

Efficient reflective practice for pre-service teachers means an ability to frame and reframe the practicum setting, develop the existing situation and to respond to it with one's actions by continually reconstructing their professional knowledge and skills so that development of professional knowledge and skills would be enhanced in reflective practice as a response to the changing demands and requirements for what is expected from 'being a teacher' (Osterman and Kottkamp 1993; Loughran 2002; Graham and Phelps 2003).

Reflective practice can improve pres-service teachers' practicum if reflective practice is aimed at restructuring their previous understanding and experience of practicum and improving their pedagogical thinking in reflective practice (in reflection before, in and on action) creating a logical flow of thoughts that give a reason for every next step of action and is the basis for self-assessment of the result of practicum thus taking personally relevant decisions. Previously stated processes should happen in an emotionally positive environment. It is significant that pre-service teachers find out the essence of reflective practice during their studies, but it is of utmost importance in the semester when they have their first practicum, because at this point they face experience which asks to reflect on their action in a conscious manner. In long run reflective practice helps to direct pre-service teachers' professional growth being based on adequate self-assessment of practicum. Reflective practice during practicum is a way to help pre-service teachers learn how to accommodate the diverse needs of students (Pedro 2005) as it is linked with pre-service teachers taking responsibility for the result of their practicum.

The result of reflective practice is every teacher's learning from one's experience. It is professional growth that starts with action and continues with an analysis of specific aspects of action to be able to conclude what has to be improved (Osterman and Kottkamp 1993). Authors claim that all the changes in one's professional behaviour that take place as a result of performing reflective practice, include an emotional as well as a rational dimension. As emotions are involved, reflective practice turns out to be an intensely personal experience because of which, based on A. Graham and R. Phelps (2003), some pre-service teachers might find reflection be an uncomfortable process in which pre-service teachers tend to resist integrating the affective and meta-cognitive aspects of learning, instead preferring to work only in the cognitive domain they find less challenging as it is not so personal.

In order to enhance pre-service teachers' reflective practice it is important in teacher education programmes to integrate theory and practice in the way that pre-service teachers

could act reflectively (Loughran 2002) and build their individual understanding of the process of their professional practice using both the intellectual and emotional aspect of their action. Thus they can create their professional knowledge on real field experienced situations in practicum which ask for developing their basic knowledge in a process of reflection on the particular situations that introduce a personal need for learning thus shifting the emphasis towards inquiry-oriented activities, interaction among pre-service teachers, and the development of their reflective skills which is one of the primary purposes of a teaching practicum (Korthagen and Kessels 1999 in Loughran 2002; Wilson and I'Anson 2006).

L. Rutka (2009), when analysing the essence of reflective practice in the development of educators' psychological competence, writes that it is possible to promote reflective practice if professional knowledge is stored and alternative and innovative solutions to challenging situations are sought by taking part in different tasks which aim is reflective practice, for example, by participating in pedagogical supervisions and exchange of experience. Pre-service teachers could enhance the development of their reflective practice not only in the cognitive but also in the emotional dimension if teacher educators put the content of the teacher education curriculum in tasks based on reflective practice in that way helping pre-service teachers reach the best results in their practicum, and that would be personal achievement of every pre-service teacher which would trigger a positive emotional experience during reflective practice.

To make reflective practice become an effective way of enhancing pre-service teachers' practicum, it is advised to construct certain rubrics to assist pre-service teachers, mentors and university staff to see the development of pre-service teachers' skills in reflective practicum in that way constituting basis for pre-service teachers' future professional development also after leaving the teacher education programme (Lee 2005; Parkes and Kajder 2010). Thus the role of teacher educators in reflective teacher education programmes is to encourage pre-service teachers to make sense of the experience from their practicum themselves rather than tell them what those experiences ought to look like (Smyth 1993). Moreover, teacher educators could lead pre-service teachers to taking a decision whether they are to become teachers who engage in reflective practice or they become unreflective teachers as the quality of all the further decisions regarding curriculum and teaching/learning process when they start working as in-service teachers rest upon this choice (Grant and Zeichner 1984).

Conclusions and Discussion

Pre-service teachers' reflection is a purposeful and systematic way of thinking about one's practicum that encourages adequate self-assessment. The aim of reflection is changes that are implemented in action, which promote professional growth. Reflective skills, if practised, can be learnt and improved.

Reflective practice starts with reflection and is its extension. The main task of reflective practice is to help pre-service teachers improve their practicum during which, thanks to reflective practice, they work effectively and grow professionally by taking responsibility for their action, being ready for changes by implementing improvements in future practice that consequently would enhance students' learning at schools.

There are several stages of reflection in practicum: reflection before action, reflection in action, and reflection on action. As pre-service teachers are involved in a continuous pedagogical process, then also the mentioned stages of reflection are linked together and spirally complement each other. In the process of teacher education a question arises in what way to determine the level, factors and characteristics of pre-service teachers' reflectivity and how it is possible to enhance reflective practice and its self-assessment.

For pre-service teachers in their practicum reflection and reflective practice is both a process and a goal that can be practised and perfected. It is import for pre-service teachers as they have a chance to purposefully engage in the process of reflective practice and gradually understand the meaning of it and realize that reflective practice helps them develop their reflective skills and become better teachers. As the goal reflection and reflective practice mean that pre-service teachers become reflective practitioners who are concerned with their professional development and who approach their professional practice not only from the rational domain but also from the emotional domain being aware of the moral aspects being a teacher entails, for example, responsibility for learners' well-being at school.

If pre-service teachers purposefully engage in reflective practice, they improve their practicum as it helps them to hone their reflective skills, enrich professional knowledge and improve professional skills. Reflective practice helps pre-service teachers to construct personally relevant professional knowledge that is based on their own experience gained in unique practice situations. It allows to learn from their own experience.

If engaged in reflective practice pre-service teachers learn to better understand students and accommodate their diverse needs. That encourages pre-service teachers take responsibility for the result of their practicum thus facilitating their professional development.

The task of pre-service teacher educators is to ensure that in teacher education programmes pre-service teachers are given an opportunity to understand the essence of reflective practice and how it can improve their practicum. The practical way how it is done and at what point of their studies depend on particular teacher education programmes and the involved teacher educators.

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References

A Brief Critical Dictionary of Education (compiled by Gillies, D.) Available at: http://dictionaryofeducation.co.uk/R.aspx

Akbari, R., Behzadpoor, F. and Dadvand, B. 2010. Development of English Language Teaching Reflection Inventory. *System*, 38: 211-227.

Beck, C. and Kosnik, C. 2002. Components of a Good Practicum Placement: Student Teacher Perceptions. *Teacher Education Quarterly*, Spring: 81-98.

Berrill, D. and Whalen, C. 2007. Where are the Children? Personal Integrity and Reflective Teaching Portfolios. *Teaching and Teacher education*, 23: 868-884.

Birmingham, C. 2004. Phronesis: A Model for Pedagogical Reflection. *Journal of Teacher Education*, Vol. 55, No. 4: 313-324.

Boud, D. 2001. Using Journal Writing to Enhance Reflective Practice. *New Directions for Adult and Continuing Education*, No.90: 9-17.

Burton, A. J. 2000. Reflection: Nursing's Practice and Education Panacea?. *Journal of Advanced Nursing*, 31 (5): 1009-1017.

Conway, P. F. 2001. Anticipatory Refection While Learning to Teach: from a Temporally Truncated to a Temporally Distributed Model of Reflection in Teacher Education. *Teaching and Teacher Education*, 17: 89-116.

Davis, E. A. 2006. Characterizing Productive Reflection Among Preservice Elementary Teachers: Seeing what matters. *Teaching and Teacher Education*, 22: 281–301.

Dewey, J. 1910. *How We Think*. Boston, New York, Chicago: D. C. Heath&Co.

Freese, A. R. 2006. Reframing one's teaching: Discovering our teacher selves through reflection and inquiry. *Teaching and Teacher Education*, 22: 100–119.

Fund, Z., Court, D. and Kramarski, B. 2002. Construction and Application of an Evaluative Tool to Assess Reflection in Teacher-Training Courses. *Assessment&Evaluation in Higher Education*, Vol. 27, No. 6: 485-499.

Gelter, H. 2003. Why is Reflective Thinking Uncommon?. *Reflective Practice*, Vol. 4, No. 3: 337-344.

Graham, A. and Phelps, R. 2003. Being a Teacher: Developing Identity and Enhancing Practice through Metacognitive and Reflective Learning Process. *Australian Journal of Teacher Education*, Vol. 27, No. 2, Article 2, Available at: http://ro.ecu.edu.au/ajte/vol27/iss2/2

Grant, C. and Zeichner, K. 1984. On Becoming a Reflective Teacher. In: *Preparing for Reflective Teaching,* ed. C. Grant. Boston: Allyn & Bacon.

Greenwood, J. 1998. The role of reflection in single and double loop learning. *Journal of Advanced Nursing*, 27: 1048-1053.

Harford. J. and MacRuairc, G. 2008. Engaging Student Teachers in Meaningful Reflective Practice. *Teaching and Teacher Education*, 24: 1884-1892.

Husu, J., Toom. A. and Patrikainen, S. 2008. Guided Reflection as a Means to Demonstrate and Develop Student Teachers' Reflective Competencies. *Reflective Practice,* Vol. 9, No.1: 37-51.

Jay, J. K. and Johnson, K. L. 2002. Capturing Complexity: a Typology of Reflective Practice for Teacher Education. *Teaching and Teacher Education*, 18: 73-85.

Killeavy, M. and Moloney, A. 2010. Reflection in a Social Space: Can Blogging Support Reflective Practice for beginning Teachers?. *Teaching and Teacher Education*, 26: 1070-1076.

Korthagen, F. A. J. and Vasalos, A. 2009. From Reflection to presence and mindfulness: 30 Years of Developments Concerning the Concept of Reflection in Teacher Educatio, Paper presented at the EARLI Conference, Amsterdam, August.

Kottkamp, R. B. 1990. Means for Facilitating Reflection. *Education and Urban Society*, Vol.22, No.2: 182-203.

Lee, H.-J. 2005. Understanding and Assessing Pre-service Teachers' Reflective Thinking. *Teaching and Teacher Education*, 21: 699–715.

Loughran, J. J. 2002. Effective reflective practice: In search of meaning in learning about teaching. *Journal of Teacher Education*, Vol. 53, No. 1, January/February: 33-43.

Moon, J. 2001. Reflection in Higher Education Learning. LTSN Generic Centre PDP Working Paper 4, 05/10/01.

Osterman, K. F. and Kottkamp, R. B. 1993. *Reflective Practice for Educators. Improving Schooling through Professional Development*, California. USA: Corwin Press, Inc.

Parkes, K. A. and Kajder, S. 2010. Eliciting and Assessing Reflective Practice: A Case Study in Web 2.0 Technologies. *International Journal of Teaching and Learning in Higher Education*, Vol. 22, No. 2: 218-228.

Parkison, P. T. 2009. Field-Based Preservice Teacher Research: Facilitating Reflective Professional Practice, *Teaching and Teacher Education*, 25: 798-804.

Pedro, J. Y. 2005. Reflection in Teacher Education: Exploring Pre-Service Teachers' Meanings of Reflective Practice. *Reflective Practice*, Vol. 6, No. 1: 49-66.

Raelin, J. A. 2002. ”I Don’t have Time to Think!” versus the Art of Reflective Practice. *Reflections,* Vol. 4, No.1: 66-79.

Rodgers, C. 2002. Defining Reflection: Another Look at John Dewey and Reflective Thinking. *Teachers College Record*, Vol. 104, No. 4: 842-866.

Rutka, L. 2009. Pedagoga psiholoģiskā kompetence. *Latvijas Universitātes raksti: Pedagoģija un skolotāju izglītība, 747. sējums*, 170.-181.lpp. Rīga: Latvijas Universitāte.

Schön, A. D. 1991. *The Reflective Practitioner. How Professionals Think in Action*. England: Ashgate Publising Limited.

Shkedi, A. and Laron, D. 2004. Between Idealism and Pragmatism: A Case Study of Student Teachers Pedagogical Development. *Teaching and Teacher Education*, 20: 693-711.

Smith, M. K. 2001. Donald Schön: learning, reflection and change. The encyclopedia of informal education. Available at: www.infed.org/thinkers/et-schon.htm

Smyth, J. 1993. Reflective Practice in Teacher Education. *Australian Journal of Teacher Education*, Vol. 18, Iss. 1, Article 2, Available at: http://ro.ecu.edu.au/ajte/vol18/iss1/2

Snow-Gerono, J. L. 2008. Locating Supervision – A Reflective Framework for Negotiating Tensions Within Conceptual and Procedural Foci for Teacher Development. *Teaching and Teacher Education*, 24: 1502-1515.

Urzua, A. and Vasquez, C. 2008. Reflection and professional identity in teachers’ future-oriented discourse. *Teaching and Teacher Education*, 24: 1935-1946.

van Manen, M. 1995. On the Epistemology of Reflective Practice. *Teachers and Teaching: theory and practice*, Vol. 1, No. 1: 33-50.

Ward, J. R. and McCotter S. S. 2004. Reflection as a Visible Outcome for Preservice Teachers. *Teaching and Teacher Education*, 20: 243-257.

Wilson, G. and l’Anson, J. 2006. Reframing the Practicum: Constructing Performative Space in Initial Teacher Education. *Teaching and Teacher Education*, 22: 353-361.

Wolfensberger, B., Piniel, J., Canella, C. and Kyburz-Graber, R. 2010. The Challenge of Involvement in reflective Teaching: Three case Studies from a Teacher education Project on Conducting Classroom Discussions on Socio-Scientific Issues. *Teaching and Teacher Education*, 26: 714-721.

Yost, D. S., Senter, S. M. and Forlenza-Bailey, A. 2000. An Examination of the Construct of Critical Reflection: Implications for Teacher Education Programming in the 21st Century. *Journal of Teacher Education*, Vol. 51, No. 1: 39-49.

Problem of Narrative in Education

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Abstract

This article is dedicated to the analysis of the concept *narrative* and use thereof in the field of education. It might seem that problematic aspects of narrative have been sufficiently elaborated by different sciences, such as philosophy, history, psychology, sociology, linguistics, etc, nevertheless, the notion of narrative in education turns out to be rather disputable and under-researched.

Education appeals to narrative due to the needs of pedagogical practice. Interest in narrative methods is some sort of attempt to compensate for excessive scientism and "inhumanity" of the contemporary pedagogical process. In pedagogical activity, the narrative approach sets dialogic reflection in opposition to monological thinking of scientism and technocracy. It reveals profound foundations of free and creative pedagogical activity that is not chained by ideological dogmas and is not restrained by carcases of scientifically-pedagogical paradigms and, therefore, adverts to phenomena pre- or beyond comprehensive level present in artistic and everyday consciousness of a person, in his/her day-to-day experience. The narrative approach is based on interpretation of pedagogical knowledge taking into consideration the integrity of a pedagogical process which unites objectively preconditioned and subjectively-personal, rationally-logical, and affective elements.

Narrative structures, means and styles of narration, techniques and methods of teaching demonstrate specific and pedagogical attitude embodying in itself such characteristics as consistency, coherence, credibility, integrity, and completeness. These are the elements of narrative which stimulate the interest of students towards theoretical thinking and theoretical knowledge. Narrative becomes the instrument for development of reflective thinking and thoughtful attitude towards experience. Narrative is the environment where communities cultivating certain values are built and developed.

Owing to the narrative method, a teacher can focus his/her efforts on discussing with the audience various sides of human relationships and behaviour, expanding and activating positive experience in solving problems under discussion. Explicatory nature of narrative allows it to serve as an instrument of influence.

Keywords: education, narrative, narratology, mosaicism, fragmentariness, integrity, humanization

Introduction

The role of narrative in education is controversial and not well researched. Increasing interest about narrative in teaching can be explained as a response to the existing rather scientific, fragmented, mosaic-like and cold-hearted approaches to pedagogy.

Contemporary interest in pedagogy about narrative is also a response to the practical needs of teachers. The use of narrative elements prompts students to think theoretically, acquire and interpret theoretical knowledge, discuss different types of relations among people and aspects of their behaviour by expanding on and activating positive emotions about the topic being addressed.

The narrative provides a holistic approach to interpreting knowledge, combining objective and subjective, rational and emotional elements.

Traditionally, narrative (lat. *narrativus* – narrative) is defined as a text describing a sequence of events. The narrative approach originated from existential philosophy. M. Heidegger, P. Ricoeur, and M. Merlau-Ponty believed that authentic human existence is conversing existence directed at understanding and explaining itself in relation to the world. Narration is a primary form of manifestation of existence. It is through narrative that life finds unity and can be narrated. In post-modern philosophy the notion of narrative becomes one of the key concepts. While classical philosophy was mainly focused on the problem of cognition, i.e. correlation between thinking and the world, the contemporary philosophy is making a turn towards language concentrating on the problem of language and the linguistic nature of consciousness.

By the end of the 20th century, it was strongly believed that functioning of various forms of knowledge could be understood only through consideration of their narrative nature (Lyotard Jean-François 1984). Attention of science towards potential of narrative is connected with comprehension of the importance of narration in life of human beings. Narrative undoubtedly plays a great role not only in literature and elocution but also in scientific discourse, in everyday communication and pedagogical practice. People often use narrative as a means of explaining different processes. Narrative is one of the most universal types of verbal interaction. Narrative is present in everything we say, think or imagine. Telling stories is an integral part of human life. It is a natural manner of a person's communication with other people, as well as a way of acquiring knowledge. Narrative structures a person's perception of the world, puts in order personal experience, facilitates one's self-discovery and acquisition of knowledge. Being part of human reality, narrative implies a possibility to organize and provide consistency to the experience of constantly changing human existence and change it. J. Brockmeier and R. Harre believe that narrative acts as an extremely changing form of mediation between personal and generalised cultural canons, i.e. narrative simultaneously is a model of the world and a model of one's self (Брокмейер, Харре 2000, 38).

Narrative has a universal semiotic nature and can be manifested both verbally and non-verbally. A direct perspective in painting, symphony in music or a novel in literature may serve as an example of narrative forms. According to Lyotard, narrative form as a mechanism of organising the human experience is omnipresent. However, due to historically specific ways of development realization of narrative always has definite forms. This is exactly why narrative possesses social instrumentalism and pragmatic potential (Lyotard 1984).

A particular role in distinguishing narrative means of understanding of reality was played by literary theory. In literature, narrative allows a person to bring meaning to the world around and perception thereof. Besides, people always try to shape events of the real world into literary forms by describing them according to the laws of traditional genres and using various narrative schemes (Усманова 2001).

Later, apart from literary theory, the notion of narrative becomes the centre of attention of socially-humanitarian and other natural sciences, such as medicine, law, history, historiography, anthropology, psychotherapy, philosophy, cultural anthropology, theology, and pedagogy. Owing to such great influence of narrative, a new science – narratology was developed. This science researches the nature, forms, functioning, and common characteristics pertaining to all possible types of narrative. Narratology sets criteria making it possible to distinguish narratives among themselves, as well as constitutes a system of rules under which narratives are created and developed.

Narrative consists of the following structural components: a plot, point of view, evaluation, time, personage, and cast of characters. Narrative must have a beginning, middle and end, which, thanks to detalization, comprises a well-built unity devoid of any unrelated elements. Characters, conflict, style, and setting are other characteristic features of narrative that are auxiliary in terms of a plot. For proper functioning, narrative should be preceded by an abstract and concluded by a coda that brings the listener back from narration to the real time. For logical development of narrative, events should not necessarily be described in sequence. Arrangement of these events may be aimed at confirmation and intensification, even creation of models representing values for human existence. In the long run, success of narrative depends on realisation of the following principles: simplicity, unexpectedness, concreteness, credibility, emotions and a good story.

The plot of narrative consists of questions about time, about one's own self, about one's mission, and such question as from whence the man has come and where he keeps going, and what people should do while they live. By formulating this kind of questions and responding to them, narrative becomes a form of transmission of cultural experience. Culture and its development are maintained by stories about human experience. From the very childhood, people are enveloped in stories (myths, legends, fairy tales, epos, etc.) and are in constant need not only for stories but also for their endless repetitions. Moreover, narrative

not only tells about events, but also interprets and models the world of human culture. The world of culture provides a wide repertoire of plots used by people to organize events in their lives in time sequence. Any personal narrative is built on the basis of and around cultural models. That is why narrative gives a clear vision of norms and values existent in a given society, as well as of the position of the narrator.

As a result, narrative is not only a phenomenon reflecting culture; it also is this culture's invisible creator. According to Miller's research, the term *narrative* derives from the Latin word *gnarus*, which means "knowing", "an expert", "acquainted with something". By telling a story, a person not only follows the sequence of events but also interprets it: narration is gnosis, it tells to those who know. Besides, it also is diagnosis, the act of identification or interpretation (Miller 1998, 127).

The above-mentioned allows narrative to fulfil numerous functions. Firstly, it is organization of ideas, intentions and experience in some kind of discursive order. Narrative creates a model of behaviour in various situations acceptable for human consciousness. Narrative gives sense to practices and experience that have not found explanation and justification in linguistic and conceptual forms yet. Creation of a holistic model of human existence can be considered a specific function of narrative. In such a way, narrative is the basic component of social interaction fulfilling the function of creation and transmission of social knowledge, as well as self-presentation of individuals.

Narrative in education

Contemporary interest of pedagogy in narrative originates from that general condition of culture that is connected with fragmentariness, mosaicism, inconsistency and clip-thinking of human perception and attitude towards the world. Abraham Moles, in his time, described culture using the term "mosaic-like". According to him, mosaicism is composed of a number of separate fragments connected by simple and purely random intimate relationships. It consists of fragments that adjoin but do not establish any constructions; these fragments lack starting points and unifying categories, but contain a lot of concepts carrying great weight such as key ideas, key words, etc. (Моль 1973, 45). Mosaicism sequentially breaks classical narrative continuum turning the elements brought out of narrative perspective into secluded and self-sufficient units, separate pictures and episodes that can be freely arranged among themselves and that create the space of collage.

Education as part of culture is subjected to the same processes. Mosaic-like education is the total of random knowledge that a man has acquired from different sources. This combination of fragmentary knowledge is formed in a person's consciousness in the course of comprehension of books, magazines, intercourse with other people, listening to lectures, watching TV, surfing the Internet, etc. Mosaic-like education is the result of accidental and

disordered selection of the most diversified, scientific and unscientific knowledge, including opinions, surmises, stereotypes, and dogmas. Mosaic-like education is built on entertainment and is mostly connected with emotional part of the human psyche. From his/her work experience, any teacher knows well that it is rather difficult to keep students' attention by providing serious information. Maintaining their attention focused throughout the whole lecture is nearly impossible. Nowadays, a serious and in-depth discussion of questions, presentation of materials by means of gradual statement of facts and sequentially developing argumentation in the majority of cases is doomed to failure. With increasing frequency, teachers face rejection in relation to scientific knowledge on the part of students. It manifests in such a way that students reject everything that needs a long-term and intensive independent work. They accept simplified means of presentation and acquisition of instruction material. Students give preference to those forms of instruction where monitoring of their work is loosened and where teachers make use of entertaining and interactive means of instruction. A lesson prepared in a "theme park" fashion facilitates captivating students' attention and holding their interest. Using such a technique of presentation of instruction material leads to atomisation of students' consciousness. Fragmentariness of perception is not able to build an integral and harmonious worldview in the human consciousness.

At that, information transferred to students does not imply its multivalent interpretation. Theses must be brief and laconic. Multivalence of information slows down perception and makes a mess in students' consciousness. Generally speaking, the simpler materials are presented the easier they are for students to understand. Teachers have long ago noticed that sentences with complex structure and various deviations and comments are perceived by students with considerable difficulty. Many students fail to aurally make sense of utterances with subordinate clauses, participial and verbal adverbs constructions. Therefore, a teacher who wants to be heard has to take into account the above-mentioned fact – the simpler materials are presented the easier they are for students to understand.

It is not a teacher's task to build logical chains and interrelations between separate facts. It is very good if such relations appear in the process of presentation of materials or if the teacher succeeds in demonstrating them. If not, the teacher has to come to terms with it since the primary effort is focused on conquering distracted attention and bringing home to students' consciousness at least minimum of what really has cognitive and cultural value.

The mosaic-like principle of knowledge acquisition can be found in any type of culture; however, it has never been as popular as nowadays. University education with its programmes aimed at development of various competencies tries to stand up to fragmentariness and mosaicism. Nevertheless, it should be borne in mind that at present knowledge tends to become obsolete both physically and morally much faster. Such amount of incoming information requires constant revision of curricula, screening of obsolete knowledge with the aim to include into curricula some necessary or more specified

knowledge. If earlier educational plans and programmes could remain unchanged for years, at present, they undergo annual revision. Also, training courses require similar revision. Therefore, organization of educational process requires not only regular reconsideration of the logics of distribution of instruction materials and sequence of teaching disciplines, but also revision of demands with regard to studying them. There is an urgent necessity for maximum intensification of educational processes so that the quality of education in specialists training would be in conformity with rapidly changing realities. Intensification is firstly achieved by means of navigating the whole educational process towards professionalism and specialisation.

It means that education is limited to pragmatic minimum of knowledge and skills helping people to simply adjust to their narrow social and professional niche. Education acquired by people is nothing but education here and now. It is earthbound to specific and rather constricted conditions of existence and, without doubt, does not facilitate the integrity of spiritual development of a person. In such a way, mosaic-like education is built on perception of just separate, basically unconnected and isolated from each other chains of knowledge and a question regarding any integral structure of their relation is rather problematic. In this connection, Lyotard was undoubtedly right by having pointed out that fragmentariness of knowledge and its applied character have no need for a teacher's figure. A teacher *per se* is someone who tells stories and, by creating a thorough action, unites separate fragments together.

Mosaic-like and visual education is maintained by achievements of information technologies rather than by a teacher's personality. Nowadays, a teacher standing in front of an audience and communicating with it is regarded as an anachronism. Codoscopes, projectors, interactive boards, and the Internet are deemed to be attributes of up-to-dateness and quality. For this reason, e-courses, distant learning and eLearning in general are so popular nowadays. Moreover, getting education at present can to some degree be described as users surfing the Internet. The network represents a structural model of how the process of mosaic-like education is built. Any webpage is a colourful image, mosaic of "windows", banners, and hyperlinks without inner relations and logic. Information in an internet page is arranged visually. Logic of arrangement is built on the grounds of statistical demand for information rather than on narration and temporality. The Internet gives a possibility to learn about some things at the expense of losing explanation and understanding of the world in general.

In this respect, interest in narrative schemes as a means of counter weight against disintegrating tendencies in education is quite understandable. Narrative structures, means and styles of narration, techniques and methods of teaching demonstrate specific and pedagogical attitude embodying in itself such characteristics as consistency, coherence, persuasion, integrity, and completeness.

Frederick Jameson defined narration as a means of reducing various dimensions and temporalities – elements of different levels, individual biography and social history, everyday micro rhythms and politically-economic macro rhythms, etc. – to a single entity (Jameson 1981, 29). Narrative unites different forms, i.e. phonetic, grammar and syntactic structures, narrative schemes, genre conventions, to produce such common perspective in which separate elements are proportionate and gain their significance. In this sense, narrative becomes an integrating factor joining separate facts, fragments, details, and odd stories together, and in this quality it is a guidebook of vision and understanding.

Narrative is a means of stimulating interest in theoretical thinking and theoretical knowledge. It becomes the instrument for development of reflective thinking and thoughtful attitude towards experience. Narrative is the environment where communities cultivating certain values are built and developed. Owing to the narrative method, a teacher can focus his/her efforts on discussing with the audience various sides of human relationships and behaviour, expanding and activating positive experience in solving problems under discussion. Explicatory nature of narrative allows it to serve as an instrument of influence.

A simple and easy-to-understand story resonating with a person's values develops in a person's consciousness casual frames necessary for a teacher and by doing so creates a motivational basis for certain behaviour. On many occasions, the author of this article had seen the power of narration. A story told is more expressive, exciting and interesting for students and they find it easier to associate it with their personal experience rather than theoretical presentations and abstract reasoning. Such stories are easier to remember, students give more meaning to them; the influence of such stories on students' behaviour is more powerful than that of logical constructions.

On the other hand, narrative allows students to learn about and understand the nature of these or those events. Narrative helps students to cognize themselves and find their place in the world. With the help of narrative, they apprehend and, in a sense, construct the meaning of human life. Students as everyone else like listening to stories; it is with the help of stories that people can be manipulated. Fairy tales, apologues, anecdotes, and tall tales appeal to a person's emotions rather than mind and logic. A correct and timely told story gives birth to a chain "emotion-conclusion-action". Having caused certain feelings in listeners, it is possible to make them arrive at necessary conclusions and then impel them to action. Therefore, if contents of pedagogical activity were made brighter and presented to students in the form of stories, they would be easier to remember, would be revised better, and would be more useful than abstract statements, pseudoscientific principles and didactic guidelines.

A characteristic feature of narration is interrelation of meaning and sense, individual and universal, unity of image and concept. At that, the image is enriched by a thought, is intellectualized, whereas the thought is enriched by the image. According to S. Rubenstein, "concept and prefiguration are presented as an inseparable unity" (Рубинштейн 2000, 389-

390). The advantage of the narrative approach in pedagogical activity is the focus of cognition on integral perception of the subject of comprehension and understanding.

Mergence of image and concept facilitates a balanced combination of scientific analysis with synthesis owing to integrating properties of artistic and aesthetic image which, due to its integrity and completeness, prevents losing the whole in order to please details. Synthesis of image and concept in narrative makes it possible to combine production of theoretically-structured interpretations sensitive towards pedagogical details.

The narrative approach does not exclude other forms of pedagogical influence. Where delicate adjustment is needed, narrative is a priceless method. It goes without saying that it is rather difficult to transfer critical skills including thorough knowledge of the subject field with the help of narrative. It is unlikely that an exciting narration of events will allow students to learn a new language of programming. To acquire specific forms of knowledge, people rely on formal education and supplement it with self-education. However, tacit knowledge that goes along with professional activity is better transferred through narration.

Conclusion

Active process of development and realization of humanistic concept of education has been caused by the teachers' striving towards comprehension of pedagogical experience, search of new forms and methods of training and education.

Many teachers do understand how narrative approach works and more often consciously place their stake on this technology. Implementation of the narrative approach in the pedagogical field allows teachers to activate the students' ability to understand theoretical texts, formulate problems, build concepts and reflect.

With the help of narrative, facts and events are selected and transformed into some kind of "plot" which explains why those events took place exactly the way they happened and not otherwise. Narrative arranges, organizes, convinces and sets a model of pedagogical activity focusing the audience's attention on some phenomena and facts. Thanks to narration, heterogeneous phenomena are structured into a unified system, acquire sense and meaning in a social and communicative context. With the help of narrative, a subject identifies itself as a representative of a certain community and culture, introduces itself to a social audience, becomes familiar with and transmits a certain value system.

The narrative method acts as a means of sense institutionalization striving not merely for neutral objectiveness, but rather for the objectiveness of the sense of socio-cultural experience of a historical subject which identifies itself in a context of socio-cultural attitude towards the world. This peculiarity of narrative indicates that the contemporary nature of education has changed the teacher's status. If earlier a teacher held a position of an all-knowing and all-understanding mentor, now his/her activity is characterized by involvement

into a pedagogical process and development of this process. A teacher aims at expressing things that are to be conveyed to the listener. If a teacher through his/her narration fails to meet some conditions, he/she will get a negative feedback from listeners. By complying with conditions and through a successful combination of what is already known with something new, a teacher gets the attention of the audience.

From the pedagogical point of view, it is worth speaking about two types of narratives. First of all, these are narratives that are created and reproduced by a teacher. Secondly, these are narrative created by students. Teachers can make use of narrations circulating in culture, and also can create original narratives. However, a teacher should keep it in mind that artificially created stories will always be less effective than genuine ones. Therefore, such forms of narration as letters, confessions, autobiographies, biographies, diaries, commentaries, portrait sketches, pedagogical aphorisms, and other texts-narratives give a teacher a possibility to make a dialogue with the audience and help students identify themselves in what they understand. Simultaneously, students create their own narrative texts (retelling, interpretation, report of their work, analysis of somebody else's actions, etc.) which provides conditions for discovering and developing the value system and independent thinking. The use of narrative by students serves as a safe means of humanization of education since it is in the genre of an independently born narrative work where the student's world-attitude is reflected. A teacher, taking position of equal collaboration, creates a context in which a student can make contact with his/her own and universal values, find or create a support group for preferable direction of his/her development.

Narration is some kind of means to do things by words. A story helps something to happen in a real life, i.e. narrative offers a model of behaviour which then is reproduced by a student in the real world (Miller 1988, 69).

The above-listed tendencies stipulated the appeal of teachers to narrative as a defining methodological principle of educational process.

Topics:

1. Narrative as an intermediary for comprehending human existence – the world model and "I".
2. The positive role of narrative in contemporary pedagogical processes.
3. The narrative approach in pedagogic processes facilitating interpretation.
4. Positive values in the narrative milieu.
5. Narrative as a counterpoint to "mosaicism" and fragmentation in the teaching process.
6. Narrative from the standpoint of the student and teacher – differences and commonalities.

References

Jameson, F. 1981. *The Political Unconscious: Narrative as a Socially Symbolic Act.* Ithaca, N.Y.: Cornell University Press; London: Methuen, 305p.

Miller, J. H. 1988. Narrative. In *Critical Terms for Literary study,* ed. F. Lentricchia and Th. McLaughlin, 66-79. The University of Chicago Press, Chicago and London.

Miller, J. H. 1998. *Reading narrative. Oklahoma.* University of Oklahoma Press, 304p.

Lyotard, J.-F. 1984. *The Postmodern Conditional.* Manchester University Press, 148p.

Брокмейер, Й., Харре, Р. 2000. Нарратив: проблемы и обещания одной альтернативной парадигмы. *Вопросы философии*, 0. – №3: 29-42.

Моль, А. 1973. *Социодинамика культуры.* Москва, Прогресс, 1973, 405с.

Рубинштейн, С. 2000. *Основы общей психологии.* СПб, «Питер», 712 с.

Усманова, А. 2001. Текст. Новейший философский словарь: 2-е изд., перераб. и дополн. -Минск.: Интерпрессервис; Книжный дом, 1022 с.

Sokratische Methode im Kontext der Lehrerausbildung in Lettland

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Abstrakt

Heutzutage wird in der Pädagogik aktuell die Frage nach der Entwicklung der Fähigkeit der Schüler zum selbstständigen Denken gestellt, die Frage nach dem Schüler als schöpferischem Forscher, dem Lehrer als Mit-Forscher. Im Zusammenhang mit diesen Aktualitäten rücken Fragen über die heutzutage in der Bildung eingesetzten Unterrichtsmethoden in den Vordergrund, über die Entwicklung und den Einsatz neuer Methoden sowie über eine entsprechende Lehrervorbereitung. Wie historische Quellen beweisen, ist die Idee von einem selbstständig denkenden Schüler in der Pädagogik nichts Neues. Diese Idee hatte ihre Förderer schon am Anfang des 19. Jahrhunderts, und als Mittel zur Verwirklichung ihrer Idee sahen viele Pädagogen damals die sokratische Methode. Wenn nach der Lösung dieser immer noch aktuellen Fragen der Pädagogik gesucht wird, könnte heute vielleicht einen wertvollen Beitrag gerade die Erfahrung leisten, die mit der Entwicklung der sokratischen Methode im 18. und 19. Jahrhundert verbunden ist. Diese historische Erfahrung müsste nur noch einmal sorgfältig ausgewertet werden.

Schlüsselworte: Sokratische Methode, Maieutik, Lehrerausbildung

Sokratische Maieutik

Die Anfänge der sokratischen Methode sind in der Tätigkeit des antiken Philosophen Sokrates (469 – 399 BC) zu suchen, der das Vermögen, den Gesprächspartner durch einen Dialog zum Wissen zu bringen, als Maieutik - Geburtshelfer- oder Hebammenkunst - bezeichnet hat. Sokrates meinte, dass ähnlich wie eine Hebamme bei der Geburt eines Kindes hilft, seine Methode Hilfe leiste bei der Geburt der Wahrheit, die eigentlich schon im Gesprächspartner stecke. Die von Sokrates angewandte Allegorie ist mit der philosophischen Anschauung verbunden, dass es in dem Menschen eingeborene Ideen verborgen sind, die durch geschicktes Fragen ins Bewusstsein geholt werden können (Platon 1957).

Dies hat zur verbreiteten Ansicht geführt, dass die wichtigste Komponente dieser Methode die vom Lehrer gestellten Fragen sowie das Fragen selbst sind. Diese Methode hat aber

einen zweiten, ebenso wesentlichen Bestandteil, nämlich die Erfahrung des Schülers. Das sokratische Gespräch wird so geführt, dass die Antworten auf Fragen in der eigenen Erfahrung des Schülers zu suchen sind (nicht etwa in Büchern oder in Aussagen und Erkenntnissen anderer Menschen). Im Dialog mit einem Sklaven aus "Menon" zeigt Sokrates deutlich, dass ein ungebildeter Mensch durch einen Dialog gesteuert und auf der eigenen Erfahrung und Erkenntnissen beruhend genaue geometrische Gesetzmäßigkeiten zu formulieren vermag, obwohl er vorher darüber weder etwas gelesen noch gehört hat. Mit diesem Beispiel hat Sokrates alle konventionellen Vorstellungen vom Lernen umgewandt. Traditionell hat man mit dem Lernen einen Vorgang verstanden, worin der Lehrer bestimmte Einsichten und sein Wissen zu vermitteln hatte, und die Aufgabe des Schülers darin bestand, sie sich anzueignen und zu behalten. In der von Sokrates angewandten Methode konstruiert der Schüler neue Kenntnisse aufgrund der eigenen Erfahrungen, Beobachtungen, Anschauungen und unter Einsatz des eigenen Urteilsvermögens. Der Schüler soll seine Erfahrungen verwerten, Antworten suchen und gemeinsam mit dem Lehrer die Gültigkeit der Antworten prüfen. Das sokratische Gespräch dreht sich meistens um einen bestimmten Begriff. Während des Gesprächs wird das Wesen der mit dem behandelnden Begriff verbundenen Erscheinung geklärt und das Verständnis für die Erscheinung vervollkommnet.

Sokratische Lehrart als Suche nach besseren Lehrformen in den deutschsprachigen Ländern im 18.-19. Jh.

Etwa 2 Jahrtausende nach Sokrates` Tod ist seine Lehrkunst von den Pädagogen des 18. - 19. Jh. der Vergessenheit entrissen worden. Die Pädagogen haben aus Unzufriedenheit mit den elenden Bildungsleistungen der Schule ihrer Zeit nach besseren Lehrformen gesucht. In ihrer Schulkritik haben sie sich gegen die *vortragende* oder *akromatische* (gr. hören) Lehrform gewandt. Dabei *„ist der Lehrer allein redend, das Kind hört nur zu, soll aufmerken"* und das Gehörte oder Gelesene genau wiederholen (Schütze 1876, 171). Bei dieser Einstellung wurde das Auswendiglernen bevorzugt und man hat sie als *traditionelle* oder *überliefernde* bzw. *mechanische* Methode sowie als *Gedächtnismethode* bezeichnet (Stephani 1835, 59-60). Die Kritiker dieser Lehrform haben darauf hingewiesen, dass die Schüler zu Papageien gemacht werden – sie seien imstande, nur das Gehörte zu wiederholen (Loska 1995, 30). Die gegen die akromatische Methode erhobenen Stimmen haben ihr vorgeworfen, dass sie *„nicht nur hemmend, sondern selbst verdummend auf die Verstandeskraft der Jugend einwirkt... Unsere Jugend gewöhnt sich demnach bei solcher mechanischen Behandlung an den Nichtgebrauch ihrer Denkkraft, folglich an eine Gedankenlosigkeit, und an ein blindes Auffassen dessen, was sie hört und liest"* (Stephani 1835, 61). In der sokratischen Methode glaubte man eine Möglichkeit erkannt zu haben, die alte pädagogische Praxis zu ändern.

Einer der aktivsten Verbreiter der sokratischen Methode war Gustav Friedrich Dinter (1760 – 1831), Professor der Theologie und Pädagogik an der Königsberger Universität. Seine Werke verschaffen einen Einblick in die Behandlung der sokratischen Methode am Anfang des 19. Jh. Dinter hat sie gedeutet als *„die Kunst durch zweckmäßige Fragen den Lehrling so zu leiten, daß er das, was man ihm geben will, selbst finde“, „der Sokratiker – der die sokratische Methode vertretene Lehrer - soll dem Kinde nichts geben, sondern Alles aus ihm nehmen. Er soll das Kind leiten, daß es aus dem, was ihm bekannt ist, das selbst finde, was er ihm darzustellen wünscht“* (Dinter 1836, 51, 59). Viele haben in diesem einfachen Prinzip gewaltige pädagogische Kapazitäten erkannt: die Möglichkeit, das Lernen durch tiefes Verständnis des Lehrstoffes zu fördern, das selbstständige Denken der Schüler zu entwickeln, sie zu suchenden, fragenden, forschenden Persönlichkeiten und nicht zu passiven Empfängern zu bilden (Loska 1995, 17).

Hier ist zu erwähnen, dass die sokratische Lehrform sowohl die Rolle des Lehrers als auch die gegenseitigen Lehrer-Schüler-Beziehungen wesentlich geändert hat. Dinter hat darauf hingewiesen, dass während des sokratisch geführten Unterrichts keine Vorgesetzten- und Untertanen-Beziehungen bestehen, aber beide – der Lehrer und der Schüler *„sind gemeinschaftlich forschende Freunde“* mit großer gegenseitiger Vertraulichkeit (Dinter 1836, 55). Das gemeinsame Forschen ist zum Leitmotiv des Unterrichts geworden. Eins der Bücher, das die Lehrerschaft mit den Prinzipien des sokratischen Unterrichtsaufbaus bekannt gemacht hat, war das Werk von Dinter „Die vorzüglichsten Regeln der Katechetik, als Leitfaden beim Unterricht künftiger Lehrer in Bürger- und Landschulen“. Dieses Werk hat im Laufe von 1800 bis 1862 in Deutschland 13 Ausgaben erlebt (Käbisch 2009, 117). Aus dem Titel des Buches ist zu ersehen, dass Dinter die sokratische Methode für den Religionsunterricht vorgesehen hat.

Einige Zeitgenossen haben die sokratische Methode als Ketzerei beurteilt. Ein starker Vorwurf gegen das Lernen dieser Art war das anscheinende Ignorieren von Autoritäten. Zu dieser Meinung konnten tatsächlich viele von den Texten der so genannten Sokratiker führen. Dinter hat z. B. geschrieben, nachdem er verschiedene Lehrmethoden verglichen hatte: bei der alten Lehrweise *„muß der Lehrling... begreifen lernen, wie wahr das sei, was Andere (das Lehrbuch) behauptet haben, der Schüler des Sokratikers erfährt vorderhand die Behauptung Anderer gar nicht, sondern muß selbst suchen und finden, was er für wahr anzuerkennen habe“* (Dinter 1836, 52). Wenn die Schüler selbst entscheiden müssen, was wahr ist, was nicht, so befürchteten viele, dass die Antworten der Schüler bedrohlich unprognostizierbar werden konnten.

Einführung der sokratischen Methode in die Lehrerseminare Kurlands im 19. Jh.

Die ersten Angaben darüber, dass die sokratischen Methode in der lettischen Lehrerausbildung bekannt gewesen ist, sind im Zusammenhang mit zwei Lehrerseminaren zu finden, die in der 1. Hälfte des 19. Jahrhunderts eröffnet wurden. Diese Seminare sind unter besonderen geschichtlichen Verhältnissen entstanden: das von Letten bewohnte Gebiet Kurland gehörte seit 1795 zum Gouvernement Baltikum des russischen Zarenreiches. Laut Gesetz sollten alle Lehranstalten in Kurland unter der Verwaltung des Ministeriums des Reiches stehen. Das Bildungswesen im Baltikum war aber von einer merkwürdigen Doppelherrschaft gekennzeichnet: die Erziehung und Bildung in Kurland sowie in Livland wurden neben den russischen Behörden vom deutschbaltischen Adel und der Geistlichkeit bestimmt. Eigentlich haben die deutschbaltischen Vertreter des höheren gebildeten Standes auch die ersten kurländischen Lehrerseminare für Letten gegründet mit der Absicht, qualifizierte Volkslehrer für lettische Bauernschulen auszubilden.

Eines der Lehrerseminare, die so genannte Zierau – Dzerwensche Schulenanstalt, wurde von dem deutschbaltischen Pastor Johann Christof Wolter (1773 – 1858) gemeinsam mit seinem Gesinnungsgenossen Georg Ludwig von Manteuffel – Szoege (1790 – 1872), dem Baron zu Zierau, gegründet (Žukovs und Kopeloviča 1997, 36). Acht Jahre später hat Wolter 1841 durch die Unterstützung des Kurländischen Landtags ein zweites Lehrerseminar in Irlava eröffnet (Žukovs und Kopeloviča 1997, 43-45).

Die sokratische Lehrmethode wurde an beiden kurländischen Seminaren von Seminarleitern eingeführt, die Wolter ausgesucht hat. Hier ist zu betonen, dass die Leiter beider Seminare die Schüler des preußischen Pädagogen Dinter waren. Zum Leiter des Lehrerseminars zu Zierau – Dzerwen hat Wolter den jungen Letten vom Bauernstand Andrejs Kalnenieks auserwählt. Sein Name wurde später zu Andreas Bergmann (1810 – 1869) verdeutscht (Wolter 1837, 42). Zum Ausbildungsort für Bergmann hat Wolter das Lehrerseminar zu Klein-Dexen in Preußen ausgesucht. Durch Georg Ludwig von Manteuffels – Szoeges finanzielle Unterstützung konnte Andreas Bergmann seine Ausbildung in Klein-Dexen 1831 beginnen. In der Zeitschrift „Inland“ hat Wolter geschrieben, dass Andreas Bergmann nach Preußen geschickt worden ist, *„um dort mit den neuen zweckmäßigen Unterrichtsmethoden bekannt zu werden*“ (Wolter 1837, 42).

Zu dieser Zeit war aber die pädagogische Richtung des Lehrerseminars in Klein-Dexen sehr stark von der pädagogischen Anschauung Dinters geprägt. Als Consistorial- und Schulrath hat Dinter für vier ostpreußische Lehrerseminare gesorgt und die Aufsicht über sie geführt, darunter über das Seminar in Klein-Dexen, wo seine Schüler auch nach Dinters Tod als Lehrkräfte gearbeitet haben (Bennack 1975, 45). So war das Seminar unter der Leitung Dinters zu einer Übungsstätte für den Einsatz der sokratischen Methode in den Schulunterricht geworden. Andreas Bergmann hatte dennoch eine Gelegenheit, Dinter in seinem letzten Lebensjahr kurz vor seinem Tod persönlich kennen zu lernen.

Als Wolter den Leiter für das zweite Lehrerseminar in Irlava gesucht hat, wurde die Kandidatur für dieses Amt von Johann Wilhelm Preuß (1790-1867), dem Direktor des Lehrerseminars Karalene bei Insterburg, vorgeschlagen. Die empfohlene Person war Karl Sadowsky (1807-1899), ein an der Königsberger Universität studierter Theologe. Die sokratische Methode war aber auch an der Universität Königsberg gut bekannt, weil Dinter dort von 1819 bis 1831 als Professor für praktische Theologie gewirkt hat. Er hat Vorlesungen zu folgenden Themen gehalten: Katechetik, Methodik der populären Dogmatik und Moral oder praktische Übungen im Katechisieren (Bennack 1975, 48, 167). Diese Vorlesungen von Dinter hatten die engste Verbindung zur sokratischen Methode, denn sie wurde von ihm für den Religionsunterricht sowohl in der Schule als auch in der Kirche verbreitet. Anscheinend hat Sadowsky die pädagogischen Anschauungen Dinters in Königsberg kennengelernt. Jedenfalls haben die Historiker des lettischen Bildungswesens Sadowsky als einen Anhänger von Dinter bezeichnet (Žukovs und Kopeloviča 1997, 42) (Vičs 1928, 131).

Verbot der pädagogischen Ansichten Dinters an lettischen Lehrerseminaren

Nach einer achtjährigen Tätigkeit am Lehrerseminar in Irlava hat Sadowsky 1850 von der Synode der kurländischen Pastoren einen Verweis erhalten, dass die junge Generation infolge der pädagogischen Ideen Dinters kirchenfremd werden könnte. In Synodenprotokollen wird auf die Gefahr hingewiesen, dass die Ausbildung der Seminaristen in Irlava im Geist der liberalen pädagogischen Ansichten von Dinter unerwünschte Folgen haben kann (Žukovs und Kopeloviča 1997, 42, 47). Da Dinters pädagogische Ideen eng mit der sokratischen Lehrform verbunden sind, kann die Negierung Dinters pädagogischer Ideen als Ablehnung der von ihm geschätzten sokratischen Methode angesehen werden. 1856 wurde zuallerletzt in den Unterlagen der Umstrukturierung des Seminars zu Irlau darauf hingewiesen, dass das Seminar sich von den Lehrmethoden zu befreien habe, welche Sadowsky von den preußischen Pädagogen entlehnt hatte (Vičs 1926, 174). Um sein Amt zu behalten, sollte er *„von den Fesseln dieser Lehrmeister frei“* werden (Vičs 1926, 172).

Die livländische Geistlichkeit hat gescheiter gehandelt. Als 1839 geplant wurde, ein lettisches Lehrerseminar in Livland zu eröffnen, hat man auch den künftigen Direktor des geplanten Seminars, Johann Zimse (1814 -1881), zur Lehre nach Deutschland geschickt. Doch für Zimse hat man auf lange Sicht das Lehrerseminar in Weisenfels gewählt, dessen Direktor Christian Wilhelm Harnisch (1787 – 1864) ein erbitterter Gegner von Dinter war. Harnisch hat sich gegen die Einführung der sokratischen Methode in den Religionsunterricht eingesetzt (Harnisch 1837, XII-XIII). Johann Zimse wurde rechtzeitig ermahnt, sich von den Ansichten Dinters fern zu halten (Vičs 1928, 131).

Sokratische Methode in der lettischen Lehrerausbildung im 20. Jh. und Anfang des 21. Jh.

Freilich gibt es einzelne pädagogische Ideen, die den Bildungsleitern manchmal sehr ungelegen vorkommen, dass alle möglichen Umwege gemacht werden, um sie zu meiden. Doch diese Ideen erstehen oft wieder, sie werden neu entdeckt und für die Lehrerausbildung angeboten. Im Rahmen des vorliegenden Beitrags wurde die Antwort auf die Frage gesucht, ob die sokratische Methode als eine Art Freisinnigkeit, als ein Demokratisierungsversuch des Unterrichtsverlaufs aus der lettischen Lehrerausbildung im 19. Jh. für immer ausgeschlossen wurde oder ob sie auch in späteren Zeiten Verbreitung fand. Als Quellen zur Klärung dieser Frage wurden pädagogische Lehrbücher benutzt, die in die lettische Lehrerausbildung im Zeitraum von 1919 bis 2001 eingesetzt wurden.
Bei der Erforschung dieser Frage wäre auch das Problem der Terminologie zu beachten: Bereits in der ersten Hälfte des 19. Jh. wurden zur Bezeichnung der sokratischen Methode mehrere Begriffe gebraucht. Dinter hat darauf hingewiesen , dass als Synonym zur Bezeichnung dieser Methode häufig die *entwickelnde Methode* benutzt wurde (Dinter 1836, 51). Sie wurde auch als *heuristische Lehrform* (altgr. ich finde zu heuriskein, (auf)finden, entdecken) (Schian 1900, 15) sowie als *synthetische Lehrform* bezeichnet (Heine 1860, 248; Schütze 1876, 178). Eine solche terminologische Vielfalt ist freilich auch in der lettischen pädagogischen Literatur des 20. und 21. Jahrhunderts zu vermuten. In den in dieser Zeit veröffentlichten pädagogischen Lehrbüchern wird tatsächlich über die Grundprinzipien der sokratischen Methode erzählt. Die Prinzipien dieser alten Methode sind darin aber in mit verschiedenen Begriffen bezeichneten Methoden zu suchen.

Sokratische Methode in der lettischen Lehrerausbildung im 20. Jahrhundert und am Anfang des 21. Jahrhunderts

Bei der Analyse der Beschreibungen der entsprechenden Methoden ist klar zu sehen, dass darin die Prinzipien der sokratischen Methode widergespiegelt werden, der Name von Sokrates wird in der Bezeichnung der Methode jedoch nicht erwähnt. Der größte Teil der Autoren verwendet in dieser Zeitperiode zur Bezeichnung der Methode folgende Begriffe: *Methode der teilweisen Suche oder heuristische Methode* (Skatkins 1984; Albrehta 2001), heuristische Methode (Babanskis 1989; Žukovs 1997; Albrehta 2001), *heuristische Gespräche* (Jesipovs und Gončarovs 1948; Iļjina 1971; Zelmenis 1975; Sorokins 1977; Baranovs 1979; Skatkins 1984; Babanskis 1987; Zelmenis 2000; Albrehta 2001), *Heuristik* (Dēķens 1919; Jesipovs und Gončarovs 1948), auch *heuristische Lehrweise* (Dēķens 1919) und *heuristische Tätigkeit* (Pētersons 1931), aber J. A. Students spricht von der *dialektischen Methode* (Students 1933).

Obwohl die Methode andersgenannt wird, weisen einige Autoren direkt auf den Zusammenhang der betrachteten Methode mit Sokrates und mit der Maieutik hin. So schreibt zum Beispiel der Historiker der Pädagogik L. Žukovs in seinem Lehrbuch der Geschichte der Pädagogik : „Wenn wir heutzutage von der heuristischen Methode wie von einer neuen Methode sprechen, so müssen wir uns daran erinnern, dass schon Sokrates sie verwendet hat (sokratische Methode)“ (Žukovs 1999, 29).

Andere Autoren der pädagogischen Lehrbücher weisen aber beim Beschreiben der heuristischen Methode nicht auf Sokrates als den Begründer dieser methodischen Tradition, sondern nur auf die Ähnlichkeit der Methode mit der Art der pädagogischen Tätigkeit von Sokrates hin. So erwähnt zum Beispiel E. Pētersons, indem er die heuristische Tätigkeit erklärt, die sokratische Methode als eine Bezeichnung für bestimmte Verfahren der heuristischen Tätigkeit. Er erklärt, dass die Arbeit im Unterricht in diesem Fall „an die Gespräche von Sokrates mit Jugendlichen und Erwachsenen erinnert“ (Pētersons 1931, 104). B. P. Jessipow und N. K. Gontscharow geben bei der Charakteristik des Wesens der heuristischen Methode nur einen Hinweis darauf, dass Sokrates die besondere Fertigkeit besessen hat, heuristische Gespräche zu führen (Jesipovs und Gončarovs 1948, 166). Deshalb wird auch als zweite Bezeichnung für heuristische Gespräche der Begriff *sokratische Gespräche* erwähnt (Jesipovs und Gončarovs 1948, 166).

Es kommt in pädagogischen Lehrbüchern auch vor, dass der Autor, indem er über die Prinzipien der sokratischen Methode erzählt, zur Bezeichnung der Methode einen seltsamen Terminus gewählt hat. Im 20.Jahrhundert kann so ein Terminus sogar missverstanden werden.So erzählt zum Beispiel J. Babanski über die Methode, zu deren Bezeichnung er den Terminus *sokratische Katechisation* verwendet. In der Beschreibung der Methode weist J. Babanski darauf hin, dass man zum Einsatz der Methode die Fertigkeit braucht, „das Denken des Schülers mit Fragen so zu lenken, dass er zu neuen Schlussfolgerungen und Verallgemeinerungen kommt“ (Babanskis 1989, 130).Hier kann man sehen, dass der Autor sehr genau die Prinzipien der Lehrweise von Sokrates beschreibt.Er erwähnt auch, dass einer solchen Fertigkeit, mit Fragen das Denken der Schüler zu leiten, „schon in der zur Zeit von Sokrates verwendeten Unterrichtsmethodik“ (Babanskis 1989, 130) große Aufmerksamkeit gewidmet wurde. J. Babanski gibt also wenigstens einen kleinen historischen Hinweis auf die Verbindung mit Sokrates.Es ist natürlich interessant, warum er zur Bezeichnung der Methode nicht den Terminus *sokratische Methode* verwendet, aber diese seltsame *sokratische Katechisation* gewählt hat. Die sokratische Methode wurde im 18. und 19. Jahrhundert viel im Religionsunterricht eingesetzt, der Religionsunterricht wurde aber damals oft einfach *Katechisation* genannt. Traditionell wurde in diesem Unterricht die *akromatische* Unterrichtsmethode eingesetzt, wo der Schüler den Unterrichtstoff einfach reproduzieren musste. Als aber die Lehrer im 18. und 19. Jahrhundert - unzufrieden mit einer solchen Unterrichtspraxis - anfingen, im Katecheseunterricht die sokratische Methode zu

verwenden, wurde ein solcher Katecheseunterricht, in dem der Lehrer die sokratische Methode verwendet hat, *sokratische Katechisation* genannt.Somit kann man bei J. Babanski sehen, dass er zur Bezeichnung der Methode einen Terminus verwendet, der eigentlich (historisch gesehen) Religionsunterricht bestimmter Art bezeichnet.

Außerdem können wegen der Verwendung des Wortes „Katechisation" in der Bezeichnung der sokratischen Methode Missverständnisse entstehen, weil man in der pädagogischen Terminologie des 20. Jahrhunderts mit katechetischen Gesprächen solche Gespräche versteht, die eingesetzt werden, um den neuen Unterrichtsstoff zu festigen, um zu wiederholen und um das vorher Gelernte zu prüfen, d.h. also nur um den Unterrichtstoff zu reproduzieren (Pētersons 1931, 104-105; Žukovs 1997, 75; Zelmenis 2000, 115) und um das Gedächtnis zu trainieren (Iļjina 1971, 290). Wenn in einem pädagogischen Terminus im 20. Jahrhundert der Name von Sokrates zusammen mit einem beliebigen anderen Wort mit der Wurzel „katech-" vorkommt, bedeutet es deshalb, dass zwei Antagonismen in einem Terminus verbunden worden sind.

Bei J. Babanskis kann man den Begriff nur missverstehen, es gibt aber auch einen Fall, wo, ohne die historische Entwicklung der Methode und das historische Verständnis von der Methode zu kennen, der Name von Sokrates in der Bezeichnung der Methode dort verwendet wird, wo er nach der Logik keineswegs vorkommen dürfte. Dieser Fall ist im Buch von N. Sorokin zu finden, in dem er bei der Erklärung der genetischen Unterrichtsmethode darauf hinweist, dass sie zwei Formen hat – die sokratische Form und die heuristische Form. Mit der sokratischen Form versteht er die Erzählung des Lehrers darüber, wie ein Wissen entstanden ist und sich entwickelt hat. Mit der heuristischen Form erklärt N. Sorokin dagegen die Methode, in der „die Schüler selbstständig Wissen erwerben und Schlussfolgerungen ziehen" (Sorokins 1984, 146). In diesem Fall verwendet der Autor den Namen von Sokrates im Begriff völlig unpassend in Bezug auf die von Sokrates und seinen Nachfolgern im 18. und 19. Jahrhundert vertretenen pädagogischen Prinzipien. Dabei sind die sokratische Form und die heuristische Form ihrem Wesen nach synonyme Bezeichnungen ein und derselben Methode; N. Sorokin bezeichnet aber damit zwei völlig entgegengesetzte Methoden. Die erwähnten Fälle sind anschauliche Beispiele dafür, dass freier Gebrauch von Termini und Begriffen nicht zuzulassen wäre. Bevor man Termini für die Methoden wählt und das Wesen der Methoden erklärt, müssen unbedingt die historische Entwicklung der Methode und die historische Verwendung des Terminus erforscht werden. So könnte man Missverständnisse und die Entstehung irrtümlicher Vorstellungen vermeiden.

Zwar schreibt E. Pētersons im Jahre 1931, dass „Versuche", eine der pädagogischen Tätigkeit von Sokrates ähnliche Fragemethodik im Unterricht „wieder ins Leben zu rufen" (Pētersons 1931, 104), immer noch sokratische Methode genannt werden. Im Übrigen ist das Verständnis für die direkte Herkunft der Methode aus der pädagogischen Praxis von Sokrates jedoch verschwunden. Die Autoren der pädagogischen Lehrbücher geben keine

ausführlichere Beschreibung über die direkte Verbindung der heuristischen Methode mit Sokrates. Eine Ausnahme bildet das Buch von J. A. Students, wo der Autor, indem er von der *dialektischen Methode* oder vom *Unterrichten durch Gespräche* spricht, erwähnt, dass Sokrates diese Methode als wissenschaftliche Methode geschaffen und begründet hat (Students 1933, 212).

Wenn man die in der Lehrerausbildung verwendeten Bücher chronologisch betrachtet, so kann man verfolgen, wie die Verbindung der heuristischen Methode mit dem Namen von Sokrates im 20. Jahrhundert aus pädagogischen Lehrbüchern verschwindet. Sie wird nur in den bis zum Jahre 1948 herausgegebenen Büchern erwähnt. Eine ähnliche Tendenz ist auch in beiden in Lettland herausgegebenen Wörterbüchern der pädagogischen Termini zu beobachten: in dem im Jahre 1978 herausgegebenen „Wörterbuch der pädagogischen Termini“ wird sowohl die heuristische Methode (Freidenfelds 1978, 126) als auch die sokratische Methode (Freidenfelds 1978, 127) erwähnt. Da die Termini in diesem Wörterbuch nicht erklärt werden, ist es natürlich schwer festzustellen, wie diese Termini verstanden werden. Doch in dem im Jahre 2000 herausgegebenen „Bedeutungswörterbuch der pädagogischen Termini“ ist nur Heuristik als „ein System logischer Verfahren zur Lösung eines Problems“ zu finden (Skujiņa 2000, 59).

Deshalb bleiben auch dem Leser der pädagogischen Fachliteratur heutzutage die alte Herkunft der heuristischen Methode und ihr Begründer oft unbekannt.

Verständnis der Autoren der pädagogischen Lehrbücher von der heuristischen Methode im 20. Jahrhundert und am Anfang des 21. Jahrhunderts

In der Beschreibung der heuristischen Methode haben die Autoren in allen analysierten im 20. und 21. Jahrhundert herausgegebenen pädagogischen Lehrbüchern das Wesentlichste, das die *sokratische Methode* schon im 18. und 19. Jahrhundert gekennzeichnet hat, beibehalten: sie wird als ein Gespräch des Lehrers mit den Schülern erklärt, in dem die Schüler - vom Lehrer geleitet - selbst die Wahrheit finden, etwas Neues entdecken, neue Erkenntnisse und neues Wissen erwerben.Deshalb erwähnt V. Zelmenis als Synonym zu heuristischen Gesprächen den Begriff *Neuentdeckungsgespräche* (Zelmenis 2000, 115).

Obwohl die Beschreibung und Erklärung der heuristischen Methode in pädagogischen Lehrbüchern im Laufe der Zeit immer kürzer, immer zusammenfassender werden, hat diese Methode mit der Zeit nichts an ihrer Bedeutung verloren. Die Wahl der Methode ist eng mit dem Ziel des Einsatzes der Unterrichtsmethoden verbunden. Dieses Ziel hat sich im Laufe der Zeit verändert: es sieht nicht mehr nur Beibringen und Aneignen von Wissen vor, sondern auch Erziehung und Entwicklung der Schüler (Babanskis 1989, 15). Schon im Jahre 1876 hat F.W.Schütze in seinem auf dem Territorium Lettlands in der Lehrerausbildung verwendeten Buch „Evangelische Schulkunde“ geschrieben, dass durch

geschicktes Fragen das Denkvermögen der Schüler entwickelt wird, und dass die Schule so zu einer „Denkschule“ wird (Schütze 1876, 173). Genauso wie F.W.Schütze sehen die Pädagogen auch im 20. und 21. Jahrhundert die Bedeutung der heuristischen Methode. J. A. Students betont die groβe Bedeutung der Methode, indem er schreibt, dass „sie seit Sokrates zu einem unentbehrlichen Bestandteil unseres ganzen Unterrichtens und unserer ganzen Erziehung geworden ist. .. Mit dieser Methode gelangt der Mensch zur Klarheit und Wahrheit“ (Students 1933, 212). In der sowjetischen Pädagogik wird erkannt, dass mit dieser Methode die Aktivität der Schüler im Unterrichtsprozess gefördert und die Fähigkeit zum selbstständigen Denken und zur Erkenntnis entwickelt werden (Jesipovs und Gončarovs 1948, 161; Zelmenis 1975, 7; 1987, 161; Babanskis 1989, 4, 131). Ähnlich weist auch M. Skatkin darauf hin, dass der Unterricht ..ohne heuristische Methode nicht vorzustellen ist. Indem die Denk- und Erkenntnisfähigkeit der Schüler entwickelt wird, hilft diese Methode den Schülern, sich den Unterrichtsstoff anzueignen – die Erkenntnistätigkeit der Schüler ist die Hauptbedingung bei der Aneignung der Unterrichtsinhalte (Skatkins 1984, 165). Und was das Kind selbst verstanden und entdeckt hat, die Erkenntnis, die er selbst gewonnen hat, macht mehr Freude und weckt Interesse für weiteres Suchen. „Aus eigenen Schlussfolgerungen gewonnene Erkenntnisse scheinen unbestreitbarer und wertvoller zu sein als die, die man vom Lehrer gehört oder im Buch gelesen hat. Deshalb haften sie auch besser im Gedächtnis“ (Zelmenis 1975, 20; 2000, 115-116).

Neben dem „entwickelnden Charakter“ (Albrehta 2001, 82) der heuristischen Methode ist als Vorteil dieser Methode noch zu erwähnen, dass sie die Vorbereitung der Schüler auf selbstständiges Lösen verschiedener Aufgaben und Probleme fördert, die Schüler lernen, sich aktiv am Lösungsprozess beteiligen (Skatkins 1984, 181; Žukovs 1997, 83).

Auβer dieser praktischen Verwendung der Denk- und Erkenntnisfähigkeit im Alltag ist unbedingt die von K. Dēķens schon im Jahre 1919 bemerkte Rolle der heuristischen Methode bei der Persönlichkeitsentwicklung des Menschen, bei der Entwicklung seines Intellektes und bei der Bildung seiner Weltanschauung besonders zu betonen: „Mit Interesse Gelerntes entwickelt den Geist, bleibt das ganze Leben lang das geistige Eigentum des Menschen und regt ihn zur Fortsetzung der geistigen Entwicklung an“ (Dēķens 1919, 116). Besonders wichtig ist diese Erkenntnis heute, wenn der Umfang des anzueignenden Wissens schnell zunimmt, ein Teil des Wissens schnell veraltet, und der Mensch deshalb sein ganzes Leben lang immer neues Wissen gewinnen muss.

Einschränkungen im Einsatz der heuristischen Methode

Obwohl die heuristische Methode viele Vorteile hat, sehen die Autoren der pädagogischen Lehrbücher, dass sie gar nicht so einfach einzusetzen ist. Sie sehen im Einsatz der Methode auch mehrere Einschränkungen.

Als erste Einschränkung wird im Einsatz der Methode die Vorerfahrung der Schüler erwähnt – neues Wissen und neue Erkenntnisse können die Schüler nur dann erwerben, wenn sie vom vorher angeeigneten Wissen, von der Vorerfahrung ausgehen. Somit ist die heuristische Methode „wenig effektiv, wenn praktische Fertigkeiten und praktisches Können gebildet werden müssen, wobei Vorzeigen und Nachmachen große Rolle spielen, ..sie ist schwer zu verwenden bei der Aneignung eines prinzipiell neuen Wissens, wo es nicht möglich ist, Vorerfahrung zu verwenden“ (Žukovs 1997, 84; vgl. Skatkins 1984, 192; Babanskis 1987, 162; 1989, 137) und „bei der Aneignung ..chronologischer Angaben und Daten anderer Art“ (Babanskis 1989, 137). Deshalb darf man, worauf mehrere Autoren hinweisen, die Bedeutung und Einsatzmöglichkeiten keiner Methode, auch der heuristischen Methode überschätzen. Es gibt keine universelle Methode, und die heuristische Methode ist oft mit anderen Methoden zu kombinieren (Iļjina 1971, 282; Babanskis 1987, 162; 1989, 131; Zelmenis 1997, 83).

In der Beschreibung derheuristischen Methodewird die selbstständige Tätigkeit der Schüler im Erkenntnisprozess betont. Gleichzeitig wird darauf hingewiesen, wie wichtig auf dieser Suche nach neuen Erkenntnissen und neuem Wissen die Rolle des Lehrers und seiner Fähigkeit ist, wie meisterhaft er das Gespräch leiten kann - „in den Händen des Lehrers ist der Faden des Gesprächs“ (Jesipovs und Gončarovs 1948, 166). Beim Gelingen heuristischer Gespräche haben die größte Bedeutung die Meisterschaft des Lehrers und seine Fähigkeit, Fragen zu stellen. Darin sind die Lehrbuchautoren im 20. Jahrhundert einig (Jesipovs und Gončarovs 1948, 168; Iļjina 1971, 288; Zelmenis 1975, 21; Sorokins 1977, 157; Baranovs 1979, 128), und ähnlich hat schon im 19. Jahrhundert F. W. Schütze betont, dass die „Frage die Seele der Lehrweise des Sokrates war” (Schütze 1876, 173). Als zweite Einschränkung im Einsatz der heuristischen Methode ist deshalb die „Fragekunst“ des Lehrers zu nennen, denn „nicht jedem Lehrer gelingen die Gespräche“ (Iļjina 1971, 286).

Besondere Aufmerksamkeit müsste man also in der Lehrervorbereitung der Fragenbildung und den Erklärungen darüber, wie heuristische Gespräche zu führen sind, widmen. Bei chronologischer Analyse der pädagogischen Lehrbücher ist leider festszustellen, dass die Autoren der Bücher im Laufe der Zeit gerade solchen Erklärungen immer weniger Aufmerksamkeit widmen. K. Dēķens erklärt in einigen Sätzen, mit welchen Fragen und warum der Lehrer die Kinder zum Denken bringen muss. (Dēķens 1919, 124-125). In den 30-er Jahren des 20. Jahrhunderts erwähnen E. Pētersons und J.A.Students überhaupt nicht die Voraussetzungen, die man bei der Fragenbildung in Betracht ziehen muss. Eingehender wird die Fragenbildung nur in den im Zeitraum von 1948 bis 1979 herausgegebenen pädagogischen Lehrbüchern der Autoren der sowjetischen Zeit erklärt. In dem im Jahre 1948 herausgegebenen Buch widmen die Autoren 4,5 Seiten Erklärungen mit Hinweisen, wie man heuristische Gespräche gestalten und Fragen bilden muss und welche Forderungen an die Antworten der Schüler zu stellen sind. Es werden auch kurze Mustergespräche

angeboten (Jesipovs und Gončarovs 1948, 167-171). Doch im Laufe der Zeit werden diese eingehenden Erklärungen zu kurzen Forderungen in Bezug auf die Fragen. Sie müssen kurz und genau sein, es dürfen keine Fragen sein, die mit *ja* oder *nein* zu beantworten sind, der Lehrer muss Doppelfragen vermeiden, auf die man zwei oder mehrere Antworten geben muss, die Fragen sind in logischer Reihenfolge und mit ansteigendem Schwierigkeitsgrad zu stellen (Zelmenis 1975, 21-22; Sorokins, 1977, 159; Baranovs 1979, 128). Aber in den um die Jahrhundertwende vom 20. zum 21. Jahrhundert herausgegebenen Büchern werden die Fragen und Fragenbildung fast gar nicht mehr erwähnt (Žukovs 1997; Zelmenis 2000; Albrehts 2001).

Die dritte von den Autoren erwähnte Einschränkung ist die Zeit (Sorokins 1977, 159; Babaskis 1987, 162; Žukovs 1997, 84; Zelmenis 2000, 116; Albrehta 2001, 82): „eine solche allmähliche Führung der Schüler zum Verständnis des neuen Unterrichtsstoffes nimmt viel Zeit in Anspruch“ (Iljina 1971, 286). Der groβe Umfang des zu erwerbenden Wissens und die kurze dafür vorgesehene Zeit regen natürlich die Lehrer nicht zur Wahl der heuristischen Methode an. Mehrere Autoren der pädagogischen Lehrbücher stellen fest, dass die Lehrer deshalb sich oft für den einfachsten Weg entscheiden und auf den Einsatz der heuristischen Methode verzichten. N. Sorokin weist in seinem Lehrbuch der Didaktik darauf hin, dass „die Lehrer in der Unterrichtspraxis sich lieber Methoden monologischer Wissensvermittlung (der Erzählung, der Erklärung, dem Vortrag) zuwenden“ (Sorokins 1977, 157; vgl. Iljina 1971, 287). M. Skatkin erwähnt Forschungen, die „beweisen, dass richtige heuristische Gespräche in der Unterrichtspraxis selten verwendet werden“ (Skatkins 1984, 165). Er folgert daraus, dass der Unterrichtsprozess sich leider oft „nur auf die Reproduziertätigkeit der Schüler beschränkt“ (Skatkins 1984, 189). M. Skatkin schreibt auch, dass in Bezug auf die Bildung„ ..Unzufriedenheit mit dem in der Schule erreichten Niveau der intellektuellen Entwicklung der Schüler geäuβert wird. .. Es ist so, weil nicht genug Aufmerksamkeit ..dem Niveau gewidmet wird, auf dem die Erkenntnistätigkeit abläuft“ (Skatkins 1984, 166). Um eine solche Situation zu vermeiden, braucht man entsprechende Vorbereitung der Lehrer auf die Arbeit mit der heuristischen Methode. Wenn man aber auf die immer zunehmende Bedeutung der heuristischen Methode und auf ihre Erläuterungen in den am Ende des 20. Jahrhunderts und um die Jahrhundertwende vom 20. zum 21. Jahrhundert herausgegebenen pädagogischen Lehrbüchern schaut, so ist im Vergleich zu anderen im 20. Jahrhundert veröffentlichten Büchern ein Widerspruch zu beobachten – indem die Bedeutung der Methode im Unterrichtsprozess immer gröβer wird, werden die Erläuterungen immer kürzer. Wenn die Rede in allen Zeiten von einer ununterbrochenen Entwicklung und Vervollkummnung der Unterrichtsmethoden gewesen ist (Students 1933, 216; Babanskis 1985, 18; 1989, 3; Albrehta 2001, 68), so entsteht bei der Analyse der im Laufe fast eines ganzen Jahrhunderts herausgegebenen pädagogischen Lehrbücher in Bezug auf die sokratische Methode = heuristische Methode der Eindruck, dass diese Methode bis heute nicht vervollkommnet,

sondern verarmt ist. Zur Diskussion könnte hier folgende Frage gestellt werden: Könnte vielleicht das Verständnis von dieser Methode bereichert und ein Beitrag zum Einsatz der Methode im 21. Jahrhundert geleistet werden, wenn die Erläuterung und Beschreibung der heuristischen Methode von der historischen Entwicklung ausgehen würde?

Quellen

Albrehta. 2001. *Didaktika.* Rīga: RaKa.

Babanskis. 1987. *Pedagoģija: Mācību līdzeklis pedagoģisko institūtu studentiem*. Rīga: Zvaigzne.

Babanskis. 1989. *Mācību metodes mūsdienu vispārizglītojošajā skolā*. Rīga: Zvaigzne.

Baranovs. 1979. *Pedagoģija: Mācību līdzeklis pedagoģisko institūtu pamatskolas pedagoģijas un metodikas fakultāšu studentiem*. Rīga: Zvaigzne.

Dehķens. 1919. *Rokas grahmata pedagoģijā*. Rīga: Izglītības kooperatīvs „Kultūras balss".

Dinter. 1836. *Die vorzüglichsten Regeln der Katechetik, als Leitfaden beim Unterrichte künftiger Lehrer in Bürger= und Landschulen*. Neustadt an der Orla: Johann Karl Gottfried Wagner.

Harnisch. 1837. *Entwürfe und Stoffe zu Unterredungen über Luthers kleinen Katechismus; ein Hülfsbuch für Lehrer im evangelischen Christenthum. Erster Theil*. Weißenfels: Verfasser.

Heine, G. 1860. Über den Begriff und die Berechtigung der sogenannten sokratischen Lehrform.*Die Evangelische Volksschule. Praktisch-theoretisch pädagogische Zeitschrift für das Preußische evangelische Volksschulwesen, insbesondere für die Provinz Sachsen*, 244-263.

Iļjina. 1971. *Pedagoģija*. Rīga: Zvaigzne.

Jesipovs, Boriss, und Nikolajs Gončarovs. 1948. *Pedagoģija: Mācības grāmata pedagoģiskām skolām.* Rīga: Latvijas Valsts izdevniecība.

Pētersons. 1931. *Vispārīgā didaktika*. Rīga: A. Gulbis.

Platon. 1957. *Sämtliche Werke, Bd. 2: Menon, Hippias I, Euthydemos, Menexenos, Kratylos, Lysis, Symposion*. Reinbek bei Hamburg: Rowohlt.

Schütze. 1876. *Evangelische Schulkunde. Praktische Erziehungs- und Unterrichtslehre für Seminare und Volksschullehrer*. Leipzig: Druck und Verlag von B. G. Teubner.

Skatkins. 1984. *Vidusskolas didaktika: Dažas mūsdienu didaktikas problēmas: Mācību līdzeklis vispārizglītojošo skolu vadošo kadru kvalifikācijas celšanas fakultāšu klausītājiem un pedagoģisko augstskolu studentiem*. Rīga: Zvaigzne.

Sorokins. 1977. *Didaktika: Mācību līdzeklis pedagoģisko institūtu studentiem*. Rīga: Zvaigzne.

Stephani. 1835. *Handbuch der Unterrichtskunst nach der bildenden Methode für Volksschullehrer*. Erlangen: Palm'schen Verlagsbuchhandlung.

Students. 1933. *Vispārīgā paidagoģija: Zinātne un māksla sevis un citu audzināšanā*. Rīga: Fr. Baumaņa apgādībā.

Wolter, J. Ch. 1837. Ueber die Zirau=Dzerwensche Schulanstalt. *Das Inland. Eine Wochenschrift für Liv,- Esth- und Kurland's Geschichte, Geographie, Statistik und Litteratur*. Zweiter Jahrgang. Nr. 3: 41-48.

Zelmenis. 1975. *Mācību metodes padomju skolā: Mācību līdzeklis*. Rīga: P. Stučkas Latvijas Valsts universitāte.

Zelmenis. 2000. *Pedagoģijas pamati*. Rīga: RaKa.

Žukovs. 1997. *Ievads pedagoģijā: Pamatkurss*. Rīga: RaKa.

Žukovs. 1999. *Pedagoģijas vēsture: Pamatkurss*. Rīga: RaKa, 1999.

Literatur

Freidenfelds. 1978. *Pedagoģijas terminu vārdnīca*. Rīga: Liesma.

Käbisch. 2009. *Erfahrungsbezogener Religionsunterrricht: eine religionspädagogische Programmformel in historischer und systematischer Perspektive.* Tübingen: Mohr Siebeck.

Loska. 1995. *Lehren ohne Belehrung. Leonard Nelsons neosokratische Methode der Gesprächsführung*. Bad Heilbrunn: Julius Klinkhardt.

Žukovs, Leonards, und Anna Kopeloviča. 1997. *Skolotāju izglītība un pedagoģiskā doma Latvijā. I daļa*. Rīga: RaKa.

Bennack. 1975. *Gustav Friedrich Dinter. Seine Bedeutung für Schule und Lehrerstand.* Ratingen/ Postfach: Aloys Henn Verlag.

Schian. 1900. *Die Sokratik im Zeitalter der Aufklärung. Ein Beitrag zur Geschichte des Religionsunterrichts*. Breslau: Dülfer.

Skujiņa, V., I. Beļickis, D. Blūma, u.a. 2000.*Pedagoģijas terminu skaidrojošā vārdnīca*. Rīga: Zvaigzne ABC.

Vičs. 1926. *Latviešu skolu vēsture. Kurzeme no 1800.-1885.gadam*. Rīga: R. L. B. Derīgu grāmatu nodaļas izdevums.

Vičs. 1928. *Latviešu skolu vēsture. Trešā grāmata: Vidzeme no 1800. - 1885. gadam*. Rīga: R.L.B. Derīgu grāmatu nodaļas izdevums.

Learning in Rehabilitation Contexts

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Abstract

Rehabilitees´ conceptions of holistic learning and rehabilitation describe the manifestation of rehabilitation as the realizer of everyday actions. Holistic rehabilitation is thus part of the rehabilitee´s everyday conditions. It means constructing interaction relationships together with other significant people. The question is of socioconstructivist learning and making it possible.
Keywords: learning, rehabilitation, human value

The aim of the research

Rehabilitation as learning was viewpoint of my doctoral thesis (Koukkari 2010). It produces a description of rehabilitation and recovery through verbalized conceptions of the disabled persons themselves. The research was based on the philosophical question of human value and the respect of a disabled person in his/ her everyday context emphasizing justness and equity in our society. The aim was to describe the rehabilitees' various experiences and meanings within the framework of holistic rehabilitation and recovery. The process of learning and change was examined through various factors connected to the learner's action.

The data and method of the research

Present qualitative research based on semi-structured interviews from 22 multi-disabled rehabilitees at various ages. The data was analysed by using phenomenographic approach and qualitative analyses as a method. Methodologically, the question is thus of listening to the voices of disabled persons and of understanding their life situations. In phenomenographic approach the research objects are people´s various conceptions concerning everyday phenomena and different ways of understanding them (Marton 1988).

Recognization and validation of human value in rehabilitation

Rehabilitation is described as people´s personal learning, growth and change processes in which the central starting point is the rehabilitee´s or learner´s active participation, motivation and possibility to influence on the attainment of their aims. (Development program for rehabilitation research 2004). Individual motivation will be formed, when he/ she participates in some activity in a community which values learning. In rehabilitation this means creating rehabilitation environments promoting learning so that the learner will find it possible to develop the identity of an active learner and to be responsible for his/ her learning. Respectively, the rehabilitation environment in which the rehabilitee does not experience appreciation and his/ her aims are not listened to causes frustration and the weakening of identity and self-efficacy. The aim of the learning process in rehabilitation is an independent, self-realizing, self-governing and socially capable person.

In rehabilitation individual autonomy is emphasized as a significant factor in promoting leaning and change. Autonomy may be limited by physical or social environment or an injury, for instance. Goal-oriented rehabilitation will not succeed without the personal activity and motivation of a learner. In encountering a person through the respect to his / her autonomy, offering support and encouraging to participation promote the learning and change processes connected to the life situation. Caring and showing it motivate the rehabilitee in learning and growth processes

The core of rehabilitation is thus to see the rehabilitee as a unique individual whose rehabilitation goals are defined in the cooperation of the rehabilitee and the professional staff of rehabilitation through dialogue. The self-defined goal of the rehabilitee is valuable and unique. It can be a dream of a goal which doesn't seem realistic in the beginning. In situations like this the rehabilitation staff is presupposed to have human understanding and sensitivity. They are demanded a lot of right words and the right attitude. In the core of rehabilitation there is the rehabilitee as a learner or as a willing and acting subject both in his/ her learning process and in relation to the rehabilitation staff.

The choice of rehabilitees

Concretizing the aims is realized through the learning and changing processes of a rehabilitee. This will create expectations. Attaining them will form a goal for a rehabilitee to strive for. Then they need not question realism, since even the smallest step forward is a great advance for a rehabilitee in relation to his/ her individual goal. This refers to an effect whose influence on each individual is different. The size of the effect is defined by the

rehabilitee him/ herself through his/ her feelings. The feelings arise from the rehabilitee´s subjective experiences of rehabilitation. The conceptions of the rehabilitees draw a picture of rehabilitation which makes a composition, a construction of how to make true the promotion of functioning, support of autonomous coping, promotion of well-being, prevention of social exclusion and strengthening life control in the life of the disabled. (See e.g. Curtis 1998; Dougherty 1991)

In addition to learning and change processes the rehabilitation is understood as the empowerment process of the rehabilitee in which the dynamic interaction relationship between an individual and environment is emphasized (according to Onken, Craig, Ridgway, Raplh & Cook 2007). The dynamic character of interaction contains both individual features and those of environments which either promote or prevent the action (Nissilä 2006). The aim is to reconstruct one´s life, finding new meanings in a changed situation the control of which presupposes resources to cope with and observe life from the changed viewpoint of disability. Seeking and finding solutions and combining them with the present everyday reality is challenging for the rehabilitee and his/ her social environment. In this rehabilitation process the guidance and support of a specialist is often the prerequisite of rehabilitation, in spite of the above stress on the role of the rehabilitee in the rehabilitation process. The rehabilitee cannot be demanded either a new self-control of resources or integration. A specialist recognizes the character of the rehabilitee´s resources and makes it possible for him/ her to proceed in the hopeful direction in the learning process.

Interaction is a central factor also in the social-cognitive learning theory by Bandura (1986). It emphasizes the meaning of interaction in learning and the interaction between an individual, his/ her action and environment in striving for the intentional and wished goal. Bandura uses the conception of self-efficacy to describe an individual´s belief in his/ her personal abilities. He considers the development of this feeling a significant facto in a person´s learning and growth. (Bandura 1986; Armitage & Conner 2000.)

Findings

The research findings were presented as description categories. The factors promoting learning were the rehabilitees´ readiness to independent life, chance to act according to one´s own intentions, personal activity and motivation, possibility to influence on planning the targets, experiences of success and the prompting of the nearest. As the hinders of learning were mentioned conflicting views of the learner and the supervisor about the appropriateness of aims as well as the undervaluing the learner´s autonomy, which were connected to the wellbeing, satisfaction and self-efficacy of the rehabilitee.

During the favourable learning and growth process it was possible to find new resources in oneself and learn alternative ways to act in various everyday tasks and situations. The factors promoting learning were the preparedness of a rehabilitee to independent coping, possibility to act according to individual aims, personal activity and motivation, possibility to influence on designing the goals, the experiences of success and the encouragement of the nearest. As the factors preventing learning were introduced the conflicting conceptions of the learner and supervisor about the meaningfulness of the goals as well as neglecting the autonomy of the learner which are connected to the rehabilitee´s wellbeing, satisfaction and self-efficacy.

My research showed how thin the rehabilitation project may be. The plan means actually continuity in the realization of rehabilitation. In rehabilitation practices the participation of a rehabilitee in the planning and decision making concerning him / her is accidental. The rehabilitees experience that rehabilitation and recovery do not go hand in hand, but are separate processes. Rehabilitees even experience having been abandoned and left outsiders in the information and organization of the matters concerning their rehabilitation. Rehabilitation may have been finished because of the lack of rehabilitation services. When the situation is like this, more and more should be talked and acted for human value and its respect. Consequently the question is: What is considered important and what do we act for? When will the tasks of the rehabilitation coordinators be seen necessary?
The rehabilitees experienced the significance of the rehabilitation staff as a valuable and promoting factor in their rehabilitation. The special competence areas of the rehabilitation staff were, however, experienced as an unclear and partly a preventing factor in rehabilitation. The competence of an occupational therapist was unexceptionally connected to the functions of hands and that of a physiotherapist to walking and promoting the functions of legs. An important point of view was the conception of a physiotherapist´s competence limited to the promotion of the functioning of legs with the central element in teaching and guiding the walking ability. The rehabilitees experienced the rehabilitation interventions as promoting the recovery when the competence of the rehabilitation staff was connected with many different elements which promoted autonomous functioning and coping. Rehabilitation was not promoted by the activities which focused rehabilitation on a limited sub-area of the body function. A fragmentary human conception results inevitably in sector specialists when there is a danger of losing the goal of rehabilitation and forget social participation and subject-oriented acting.

Conclusion

The rehabilitees interviewed experience that rehabilitation includes a lot of things that they have to cope with themselves: to learn to act in a new way, keep motivation and dreams, encounter the everyday realism as well as direct their eyes towards the future. When dealing with these questions they seek for answers to the matters which are connected to people´s control of life and individual resources in the phases promoting rehabilitation. Referring to them, understanding rehabilitation as a personal learning and change process reveals the rehabilitee´s active role and possibilities to influence as well as the relationship between both the rehabilitee and the environment as the starting point of rehabilitation activities.

It happens too often that the rehabilitation worker does not listen to what the rehabilitee has to say. Often in the rehabilitation it is enough in the beginning to take a psychic touch and receive the rehabilitee´s signal: “Listen to me!” The question is about giving attention to a person and encountering him/ her in everyday matters. Conscious presence of a rehabilitation worker in the situation which is unique to the rehabilitee promotes the rehabilitation process to positive direction. (Koukkari 2010)

Discussion

Autonomous learning, supervised by professionals includes thoughts, feelings and planned and adapted actions that are all managed by the learner to reach learning goals. Actions, environments and persons connected to these actions and environments mutually impact each other. According to Pintrich (2000) learners are active participants who consider their actions in relation to aims and standards. If a skill is going to be mastered or accomplished successfully, the learner needs methods or strategies suitable for the task and setting. No autonomous strategy will function the same way from one person to the next, and few or no strategies will function optimally for one person for all tasks and opportunities. Thus strategies are dependent on the actual situation, the persons involved and the specific tasks. In essence, autonomous learning mediates the relation between context, learner characteristics and performance. It is not, however, solitary learning, but presupposes collaboration of all persons involved both in rehabilitation and all learning.

References

Armitage, Christopher J. & Conner, Mark. 2000 Social cognition models and health behaviour: a structured review. *Psychology and Health,* 15: 173–189.

Bandura, Alberta. 1986. *Social foundations of thought and action.* A social cognitive theory. Prentice-Hall, Inc., Englewood Cliffs. New Jersey.

Curtis, Rebecca S. 1998. Values and valuing in rehabilitation. *Journal of Rehabilitation,* February/March: 42–47.

Dougherty, Charles J. 1991. Values in rehabilitation: happiness, freedom and fairness. *Journal of Rehabilitation.* January/February/March: 7–12.

Koukkari, Marja. 2010. *Recovery as a goal. Conceptions of rehabilitees on holistic rehabilitation and recovery.* Acta Universitatis Lapponiensis 179. Faculty of Social Sciences.Lapland University Press.

Development programme for rehabilitation research. Helsinki 2004. Publications of the Ministry of Social Affairs and Health. Researches 2003:19.

Marton, Ference. 1988. Phenomenography: a research approach to investigating different understandings of reality. In *Qualitative research in education: focus and methods*, toim. Teoksessa Sherman R.R. & Webb R.B., 141–161. Falmer. London.

Nissilä, Säde-Pirkko. 2006. *Dynamic Dialogue in Learning and Teaching - Towards Transformation in Vocational Teacher Education.* Acta Universitatis Tamperensis 1179. Faculty of Education.Tampere University Press.

Onken, Steven J. & Craig, Katherine M. & Ridgway, Priscilla & Ralph, Ruth O. & Cook, Judith A. 2007. An analysis of the definition and elements of recovery: a review of the literature. *Physiatric Rehabilitation Journal,* 31 (1): 9–22.

Pintrich, P. R. 2000. The role of goal orientation in self-regulated learning. In *Handbook of self-regulation*, eds. M. Boekarts, P.R. Pintrich & M. Seidner, 451-502. San Diego, CA: Academic Press.

Sustainability on Earth WebQuests as Problem-Solving Activities: Can Physical Sciences Teachers Rely on Them?

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Abstract

WebQuests are problem-solving activities that are supposed to be addressed by dealing with information that is available mainly on the internet. WebQuests integrate problem-solving challenges with ICT students' motivating power and they may be more useful learning tools than the usual free internet-based Problem-Based Learning settings. However, the educational value of WebQuests depends heavily on the type of task they include. This paper aims at analysing the problem-solving potential of 16 WebQuests, available from schools and universities sites, focusing on Sustainability on Earth. Results indicate that WebQuests differ with regard to the issues addressed in the analysis. Most of them tend to focus on science content and have very low cognitive and creativity demands. The results suggest that science teachers should not rely on the available WebQuests, but rather they should be able to analyse them critically in order to select those that better fit the problem-solving purpose of a WebQuest.

Keywords: WebQuests, Problem-Based Learning, sustainability on earth, science education, teacher education

Introduction

Pre-service teacher education programmes include Information and Communication Technology (ICT) courses. Some of these courses deal with WebQuest analysis and development. WebQuests are inquiry-based or problem-solving activities that face students with a task that is supposed to be answered by dealing with information that is available mainly on the internet (Dodge 1998). By following a set of predetermined steps (process), students will prepare the product specified in the task, both process and product being assessed by some criteria that are made explicit in advance (evaluation). As is known, students usually enjoy engaging in computer-based activities. Hence, WebQuests integrate problem-solving challenges with the motivating power of ICT for students (March 2005). However, there is some empirical evidence (Silva 2006) that WebQuests may be more useful learning tools than are the usual free internet-based Problem-Based Learning (PBL) settings.

Thus, WebQuests' educational value depends heavily on the type of task they include. Some tasks just ask students to collect data while others may require students to engage in problem-solving activities or in evaluation or synthesis activities (Dodge 2002). As WebQuests became well known, the diversity of levels of expertise of their authors may have increased. In addition, WebQuests developed by novices are often made available online. A consequence of this is that high quality problem-based WebQuests may coexist with low quality routine WebQuest-based activities. As WebQuests are freely available online, it is worth analysing them in order to find out whether or not teachers need to be both made aware of the diversity of their characteristics and educated in order to be able to select the most appropriate ones for PBL.

Objective

This paper aims at analysing WebQuests available from school and university websites and that focus on the Portuguese physical and natural sciences Sustainability on Earth curriculum sub-theme (hereafter referred to as 'theme'). This junior high school theme was selected, as it is a theme that encompasses cognitive, social and attitudinal components, and therefore is an appropriate theme to be tackled through a PBL approach.

Theoretical background

ICT in the Portuguese school curricula and in science teacher education

As far as the Portuguese basic school curriculum is concerned, it acknowledges ICT as a valuable educational resource. In addition, it advises that ICT should be used for the purpose of both "knowledge construction tasks" (DEB 2001, 22) and "appropriate use of diverse languages" (DEB 2001, 18). It also suggests that face-to-face or virtual interchange activities should be fostered through ICT (DEB 2011). Moreover, it recommends that teaching should be organized so that diverse information sources and ICT can be used "to develop problem-solving strategies" (DEB 2001, 23). From what has been stated earlier in this paper, WebQuests can help to fulfill this curriculum aim and therefore should be used in the science classroom.

Before the implementation of the Bologna process, pre-service teacher education in Portugal was done mainly through five-year undergraduate programmes on teaching a subject. These programmes combined courses on the subject (e.g., science) with courses on how to teach the subject, the basics of education and teaching practice. Every prospective teacher took at least one course on Educational Technology, or a course on ICT or equivalent (Gomes 2006; Costa and Carvalho 2006). Whatever the name, one of the issues dealt with in these ICT-

related courses was that of WebQuests. Thus, in these courses, prospective teachers learned about the concept, the development requirements and the educational use of WebQuests. They also learned how to analyse WebQuests critically. This means that science teachers who completed their undergraduate programmes over the last ten years or so may be able to deal with WebQuests, from both the user and the developer perspectives. The same applies to the teachers formed through the newly created masters in teaching (under the Bologna philosophy). Nevertheless, teachers who completed their first degree in the last century may not be aware of the educational value of this teaching tool, may feel uncomfortable in selecting and using it and may not possess the required technical skills to develop new WebQuests, unless they have been recently enrolled in masters programmes or in-service teacher education short courses focusing on ICT. A visit to the in-service teacher education courses certification entity website (http://www.ccpfc.uminho.pt) confirms that there are many short courses for in-service teachers focusing on ICT. These courses can be attended by science teachers even though they are not specially targeted at them. Also, an analysis of courses of studies of Portuguese masters programmes targeted at in-service science teachers indicates that most of them include at least a compulsory or an optional ICT-related course. This is the case for the Master of Arts – Educational Supervision on Science Teaching, at the University of Minho, which includes an optional course on Hypermedia and the Information Society. The information provided so far indicates that science teachers may have learned about WebQuests during their undergraduate programmes, may have become familiar with this educational tool when they attended in-service masters programmes or in-service short courses or may have no formal education on the issue. Even without formal instruction on the topic, the latter group of teachers, probably the largest one, may come across and feel like using WebQuests to fulfil the National Curriculum requirements with regard to the educational use of ICT.

WebQuests and Problem-Based Learning

As mentioned above, WebQuests are problem-solving activities devised to be addressed by the students through information searches mainly using online information sources. According to Dodge (1997), a WebQuest includes six sections, as follows:

- Introduction: this should motivate the student/solver to engage with the task;
- Task: this describes student expected achievements, therefore it is a very important part of the WebQuest;
- Process: this describes the methodology that should be used to fulfil the objective underlying the task;
- Resources: this section provides the student with selected online resources that can be used to complete the task; usually, they include websites relevant for the task that

are appropriate to the characteristics of the solver. Instead of being accessed directly by the URL, they should be named after their main content (using a sort of keyword) so that the user can easily identify their relevance for each part of the process;
- Evaluation: this provides the student with information on how to evaluate his/her own work;
- Conclusion: without providing an answer to the task, this should motivate the student to carry out further work related to the topic.

A few years later, Carvalho (2002) added two other elements to Dodge's list:

- Home page: this informs the visitor about the site he/she is accessing (e.g., type of activity, author, target school level, date of construction, etc.) and should include information on credits and author's contact, target population, date of development, etc.;
- Help page: this explains how the site works (offering, for example, information for performing some technically based activities) and advances strategies for how the WebQuest can be used.

Dodge (2002) formulated a taxonomy of WebQuests that includes 12 types of tasks that can be briefly defined as follows:

- Re-telling: write a report, a summary, a text;
- Compilation: organize information selected from several sources;
- Mystery: create a fictional puzzle by synthesizing information;
- Journalistic: Write a deep, broad, fair, creative, accurate report;
- Design: build in authentic constraints, for example, a product being needed;
- Creative Product: produce something with creativity and self-expression;
- Consensus Building: integrate opinions and facts for a specific audience;
- Persuasion: convince someone of your opinion;
- Self-Knowledge: answer complex questions about oneself;
- Analytical: find and explain similarities/differences, cause/effects;
- Judgment: evaluate (behaviour, opinions, etc.) based on criteria;
- Scientific: approach a question through scientific methodology.

It should be noticed that there is no order in this list of tasks and that a WebQuest may combine two or more types of tasks. However, bearing in mind the types of WebQuests defined and the time needed to solve the task (Dodge 1997), a given type of task may fit one type of WebQuest better than another. Thus, short WebQuests, that is WebQuests that can be solved in a one to three class hours, usually comprise low cognitive requirement tasks, focusing on understanding new information or integrating new information with previous

knowledge. Long WebQuests, that is WebQuests that may take one week to one month to be solved, fit better to medium or high cognitive requirement tasks, concentrating on re-examination of previous knowledge, increase in the accuracy of previous knowledge, transformation of one's knowledge and points of view, and examination of things from a different perspective.

PBL is a student-centred teaching approach in which students learn by solving problems (Lambros 2002). In PBL settings, learning occurs in multiple dimensions, including content knowledge, procedural knowledge, attitudinal knowledge, interpersonal relationship skills, learning how to learn skills, etc. As it acknowledges active learning, PBL leads to great changes in teachers' and students' usual roles. Thus, teachers do not teach in the usual sense; they create conditions for students to learn by solving problems. Hence, they are guides or tutors that play the key role of keeping students on the job (Lambros 2002). Students, in their turn, have to look for solutions for the problems and to share those solutions with their own teacher and classmates. They are not sitting there waiting for the teacher to tell them new ideas; rather, they have to look for the new ideas and tell them to the teacher and colleagues. This also applies to WebQuest-based educational environments. As Mentxaka (2004) argues, WebQuests facilitate teachers' job in the classroom, as they themselves guide students' work.

In the original PBL contexts (Berkel, et al. 2010), students solved problems by looking for information in environments other than the internet. However, over the last five years or so, a few books (Savin-Baden and Wilkie 2006; Savin-Baden 2007) dealing with PBL online came out. Despite the fact that WebQuests were not at first associated with PBL, they may nevertheless include PBL activities (Leite, et al. 2007) depending on the type of task they include. Of course, some types of tasks (e.g., compilation tasks) make low demands, from both a cognitive and a procedural point of view, and they would not be therefore the best examples of WebQuests for problem based learning online. However, WebQuests with judgment or scientific tasks would be good examples of WebQuests as online problem solving activities.

Methodology

Sixteen WebQuests focusing on the sub-theme Sustainable Development and Resources Sustainable Management that could be accessed on Portuguese school and university sites were analysed with regard to: the science content dealt with in the task; the type of task; the cognitive level of the questions associated with the task; and the type of product demanded. The WebQuests were content analysed by two of the authors separately. Afterwards, the results of the two analyses were compared and a discussion was held among the three authors before consensus was reached. The categories of analysis regarding types of task

and cognitive level of the task were taken from the literature, namely from Dahlgren and Öberg (2001) and Dodge (2002), respectively. These categories are given in tables 2 and 4. Categories for other relevant issues were developed for the purpose of this study.

Results

Most of the WebQuests include just one task. However, one WebQuest includes two sub-tasks and another one includes four sub-tasks. This means that for 16 WebQuests there are 20 sub-tasks. If one does not differentiate between tasks and sub-tasks, one can notice that most (12, that is 60%) of the tasks are presented as orders, as shown in table 1; they describe an action that students are supposed to carry out. The remaining eight tasks were presented as interrogations; they ask a question that students are supposed to answer.

Table 1. Format of tasks or sub-tasks (16WQs; 20 tasks)*

Format	*f*	*%*
Order	12	60
Interrogation	8	40

*1WQ has 2 sub-tasks; 1WQ has 4 sub-tasks

As shown in table 2, the majority of the order-like tasks are meaning-oriented. An example of this type of task is as follows: “Each small group should do research work on one of the following renewable energy sources: sun, water, biomass, wind, geothermal energy”.
In the case of the interrogation-like tasks, tasks are spread over several categories, with a quarter of them classified at the encyclopedic level, which is the lowest level, from a cognitive point of view. An example of a task classified in this category is as follows: “What are the possible uses of water?”
Solution-oriented tasks appear in both formats, although with low absolute frequencies. This is not good, as this type of task is the most interesting from a PBL point of view. “What could you and your colleagues do in order to save water in school?” is an example of this type of task.

Table 2. Cognitive level of tasks or sub-tasks (16WQs; 20 tasks)

Cognitive Level	*Order-like task (n=12)*		*Interrogation-like task (n=8)*	
	f	%	f	%
Encyclopaedic	0	00.0	2	25.0
Meaning-oriented	7	58.3	3	37.5
Relational	0	00.0	0	00.0
Value-oriented	0	00.0	0	00.0
Solution-oriented questions	5	41.7	3	37.5

Although March (2005) argues that WebQuests can facilitate students' relationship of school acquired knowledge with daily life, 40% of the tasks analysed focus on school science only (table 3). The following example is representative of this type of task:

> *"You and your team are asked to select one of the sub-themes below, look for information on it, and organize this information into a PowerPoint to present it to the other teams and to your teachers in the final class.*
> *Sub-themes: What is the greenhouse effect and what originates it?; Clean technologies, […]"*

Table 3. Context of tasks or sub-tasks (16WQs; 20 tasks)

Context	*f*	*%*
School Science	8	40.0
Science & Technology Research	0	00.0
Daily life	12	60.0

However, the remaining 12 tasks focus on daily life and therefore can facilitate the interrelationship between school science and students' daily life: "What could you and your colleagues do in order to save water in school?; What could you do to save water at home?". Although the set of WebQuests analysed includes a diversity of types of tasks (table 4), most of the tasks are Compilation tasks (table 4) with low cognitive requirements and can hardly be classified as problem-solving tasks. An example of a compilation task is as follows: "What are the possible ways you can use water?".
Examples of more creative and cognitively demanding tasks are the tasks that ask students to "Prepare a campaign for the use of clean energy to be put in action in your school in the world environment day" (Design task) or to do a role playing exercise:

> *"You should take the role of a member of the team working for the environment in your city. In a city council meeting, you should discuss the importance of collective practices for the solution of environmental problems as well as for global resources management".*

Table 4.Type of task or sub-task (16WQs; 20 tasks)

Type of task	*f*	*%*
Compilation Tasks	13	65.0
Mystery Tasks	1	05.0
Design Tasks	1	05.0
Creative Product Tasks	2	10.0
Persuasion Tasks	1	05.0
Role Playing	2	10.0

As far as the final product is concerned, the WebQuests analysed ask students to prepare and/or present a variety of products, ranging from answering questions, writing a text for an oral presentation or participating in a discussion to designing a leaflet, creating a blog or organizing a persuasion campaign (table 5). One of the WebQuests has one task and asks for two products, one of them being a poster and the other not being made explicit. Another WebQuest that includes four tasks asks for two products: a text to be presented orally and an awareness campaign.
An example of a product with the format of a debate was asked as follows:

> *"A debate moderated by your teacher will be scheduled soon. During the 30 minutes of the debate you will present your suggestions to your classmates. The classroom should be organized in such a way as to create an environment that promotes discussion."*

An example of a product with the format of a role playing exercise was demanded as follows:

> *"We suggest that you organize a role playing exercise so that you can discuss the importance of an international organism like UNO for global environmental problems solution".*

One of the WebQuests asks students to choose the format of the WebQuest's products among four possible types:

> *"Using teamwork, organize a campaign with cards, posters, figures or drawings, so that you can make the school community aware of the need for water."*

Despite the fact that this research was not concentrating on the internal consistency of WebQuests, the analysis carried out has shown that many WebQuests have low internal consistencies that may put their educational value at risk.

Table 5.Types of final product (16WQs; 19 products)

Type of Product			*f*	*%*
Written piece of work	Leaflet, poster	With oral presentation	2	10.5
		Without oral presentation	2	10.5
	Text	With oral presentation	2	10.5
		Without oral presentation	1	5.30
	PPT presentation	With oral presentation	2	10.5
		Without oral presentation	0	0.00
Persuasion Campaigns			1	5.30
Multimedia production (video, site, blog, etc.)		With oral presentation	1	5.30
		Without oral presentation	2	10.5
Discussion			3	15.8
Answering to questions			2	10.5
Not made explicit			1	5.30

In fact, some WebQuests skip the resources section (which would be helpful to guide students in their information search), others include low level tasks but ask for higher level products, others show inconsistencies between product asked (e.g., organization of a campaign) and the focus of the assessment (e.g., research and materials construction), or they mix elements of the WebQuest, with the product (PowerPoint to be presented to the class) being mentioned only in the process section (instead of being mentioned in the task).

Conclusions and implications

Results indicate that the WebQuests analysed differ with regard to the issues addressed in the analysis. However, most of them tend to focus on science content and have very low cognitive demands. A smaller number of them deal with looking for a solution and very few pay attention to affective issues, namely to persuasion.

Hence, despite the small size of the sample, the results suggest that WebQuests may be inconsistent with the requirements of a problem solving activity. In addition, in some cases, their internal inconsistencies may put WebQuests' educational value at risk. Hence, science teachers should not rely on the WebQuests that are made available on institutional websites, but rather they should be able to analyse them critically in order to select those that better fit the problem-solving requirements.

Thus, within a teacher education development framework, in-service teacher education courses should help teachers to improve their expertise in evaluating, selecting and adapting WebQuests, as well as in developing good ones, not only from a technical point of view but

also from a scientific and a pedagogical one. This is worthwhile because research (Leite, et al. 2007) has shown that whatever the science topic and school level, students not only enjoy using WebQuests but also learn more from them in terms of both science content learning and development of problem-solving competences.

On the other hand, WebQuests should not be made available online before being technically, scientifically and educationally validated. Thus, schools and universities should find ways of supporting their staff members who want to publish this sort of online teaching tool in order to help authors to improve them so that they can meet the required high quality standards. School and university intranets can be used as intermediate stages from WebQuests' development to their worldwide publication.

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References

Berkel, Henk, Scherpbier, Albert, Hillen, Harry, and van der Vleuten, Cees. 2010. *Lessons from Problem-based Learning*. New York: Oxford Univerty Press.

Carvalho, A. 2002. WebQuest: Desafio colaborativo para professores e para alunos. *Elo*, no. 10: 142-150.

Costa, F. and Carvalho, A. 2006. WebQuest: Oportunidades para Alunos e Professores. In *Actas do Encontro sobre WebQuest*, ed. Ana Carvalho, 8-25. Braga: CIEd.

DEB, 2001. *Currículo Nacional do Ensino Básico*. Lisbon: DEB.

Dahlgren, M. and Öberg, G. 2001. Questioning to learn and learn to question: Structure and function of problem-based learning scenarios in environmental science education. *Higher Education*, no. 41: 263-282.

Dodge, B. 1997. Some thoughts about WebQuests. http://edweb.sdsu.edu/courses/edtec596/about_webquests.html.

Dogde, B. 1998. Building blocks of a WebQuest. http://web.archive.org/web/20000817065629/edweb.sdsu.edu/people/buildingblocks.html.

Dogde, B. 2002. WebQuest Taskonomy: A Taxonomy of Tasks. http://webquest.sdsu.edu/taskonomy.html.

Gomes, C. 2006. Contributo para melhor compreensão do uso da WebQuest no contexto de uma estratégia de formação de professores. In *Actas do Encontro sobre WebQuest*, ed. Ana Carvalho, 72-83. Braga: CIEd.

Lambros, Ann. 2002. *Problem-Based Learning in K-8 classrooms*. Thousand Oaks: Corwin Press

Leite, L., Vieira, P., Silva, R., and Neves, T. 2007. The role of WebQuest in Science Education for Citizenship. *Interactive Educational Multimedia*, no. 15: 18-36.

March, T. 2005. What WebQuests are (really). http://bestwebquests.com/what_webquests_are.asp.

Mentxaka, I. 2004. WebQuest: internet como recurso didáctico. *Alambique*, no. 40: 62-70.

Savin-Baden, Maggi, and Wilkie, Kay. 2006. *Problem-Based Learning Online*. New York: Open University Press.

Savin-Baden, Maggi. 2007. *A Practical Guide to Problem-Based Learning Online*. New York: Routledge.

Silva, R. 2006. As WebQuests e a promoção da imagem do cientista: Um estudo com alunos do 9º ano de escolaridade. MA diss., University of Minho.

EUROPEAN AND GLOBAL PERSPECTIVES

European Perspective in Teacher Education: Escalation of the Global University Rankings: Should We Bother?

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Abstract

In recent years university rankings have become increasingly important worldwide; the number of global rankings has grown during the period of this review and it is predicted that it will keep growing (S. Marginson, interview in The Australian, 12 January 2011). Policy makers in different countries are increasingly interested in comparisons of the performance of various higher education institutions (HEIs) according to "objective indicators".

The popular global rankings use methodologies to single out the top universities only and these methodologies are not able to produce wider comparisons of higher education institutions.

It has been proven that university rankings reflect university research performance substantially better than performance in teaching and that indicators on research are heavily biased natural sciences and medicine. The above means teacher training faculties are among those that are not likely to produce high input into the ranking score of the university – and the latter may cause consequences within the university. Subject rankings on education/teacher training could have a potential to create a wider comparison of Education faculties or teacher training programmes, however what has been done by existing global rankings thus far is not suitable. One option could be that education faculties themselves cooperate to work out appreciable indicators for their national and/or international comparisons.

Keywords: global university rankings, universities, teacher education, labour market

Introduction

Rankings went global in 2003 when Shanghai Jiao Tong University published the results of the first global university ranking. The importance of rankings seems to have grown exponentially (see e.g. Marginson 2011).

The Rankings have always been controversial. Society may like to have a league table that allows one to see who is the 'best in the world' (and who is not). Politicians like to be presented with information in a business-like manner – and rankings do just that. In times of

significant financial constraints, policy makers in different countries are increasingly interested in comparisons of the performance of various higher education institutions (HEIs) according to “objective indicators”.

The EUA review of rankings (Rauhvargers 2011) was aimed at providing universities with an analysis of the methodologies behind the global rankings rather than ranking the rankings themselves. Only publicly available and freely accessible information on each ranking, rather than surveys or interviews with the ranking providers was used in the survey. Such an approach was used in an attempt to find out how transparent each ranking is from a user’s perspective.

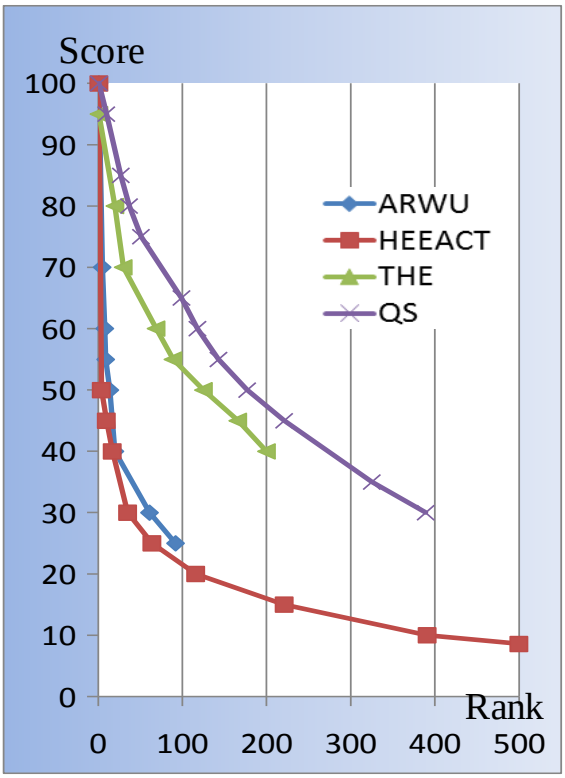
The review covered the global university rankings producing league tables such as Shanghai Academic Ranking of World Universities (ARWU), Times Higher Education (THE) World University Ranking, and Times Higher Education in cooperation with Thomson Reuters as of 2010, Quacquarelli - Symonds based rankings, as well as some others. A second group of global rankings studied were those concentrating on research only such as Leiden Ranking, Performance Rankings of Scientific Papers for World Universities, Taiwan (HEEACT) and also the EU University-Based Research Assessment (AUBR) prepared by a working group supported by the European commission which is actually not a ranking but a multi-indicator tool for assessment of the research performance of universities. The 2011 EUA report on rankings also included a glance at the new developments in rankings and classifications such as the U-map classification and U-multirank ranking supported by the European Commission as well as their prototype the German Centre for Higher education development (CHE) ranking.

Because of the notable attention attracted to the global university rankings by both society and even more higher education policy makers in a number of countries are tempted to judge all higher education in the world using the standards that rankings use to detect the top research universities. Using ‘one size fits all’ set of indicators approach used in global university rankings, one of the core principles of higher education quality assurance - the ‘fitness for purpose’ is not applied thus ignoring that not only research universities deserve consideration, but also ones concentrated on producing professionals for labour market, ones that are regionally important, those targeted at widening access to higher education with a view to involving a wider cohort of young people as well as those concentrated on preparing professionals for labour market. Thus, one ‘unwanted consequence’ of the global league tables is that Higher education institutions (HEIs) with missions other than that of being excellent in research universities may have to re-justify their profile at a time when mission differentiation is at the top of higher education agendas.

Global rankings only cover the elite universities

Current global university rankings can cover only a narrow layer of the world's research universities. The ranking lists of the global rankings usually are limited to 200-500 top universities making roughly 1% to 3% out of approximately 17,000 universities in the world. Addressing just some hundreds of institutions is not an intention of decision of the global rankings but rather a limitation of the methodologies that cannot produce stable results for more than 700-1200 universities and at most 300 universities in subject area rankings.
Figure 1 clearly demonstrates the sharp decrease of ranking scores within the first 200-500 universities and that explains why several of the global rankings stop displaying the actual university scores after first couple hundreds of universities.

Figure 1. Drop of ranking scores within the first hundreds of universities in Shanghai ARWU, Taiwan HEEACT, Times Higher Education and QS global rankings



Analysis of indicators and procedures through which the global rankings select universities for inclusion into rankings also show that methodologies of the global rankings are not suitable for covering large numbers of higher education institutions or to underpin analysis of the higher education systems.
Indicators such as count of Nobel prizes among staff and alumni of a university (ARWU) are the most telling. It is quite evident that such indicators concern a narrow group of elite universities. A number of frequently used indicators also concern the top group of research universities only. These are indicators such as count of articles published in Science and Nature, number of highly cited researchers defined as 250 top researches in each of the22 ESI fields (Science watch 2012); as well as number of highly cited papers which is the absolute number of papers of the university in question that belong to the 1% of articles by total citations in each annual cohort from each of the 22 fields in ESI (ibid.) or High-impact papers (Thomson-Reuters 2012) defined as 200 most-cited papers of each year — in each of the 22 fields: a total of 4,400 papers; as well as number of publications in high impact journals.

Thus, the above indicators, while being suitable for the historical aim of the ARWU ranking: to indication of top research universities, are not suitable for comparing larger numbers of diverse higher education institutions or analysing entire higher education systems.

Selection of the sample of universities for ranking

ARWU mainly selects universities on the basis of counts of Nobel Prize winners, counts of Highly Cited Researchers, as well as papers published in Nature or Science are included (Liu 2009) in the ranking. Leiden ranking selects universities that have at least 500 publications in the Web of Science in each of the 5 consecutive years, but excluding publications in humanities and arts. HEEACT first selects 700 institutions having highest counts of publications and citations out of institutions listed in Essential Science Indicators and more than 100 institutions are added as a result of comparing with the THE, ARWU and US News and World Report ranking lists (HEEACT, 2011). Also Quacquarelli-Symonds (QS 2010) primarily selects world's top universities based on citations per paper but then several other factors are applied such as domestic ranking performance, reputation survey performance, geographical balancing and direct case submission; however there is no further explanation of how those criteria are applied. In their Global Institutional Profiles project Thomson-Reuters use bibliometric analysis by publications and citation count to look at the top institutions as well as reputation survey**.** As regards THE World university rankings, information on how the universities are selected for the THE ranking is not provided on the 2011-2012 methodology page (Baty 2011).

It should be noted that the way how academic reputation surveys are organized, is also suitable for selection of top universities only. In those surveys academics are requested to nominate a limited number of universities (e.g. 30) that are the best in their field. The practical implication of this approach is that if no experts consider a university among the top 30 in their field, the university will not be considered at all.

In this managerial and competitive world, every higher education institution needs to demonstrate its excellence in one way or another. However, due to the methodologies used by the global rankings, thousands of “normal” universities including teacher training institutions are not likely to appear in their top lists.

Coverage of teaching and research by ranking indicators

In the situation where ranking results are increasingly used in higher education policy making, it is important to check how well the indicators used by most popular rankings cover the two most important university missions: teaching and research.

Teaching

All the currently used indicators on teaching are proxies and their link to teaching performance is indirect at best.

One extreme is measuring the quality of education by the number of Nobel Prize winners among the university's graduates (ARWU) – this indicator can be considered as being linked to the quality of education, but in a very special and rather indirect way. Judging teaching quality using staff/student ratios alone without examining teaching/learning itself is another extreme. Moreover, it has been proven that staff/student ratios can be easily manipulated (Baty 2010)

Several indicators used by rankings as indicators for examining teaching and learning are country specific and cannot work properly in international environment. Staff salaries indicator is an obvious example. Correction by normalizing the salaries using purchasing parities is just a partial solution because the traditions how staff in higher education and education at large is remunerated for their work may strongly vary between countries. As regards dropout rate, it should be noted that, for instance in Europe, there are countries in which the school leaving certificate is legally an entrance ticket into higher education, hence there is no selection at the entrance while in educational systems (or sometimes institutions within the same institution) where there is a selective entrance and that can lead to different dropout rates in undergraduate programs. Time to degree indicator measures how big are differences between the nominal time to graduation and the time after which the students actually graduate. It is based on assumption that students use more time than planned and that shorter graduation time is a positive indication. However, if time to degree indicator becomes widely used, it may cause a tendency to make graduation time as short as possible and that in turn will compromise quality. The proportion of graduate students in the total number of students (usually considering the huge proportion of graduate students is a positive indication) is also not a suitable indicator in international comparison. An example from Europe: in 2010/2011 academic year the proportion of students who continued studies after first degree was estimated 75-100% in Austria and Spain, 50-75% in Germany and Italy and Switzerland, 25-50% in Sweden 10-25% in Spain and below 10% in UK (England). Does it point at large differences in performance between universities those countries? Rather no - simply the high level of graduate students in some countries the labour market is used to accept second degree holders. The time-to-degree indicator probably is important issue in some countries, but it is hardly seen as a valid indicator in others. It is not clear whether a much shorter time to degree or high graduation rates are signs of high quality or rather of low requirements. The count of PhD degrees awarded is a good indicator but the question remains if it indeed belongs to teaching indicators or it rather is a research indicator. When used in a form of ratio between PhD and first degrees awarded the indicator will discriminate the institutions whose mission primarily is preparation of specialists for labour market. The

number of PhDs in an institution is used as a proxy to quality of teaching but it becomes misleading in those cases where a great part of staff actually are involved in research only.
It has been already noted that reputation surveys of academics do not work well in international rankings (Federkeil 2009). It should be underlined that because academics are much more aware of their peers' performance in research and as a result their judgment on teaching performance in other universities is strongly influenced by their research reputation and/or success of other universities in rankings – which are again research dominated.

Research indicators

Taken together, various global rankings have rather good coverage of the research mission of universities. Indicators based on publication count in Science Citation Index and Social Sciences Citation Index characterizes the overall production of publications by a university (HEEACT, Leiden ranking and also U-map profiling tool). When taken per staff the publication indicators characterize the staff research productivity (HEEACT, THE as of 2010, and also the U-map profiling tool and U-multirank). Count of publications published in Science and Nature (ARWU), count of highly cited publications (HEEACT, U-multirank) as well as count of publications in high impact journals (HEEACT) demonstrate excellence in research.
Another group of indicators used by global university rankings is based on citation count. Plain count of citations demonstrates the university's overall strength but citation count per paper (Leiden, HEEACT, THE as of 2010) or per staff member (HEEACT, QS, THE until 2009 and U-multirank). In several rankings, citation numbers are field-normalized (Leiden Ranking, THE-TR, U-Multirank). In addition, several rankings also use count of doctoral degrees awarded per academic staff members (THE after 2010; U-map, U-multirank) which demonstrates doctorate productivity or count of doctoral awards per first degree awards which characterizes the university's study environment. Not least, some rankings use research income per staff member, sometimes splitting it up according to different funding sources. Finally, some rankings (THE and QS-based rankings) also use research reputation surveys which are more controversial and risky in international comparisons.
Overall, global university rankings reflect university research performance far more accurately than teaching performance. The bibliometric indicators, which are used for measuring research performance in most rankings, also have their biases and flaws, but they still are direct measurements.

Natural sciences (and life sciences) bias

Numerous previous publications have demonstrated that medicine and sciences are much better represented in bibliometric indicators than engineering, social sciences and especially humanities which are often completely ignored. To a large extent the bias is caused by the fact that bibliometric indicators primarily cover journal publications. Peer-reviewed journal articles are the primary outlet, of natural and life scientists, but for social scientists and humanists books are the most important sources of communication (AUBR 2010, 26). It should be noted that values of indicators based on publication or citation count are calculated combining increments of each of the "22 broad subject areas" as defined by ESI (Science Watch 2012). These include Agricultural Sciences, Biology & Biochemistry, Chemistry, Clinical Medicine, Computer Science, Ecology/Environment, Economics & Business, Engineering, Geosciences, Immunology, Materials Science, Mathematics, Microbiology, Molecular Biology & Genetics, Multidisciplinary, Neuroscience, Pharmacology, Physics, Plant & Animal Science, Psychology/Psychiatry, Social Sciences, General, and Space Sciences. It is not difficult to notice that there are several areas that are parts of medicine and natural sciences and especially biology while all social sciences form just part of an area and humanities are left out. It is also well known that the culture of publications and citations is different in different research areas. The data presented by Cheng (Cheng 2010) show that biologist in average produces 2.7 times more publications compared to an engineering scientist and 3.6 times more than a social scientist. Since the differences in citation cultures are similar: biologists cite each other substantially more frequently than other natural scientists substantially more than social scientists. As a result, biologists statistically receive double number of citations than physicists and nearly 12 times more citations than social scientists.

For the above reasons already some years ago some rankings started applying field normalization at calculating citation rate calculated by dividing the sum of citations in the publications of a university by the sum of the expected number of citations in the same fields in the same year as the publication. This indicator which was the "crown indicator" of the Leiden ranking. Field normalization was criticized because it had a bias towards older publications. In addition, adding up all citations and all expected citation rates from different fields blurs the overall picture. Next attempt has been introduction of the mean-normalized citation score (MNCS), which is calculated by first dividing the number of citations of each publication by the expected citation number in the same year and field. This indicator had its own flaws – firstly, the results were unstable for the newest publications and therefore the last year's publications had to be left out, but soon it turned up that MNCS indicator value could be strongly influence by very small numbers of extremely highly cited publications. Thus, the recent advice of the Leiden (Waltman, et al. 2012) is to rather switch to a new indicator - share of publications of a university belonging to the top 10% of their field.

However it should be noted that while the mathematical approaches of the citation indicators are step by step improving, the main improvement should addressing book publications properly.

Language bias

Since the publication of the first world rankings, it has been noted that global rankings favour universities in countries in which English is spoken, because non-English language work is both published and cited less (Marginson & van der Wende 2007). The Leiden Ranking team has demonstrated that, for instance, the citation impact of publications of French and German universities in French or German, respectively, was smaller than the citation impact of publications of the same universities published in English (van Raan, et al. 2010).

Regional bias

Ever since the onset of global rankings, some world regions, notably North America and (Western) Europe – have been better represented in the league tables than others. Indeed, global rankings implicitly refer to the Anglo-Saxon model of research organization (CHERPA 2010, 24) therefore regional differences in the regions other than North America and Western Europe turn out as disadvantages of the universities of those regions in rankings. It could also be concluded that global university rankings are implicitly stimulating spreading of Anglo-Saxon model and thus reducing the diversity of the world's higher education and research systems.
Both the THE ranking after 2010 as well as QS based rankings have stated that they attempt to normalize by regions – QS by applying regional weightings to each subject area but THEapplies "regional normalization and also takes account of each country's subject mix" (Baty 2011). Unfortunately, in both cases, neither the regional weights and factors or the criteria on which they are based are not available on the public websites.

Towards multi-indicator rankings and classifications

Two European Union supported transparency tools U-map and U-multirank have emerged in the recent years. Those tools allow comparing higher education institutions using multiple indicators but not producing league tables.
U-map is positioned as a universities profiling tool (U-map 2011, 1) and according to its developers covers the "need for a better understanding of the variety of institutions and the diverse range of activities they are engaged in" (ibid.). U-map classification is therefore mainly using neutral indicators that allow users indicating groups of higher education

institutions with similar intensity in chosen set of activities. As a next step U-map's Profile viewer allows to choose up to three universities and compare them indicator-by indicator. At the end of 2011 U-map database included 333 universities and the target has been announced to include 1000 universities by the end of 2013.
As U-map is mainly using neutral indicators one of the tools that has a potential for comparison education/teacher institutions or faculties.
U- Multirank (see e.g. Kaizer and Federkeil 2011) is a multi-indicator ranking tool using a variety of indicators including performance indicators but not publishing league tables. U-multirank has separate sets of indicators for university rankings and field rankings. Default set of indicators contains 15 indicators - 3 for each group: teaching and learning, research, knowledge transfer, international orientation and regional engagement. Users can personalize the ranking by choosing indicators of their interest from the indicator list. Like in the prototype CHE ranking U-multirank does not retrieve scores of universities. The ranking is actually positioning a university into one of the three groups – top, middle and tail group marked by green, yellow and red color. Also, the universities in each group are listed in alphabetical order thus avoiding an implicit scoring. Users can chose by which indicator the universities are ranked. At the same time it is also displayed in which groups the university in question is in other indicators. Multirank, when the programme (field) ranking of Multirank ids completely ready for use, it will of course be a useful tool indicator-by-indicator comparisons of education/teacher training programmes.

Recent developments

Emerging of the U-map or Multirank has definitely provoked to launch a multi-indicator tool. Those developments deserve to be analysed more in detail, but in this article just short descriptions of the developments will be provided.

Shanghai ARWU Rankings Lab

Rankings Lab uses data from Global Research University Profiles (GRUP) survey data collection with 231 participating universities in 2011. User can chose between 21 indicators of which five are the regular ARWU indicators, another five are the relative values of the above - either per student or per staff. Rest of indicators used in Rankings Lab e.g. staff/student ratio, proportion of graduates students, doctoral awards, staff with doctoral degree, etc. have not been used in ARWU ranking before, ARWU "Rankings lab" includes a visualization tool where user can select the indicators of interest and chose importance level of each indicator – it actually means that user changes weights of each indicator in the total score. As a result the *Rankings lab* returns a league table where the currently 231

universities are ranked according to the total score calculated according to the user's choices of indicators and their importance. Next GRUP data collection has deadline of March 31, 2012 and the questionnaire seems to indicate that more indicators will be added in the next round.
Another ARWU tool is *Ranking by indicator* which uses the same indicators and data collection as *Rankings lab.* Universities are ranked by one chosen indicator.

Thomson-Reuters Profiles Project is announced as "coming soon". It will create data-driven portraits of 'globally significant institutions', i.e. it again concentrates on the world's top research universities. Profiling will be based on reputational assessment, scholarly outputs, funding levels, faculty characteristics and more. More precise information was not publicly available at the time of writing this article (Thomson Reuters 2012c).

Quacquarelli-Symonds (QS) has recently produced the greatest number of new tools.

QS Subject rankings, (see QS, 2011). Firstly, QS produces subject rankings that cover 33 subjects out of 52 in QS subject list. While ARWU attempts to keep the same indicators that are used in the university ranking and replacing only those indicators that are not relevant to particular field, QS subject rankings use just three indicators – academic reputation, employer reputation and citations per paper. The weights of the above indicators strongly differ between fields but they are reputation dominated in all cases. For instance, in subjects such as English language and literature, Modern languages, Art and Designs and Performing arts subjects 100% of total score come from reputation indicators. At the other end for Biology and Medicine 40% of the total score comes from citations indicator but it means that reputation indicators still have 60% of the overall score. For other subjects the input of reputation surveys in the total score is between 70% and 90%.
As regards Education the score in QS subject ranking consists of 50% coming from reputation survey of academics, 30% from reputation survey of employers and 20% from citations per academic indicator. The objectiveness of these subject rankings could be questioned also because of small number of academic or employers that replied to the survey: in the case of Education the number of answers was 796 for academics and 439 for employers – which seems much too little to produce global comparisons.
In general, subject rankings could be more useful than university rankings because the in subject rankings there is no field bias, but in the case of QS subject rankings the weights of reputation surveys are so high that the reliability could be questioned. In addition, the ranking provider uses the same selection of universities as for the global university rankings – and that means

QS Classifications started in 2009; changes have been made in 2010 and 2011**.**Classification uses five indicators: size - student body; subject range - provision of programs in five areas: Arts and Humanities, Engineering and Technology, Life Sciences, Natural Sciences and Social Sciences; research intensity –publication count in Scopus in last 5 years; age of university (QS 2011b). It is not quite clear what this classification is aiming at. The classification does not reflect on the actual diversity of higher education institutions but only presence of the classical faculties. Thus, professionally oriented, regional, inclusive, lifelong learning oriented etc. universities will not find their specific niche in this classification.

QS Stars system evaluates universities in eight areas: teaching, research, internationalization, third mission, graduate employability, infrastructure, Innovations/knowledge transfer ad excellence in a narrow area (QS 2010b). Each area is characterized by several indicators and in each area a university can obtain up to five stars (ibid.). Those stars are displayed on QS Top universities ranking table. Together with the recently available study fees the stars may provide additional information to potential students

QS Country Guides provide information on whole countries and include various information relevant for potential students plus information on the universities of the country in question – not only those which is in the Top universities ranking table but also other of the country (QS 2012a).

QS Best student's cities ranking. To participate, a city has to have 250,000 population and at least 2 universities in ranking table (QS 2012b). The cities are ranked according to: performance of its universities in rankings, student population and proportion of international student, quality of living from Mercer Quality of Living Survey 2011, Domestic and internal Employer Popularity of the city, affordability indicator, consisting of tuition fees, BigMac index and Mercers cost of living index.

Looking at all those new initiatives form the side of universities there is a split feeling is split. These are all services universities have not asked for. To keep being visible, universities probably have to participate in at least some of these activities – but it leads to using university resources to submit information and no all those services are for free. Of course, participation or not participation is a decision of the university itself. But… universities are living in a competitive environment and they probably will have to more or less participate in some on the new activities. Overall, it looks like a new round of 'arms race' between the global rankings.

Some improvements in transparency of ranking methodologies have been noticed in transparency of rankings' methodologies can be in 2011 compared and comparing with ones in 2010. In several rankings it has really become easier to follow the calculations between raw data through indicator values to final score. A common issue still is claiming that the data have been *normalized* without explanation so that it may mean anything between field normalisation of citation indicators, compensation for differences between world regions down to calculating, calculating z-scores or presenting the value of indicator per staff member. The transparency improvements could be at least partly caused by the upcoming first round of the IREG ranking audit. European universities will follow further developments with great interest.

Conclusions

1. Since arrival of global rankings universities cannot avoid comparisons, and this has caused changes in the way universities function.
2. Methodologies of global rankings are aimed at picking the top universities only and this approach starts already at selection of universities for ranking. As a result, global rankings are not able to cover substantially more universities and include them producing in ranking lists.
3. Global university rankings still cover only some of university missions. Lack of suitable indicators is most apparent when measuring teaching performance and despite new attempts even the bibliometric indicators still have strong biases and flaws.
4. The current global rankings are not suitable for comparing institutions/faculties of education and teacher training. To have international comparisons, a suitable set of indicators would be needed.
5. The recent mushrooming of multi-indicator tools and may provoke another round of 'arms race'.
6. Higher education policy decisions should not be based solely on rankings data.

References

Baty, P. 2010. THE World University Rankings 27 May 2010. Retrieved from: http://www.timeshighereducation.co.uk/story.asp?storyCode=411739&sectioncode=26

Baty, 2011. Change for the better. Retrieved from: http://www.timeshighereducation.co.uk/world-university-rankings/2011-2012/analysis-rankings-methodology.html

HEEACT, 2011. 2011 Performance ranking of scientific papers for world universities. Methodology http://ranking.heeact.edu.tw/en-us/2011/Page/Methodology

Kaizer, F. and Federkeil, G. 2011. Sneak preview. The multirank tool. Presentation at Multuirank final conference on Jun 9, 2011. Retrieved from: http://www.u-multirank.eu/Final%20Conference/UMR_sneak_preview.pdf

Marginson, S. and van der Wende, M. 2007. To Rank or To Be Ranked: The Impact of Global Rankings in Higher Education. *Journal of Studies in International Education*, 11, No. 3/4 (Fall/Winter): 306-329. Retrieved from: http://www.cshe.unimelb.edu.au/people/staff_pages/Marginson/Marginson&VanDeWendeJSIEFallWinter07.pdf

QS, 2010. Institution Inclusion. Retrieved from http://www.topuniversities.com/university-rankings/world-university-rankings/methodology/institution-inclusion

QS, 2010b. QS Stars brochure, 2010. Retrieved from: http://www.topuniversities.com/qsstars/qs-stars-introduction

QS, 2011. QS Top universities. Retrieved from: http://www.topuniversities.com/

QS, 2011b. QS classifications refined to embrace age dimension for 2011 and beyond. http://www.iu.qs.com/category/university-rankings/classifications-university-rankings/

QS, 2012a. QS city guides. Retrieved from: http://www.topuniversities.com/country-guides

QS, 2012b. QS Best student cities ranking 2012. Retrieved from: http://www.topuniversities.com/student-life/best-student-cities/2012/

Rauhvargers, A. 2011. *Global University Rankings and their impact.* European University Association, Brussels, 82 p., ISBN978907897276.

Science Watch, 2012. Field definitions. Retrieved from: http://sciencewatch.com/about/met/fielddef/

Thomson-Reuters, 2012a. High Impact Papers. Retrieved from: http://thomsonreuters.com/products_services/science/science_products/a-z/high_impact_papers/

Thomson-Reuters, 2012b. Global Institutional Profinels Project. Institutional Data Collection**.** Retrieved from: http://ip-science.thomsonreuters.com/globalprofilesproject/gpp-datacollection/

Thomson-Reuters, 2012c. Global Institutional Profinels Project. Retrieved from: http://ip-science.thomsonreuters.com/globalprofilesproject/

van Raan, Anthony F.J. van Raan, Thed N. van Leeuwen, and Martijn S. Visser Van. 2010. Germany and France are wronged in citation-based rankings. Retrieved from: http://www.cwts.nl/pdf/LanguageRanking22122010.pdf

Waltman, L. Calero-Medina, C *et al*. 2012. The Leiden Ranking 2011/2012: Data collection, indicators, and interpretation, arXiv:1202.3941v1, 23 p., Retrieved from: http://arxiv.org/ftp/arxiv/papers/1202/1202.3941.pdf

Changing Nature of Teachers' Work in the Age of Globalization: the OECD and Policies on Teachers

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Abstract

In the age of rising internationalization of education policy making, teachers are often becoming a 'hot topic' among scholars (Apple 2009; Robertson 2000; Smyth & Schacklock 1998; etc.). In their mostly empirical studies, the convergent stance is that the work, role and tenure of teachers are rapidly changing under the influence of globalization, the transformation of education to serve the economy as well as the international organizations as prominent actors in teacher policy making. Drawing on these trends, this study is looking at international organizations as the site of policy production and is trying to identify some macro-trends regarding teachers. This is relevant as most of them have some sort of interest in and policy on teachers. Hence, for instance, the World Bank and International Monetary Fund affect teachers through loans in Africa or the European Union, as transnational institution, through an array of programs targeting the work of teachers across its Member States. For the purposes of this paper, the study will take as its central focal point proposals and recommendation for teachers of yet another actor: the OECD.

The objective of this study is, thus, to investigate OECD policies on teachers, specifically *Teachers Matter and Evaluating and Rewarding the Quality of Teachers*. To this end, the following research question will be asked: How do OECD policies on teachers affect them at a professional and organizational level?

Since the OECD has a few policy papers on teachers, depending on which level of educational system they teach, it is necessary for the purposes of this study to define what is here meant by "teacher". The analysis will focus on two policy papers *Teachers Matter* and *Evaluating and Rewarding the Quality of Teachers.* The study intends to investigate teachers of primary and secondary education. Following the background of the study, this paper will argue that the OECD steers teacher profession in such a way so that it is consistent with neo-liberal practices, which introduce certain elements of neo-liberal market economy into the field of education, in this case into teachers' profession as well. Consequently, proposals guided by market practices for teachers are changing the nature of their work. This trend, as it will be demonstrated in the analysis, is particularly visible in OECD's recommendations to form a profile of a teacher appropriate for knowledge society, to redefine teacher-

principal relationship as well as suggestions to evaluate teachers' work, and introduce performance-related payments.
Keywords: international organizations, neoliberalism, OECD, educational policy, teacher policy

Introduction

In the age of rising internationalization of education policy making, teachers are often becoming a 'hot topic' among scholars (Apple 2009; Robertson 2000; Smyth & Schacklock 1998; etc.). In their mostly empirical studies, the convergent stance is that the work, role and tenure of teachers are rapidly changing under the influence of globalization, the transformation of education to serve the economy as well as the international organizations as prominent actors in teacher policy making. Drawing on these trends, this study is looking at international organizations (IO) as the site of policy production and is trying to identify some macro-trends regarding teachers. This is relevant as most of IOs have some sort of interest in and policy on teachers. Hence, for instance, the World Bank and International Monetary Fund affect teachers through loans in Africa or the European Union, as transnational institution, through an array of programs targeting the work of teachers across its Member States. For the purposes of this paper, the study will take as its central focal point proposals and recommendation for teachers of yet another actor: the OECD.

The objective of this study is, thus, to investigate OECD policies on teachers, specifically *Teachers Matter and Evaluating and Rewarding the Quality of Teachers*. To this end, the following research question will be asked: How do OECD policies on teachers affect them at a professional and at the organizational level?

The first section of the paper demonstrates the major factor that paves the way for agenda and policies of international organizations in the light of globalization. This will be followed by a section that concentrates on the OECD and the character of its education policy. In the central, analytical part of the paper, OECD's policies on teachers will be thoroughly reviewed. Bearing in mind certain elements of neoliberal ideology, it is argued that OECD's proposals are congruent with neoliberal convictions hat promote the transfer of economic practices into teachers' profession and their working conditions. This is extrapolated from the following lines of analysis: a broader role of a teacher, mercerized organization of school as well as the introduction of teacher external evaluation and performance-related payment.

Background of the study

IOs and neo-liberalism

"The all-powerful god of the market"1 and international organizations

The study at hand argues against overt use of neoliberal ideology (and market practices) in educational policy making, specifically teacher policies because it is diminishing the humanistic nature of school environment and teaching profession. In order to demonstrate this, the paper presented here uses as its theoretical standpoint first the newest sociological theories regarding neoliberalism and IOs, then how these apply to and negatively affect education generally. With this in mind, the central, analytical part, then identifies and pinpoints elements of market practices in teacher policies and discusses the potential detrimental consequences of such proposals on teachers.

The understanding of teacher policy proposals is intrinsically related to the examination of the nature of international IOs as their makers (e.g. World Bank, International Monetary Fund, and the OECD).

For the aims of this paper, two convergent theories will be scrutinized. The following part will mostly refer to the works of Harvey (2007), and Beck (2006), respectively. This section of the study will argue that neoliberal economic agenda constitutes the major force sweeping across IOs' policy making. In order to do so, firstly the emergence and rise of neo-liberalism as ideology will be briefly dealt with; secondly, it will be followed by the focus on how IOs act as the bearers of this ideology through the power they possess and policy creation; finally, light will be shed on relatedness of IOs, markets and education.

According to Harvey the beginning of neo-liberalism can be traced in the years between 1978 and 1980 when "revolutionary turning point in the world's social economic history" occurred with the assumption to power of Margaret Thatcher in the UK, Ronald Regan in the USA and Deng Xiaoping in China, leaders who took unprecedented moves in transforming their countries. These transformations, as Harvey says, primarily related to the introduction of policies which *"curb the power of labour, deregulate industry, agriculture, and resource extraction, and liberate the powers of finance both internally and on the world stage"* (Harvey 2007, 1). But what exactly the term neo-liberalism encompasses and how come that that according to some authors (Harvey 2007; Beck 2006) it spread so rapidly and that the ubiquity is worldwide, not circumventing any state. The 'allure' of neo-liberalism lies in the fact that it is *"a theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills"* (p.2). Harvey goes on further to suggest that an important component of neo-liberalism holds that *"state interventions must be kept to a bare minimum, because according to the theory, the*

[1] (Beck, Power in the global age, 2006, p. 77)

state cannot possibly possess enough information to second-guess market signals (prices)" (Harvey 2007, 2). Likewise, Beck claims that "the promise that all who obey the commands of the world market will be blessed with earthly riches is renewed time and time again at the altar of the all-powerful god of the market" (2006, 77). Beck also promulgates that the pillar on which neo-liberalism rests is *"the trinity of deregulation, liberalization and privatization"* (2006, 87), which makes the state intervention redundant. This is what creates the space for *"transnational principle of order for the global age where nation-states" act as "local executive bodies"* (2006, 80).

Provided that it can be inferred from this that with the advent of neo-liberalism, the power of state diminishes, then, who are the actors, in the age of globalization, that promote and impose such measures which *"seek to bring all human action into the domain of the market"* (Harvey 2007, 3) and wield the power that transcends that of a state? According to a number of prominent sociologist (Beck 2006; Harvey 2007), these are transnational organizations that create policies with neoliberal agenda. As an illustration, this is how, for example, Beck understands it:

> *"The old nation-state international institutional order is not an ontological given but is itself at stake. Institutions no longer prescribe the space and the framework within which organizations engage in political action; instead, it is organizations[2]-such as global business actors- that are breaking out of the institutional[3] box and are forcing a reconsideration of the national a prioris of political action"* (Beck 2006, 3)

It is beyond the scope of this paper to deal profoundly with the policy of each and every of these organizations. It will, however, present just some of them in order to illustrate how neo-liberalistic agenda permeates their politics, as well as how much influence and power international organizations have over the institutions of a state. The examples taken here are the International Monetary Fund (IMF) created through Breton Wood's agreement in 1944 as well as the Organization for Economic Co-operation and Development (OECD).

The IMF, the Big Brother of 186 member states "monitors policies of every third 'sovereign' state on the planet" and ensures that *"they follow the rule of neo-liberal budgeting"* (Beck 2006, 261).This surveillance means that the IMF through various mechanisms ensures that the states allow *"the removal of trade barriers, maximum mobility of capital, and minimal regulation of the labour market"* (Harvey 2007, 78). Additionally, the IMF is also involved in landing programs aiming at reducing poverty and facilitating economic recovery. This lending is conditional upon country agreeing to adjust or re-structure its economy. Thus those states

[2] By organization Beck here means (Beck, 2006, p. 2) "particular actors that have a certain number of members, financial and spatial recourses at their disposal, and a certain legal status"

[3] By institution Beck refers to power of state which controls a limited territory, diplomacy, legal sovereignty, welfare, basic civil and political rights.

that manage to obtain *"IMF tested stamp of approval"* (Beck 2006, 261) are considered to be creditworthy, sound for foreign investments and are supposed to invigorate their economies and employment by attracting fresh capital into the country. This generosity of economic analysis, policy advice, and lending, however, does not come without price. By way of illustration, here is how it operates in practice. A country engages in the so-called *bilateral surveillance* whereby permitting the IMF to assess the economy and suggest policies which are most "conducive to prosperous and stable economy" (IMF, About Us, 2010). Afterwards, the country opens up its economy, applies the above mentioned "trinity of deregulation, liberalization and privatization" and is stamped financially lean and *"short-term capital floods in"* (Harvey 2007, 97). Consequently, such policies have been responsible, in Harvey's analysis, for a number of financial crises around the world, such as the Asian financial crisis in 1997, and created uneven geographical developments. Interestingly, Harvey contends that those countries that did not listen to the 'advice' of IMF (China, Taiwan, Singapore) *"were far less affected than those that had"* (2007, 97).

The Neoliberal agenda also percolates yet another powerful and influential actor on the global scene when it comes to policy creation: the OECD. Emerging from the Organization for Economic Co-operation (OEEC) in 1961, the OECD encompasses today 30 member countries which "represent the world's most prosperous economies" (About OECD. (n.d) 2010). By seeking to help governments ensure economic growth and stability in its member countries, the OECD recommends *"opening up their markets to trade and investment"* and strongly supports implementation of competition policies which *"eliminate distorting impact on competition of laws, regulations and administrative policies"* (Hoi, An, and Viet, Nam 2006). Such approach seems to reflect the above mentioned characteristics of neo-liberalism: deregulation, liberalization and competitiveness (see Harvey 2007; Beck 2006). Thus taking this into account, it may be suggested that neo-liberal agenda is embedded in OECD goals.

The way the OECD exercises its influence is through *"indirect adherence to agreed standards"* (Martens, Rusconi, & Leuze 2007, 10). These are set through a wide network of scientists and researchers employed to produce statistical reports and recommendations. This is how the OECD derives its credibility and acts as one of the world's greatest statisticians and know-how advisors. Similarly like the IMF, the OECD collects data from its member countries on various topics of interest (e.g. economy, society, development, finance), analyses the information, the OECD Council makes decision regarding policies that are, then, to be implemented by governments. The recommendations the OECD makes range from issues such as taxes, pensions, insurance to those least likely to be thought of interest of an organization, but rather as Beck says fall under the power of state, such as legal and social institutions and even migration (Beck 2006). All of these are aimed at opening new perspectives for growth and remove the potential protectionism, which Harvey

(2007) characterizes as the worst enemy of neo-liberal market economy and a scapegoat when financial crisis hits a country.

One may wonder how education policies and issues fit in the story of international organizations when their primary mandate concerns economic and financial issues, seemingly so remote from classroom, libraries and teachers. Moreover, education has always been considered national concern, as it *"has played a key role for the formation and development of the nation state"* by improving the "economic competitiveness and securing the wealth of the nation" (Martens, et al. 2007, 4). However, today in the age of globalization, these researchers contend that state's power as policy maker is dwindling, to be taken over by *"the arena of IOs and the arena of markets"* (2007, 9). According to Martens *et al*, IOs have during the 1990's considerably broadened their field of action and are "undertaking new activities". These activities follow from the premise that in the age of globalization, the only viable solution for economic stability lies in the creation of knowledge society, whose pillar is certainly education. Thus, even though their primary goal does remain economic issues, IOs manage to reach education through various programs designed to secure economic growth and prosperity, or to embark the country on the road to knowledge society. IO's infiltration into educational matters was possible because they *"introduce new performance standards in education, new evaluation coordination, set benchmarks etc"* (2007, 10). Therefore, as a number of scholars have demonstrated (Dale 2000; Klees 2008; Moutsios 2009), tremendous influence IOs possess, enables them to introduce new policy agendas. These are saturated with *"policies promoting liberalization and deregulation that lead to the establishment of a market in the field of education"* (Martens, et al. 2007, 10).

This paper concentrates on just a particle of the overall education policy trends, on those who are pragmatically supposed to be practitioners of education policy in the classroom: teachers. Since the OECD has a few policy papers on teachers, depending on which level of educational system they teach, it is necessary for the purposes of this study to define what is here meant by "teacher". The analysis will focus on two policy papers *Teachers Matter* (OECD 2005) and *Evaluating and Rewarding the Quality of Teachers* (OECD 2009). The study intends to investigate teachers of primary and secondary education. Following the background of the study hereby presented, this paper will argue that the OECD steers teacher profession in such a way so that it is consistent with neo-liberal practices, which introduce certain elements of neo-liberal market economy into the field of education, in this case into teachers' profession as well. Consequently, proposals guided by market practices for teachers are changing the nature of their work. This trend, as it will be demonstrated in the analysis, is particularly visible in OECD's recommendations to form a profile of a teacher appropriate for knowledge society, to redefine teacher-principal relationship as well as suggestions to evaluate teachers' work, and introduce performance-related payments.

However, before the actual OECD's recommendations on teachers are examined, it is important for the purposes of broader comprehension of the interest of OECD in teacher profession, to place them in a wider context of education policy of this organization.

Analytical framework

The OECD and neo-liberal education policy

The preceding part of the paper provided an account of major IOs (IMF and the OECD) that promote policies that have neo-liberal orientation. This part attempts to focus on the educational policy. It intends to demonstrate particular developments in the education policy where can be seen how economic agenda predominates. In order to portray a concise picture of an otherwise complex issue, this section will begin by placing the OECD's educational directorate within a broader organizational structure. This will be followed by the issues of human capital theory and markets in education.

Since the OECD operates through a system of directorates, the educational division has not been an exception. The directorate was founded in 1968 *"with the establishment of the Centre for Educational Research and Innovation (CERI)"* (Henry, et al. 2001, 9). While CERI, according to Henry *et al.,* is mainly responsible for the actual research and scientific publications, it is the Educational Committee that steers and oversees the direction of OECD's work on education as it is, unlike CERI, funded directly from the core budget of the OECD. That educational directorate is a part of an organization that looks primarily at economic objectives reminds the fact that *"education has no permanent status within Organization"* (Henry, et al. 2001, 10). Namely, the existence of the directorate is in the hands of the earlier mentioned Council, which grants mandate every 5 years under an organizing theme. Moreover, whereas Papadopoulos, for example, notices that the way education has been officially associated with the OECD is actually *"a story of economists being persuaded about the importance of investing in education"* (1994, 52), Henry et al. contend that *"it is also a story about educationists embracing an essentially economic rationale while at the same time asserting an independent stance"* (2001, 13). Moreover, it is permeated by the belief that *"we are living in a knowledge based economy, in turn necessitating an even more radical set of reforms in education than we have seen to date"* (Robertson 2007, 5). With regard to the OECD and knowledge based economy, Robertson indicates four pillars on which knowledge-based economy rests: *"innovation, new technologies, human capital and enterprise dynamics"* (2007, 5). For the purposes of this study, particularly visible for teacher proposals are the elements of the last two.

Today's OECD education policy, according to Henry et al, has emerged as a blend of globalization and neo-liberal framework, where it is regarded as *"a key to future prosperity of*

nations" (2001, 30). A number of scholars contend (Drucker 1993; Marginson 1999; Robertson 2007; Moutsios 2009) that this future is seen within the borders of human capital theory, which places great emphasis on *"highly skilled and flexible workforce"* (2001, 30) in order to ensure economic growth. This has, among other things, resulted in what Robertson defines as gradual creation of "new kind of self/ worker/ citizen" and adds:

> *"An economy driven by constant innovation would require a rather different kind of self- one that actively produced new knowledge (and potential products and markets) through processes of assembling and reassembling knowledge."* (Robertson 2007, 7)

The demand for new kind of self will be particularly reflected, as it will be demonstrated in the following section, in OECD proposals for redefinition of teacher profile, which are to demonstrate that they are capable of constantly updating their knowledge.

Human capital theory together with the earlier discussed bigger role of transnational organizations has enabled the OECD to serve *"as significant mechanism for institutionalizing this new consensus"* (Henry, et al. 2001, 30). Furthermore, it seems that the OECD sees globalization as an arena of opportunities where knowledge society plays a major role. This can be inferred as, against the background of globalization; the OECD articulates education *"not as a residual, but as a direct and measurable factor in growing the new knowledge-based economy which confers both individual and societal benefits"* (Henry, et al. 2001, 59).

Another pillar of knowledge based economy in OECD educational policies is the incorporation of enterprise dynamics. This has entailed, just like human capital production, the redefinition of education under the influence of market forces in two directions: first, association of education with individual instead of social good; second, considering education as *"sites for profit making"* (Robertson 2007, 5). On the one hand, Henry et al., for instance, notice that the former trend has justified *"the user-pay in education"* or *"introduced quasi-market approach"* (2001, 30), which will be reflected in OECD proposals for performance related payments for teachers. On the other hand, the latter one resulted in educational institutions being seen as *"a big business"* (Robertson 2007, 5). Since schools and universities are now just one of the services in the economy, they need to reconstruct themselves in order to compete in the market (Robertson 2007). With regard to OECD teacher policies, these dynamics will be reflected, as it will be shown in the analysis, in proposals to redefine organizational level of school as well as to evaluate teachers so as to make them more competitive.

This educational framework has stirred lot of debate and reactions among scholars. Thus, these range from sharp criticism of Connell (1996) who defines IO's work (including the OECD) as "*a group of hairy-chested individuals swing down from the trees, uttering cries of "efficiency", "competition", "market discipline"; they tip all the huts over, then they swing back*

into the trees, leaving the villagers to clean up the banana peels", referring here to the devastating influence market-led policy making can have on education. Yet, there are authors who are not dissimilar from Connell, but still express somewhat milder analysis of OECD's agenda that serves the interest of neo-liberalism. For instance, Spring speaks about the dual role education plays in OECD policies: *"education is to aid the development of market economy"* and *"education is to remedy problems resulting from globalization such as unemployment, economic inequality etc"* (1998, 160). Last but not the least, Henry *et al.* contend that OECD "educational agendas are being "hollowed out" by the broader culture of performativity" whereby education has become *"handmaiden to the economy"* (2001, 58).
Taking this broader educational landscape of the OECD into account, how are teachers and their role to be interpreted in the knowledge society? By the same token as governments are to adjust their respective educational systems to the new age of knowledge production or students to acquire better skills in science, mathematics or languages, which will enable them to enter the job market; teachers are required to accommodate many aspects of their work, as well.

Analysis

The OECD and policies on teachers

As indicated in the previous section, economic agenda and the creation of knowledge society seem to score high in OECD educational agenda. In such a context, teachers have not been circumvented from OECD scenario that envisages the linkage between economic prosperity and education. This section will, therefore, delve more deeply into the OECD policies on teachers. It will attempt to demonstrate that particular proposals for teachers exemplify the overall OECD policy framework which reflects the organization's neo-liberal agenda and that such approach alters teacher's work. Specifically, the analysis will be based an overview of the two most recent publications on teachers: *Teachers Matter* (OECD 2005) and *Evaluating and Rewarding the Quality of Teachers* (OECD 2009).

An entrepreneurial role of a teacher

In 2005, the OECD published *Teachers Matter*, a policy document, alarming the public of the concerns regarding school teachers and their work. Since" all countries are seeking to improve their schools and to respond better to higher social and economic expectations", teachers are thought to be *"central to school improvement" and "vital for improving student learning"* (OECD 2005, 1). However, the studies have shown, the document continues, that teachers are not prepared enough for new challenges in education, primarily how to cope with much broader role they are assigned to (OECD 2005). To this end, a number of proposals were offered in order to mend the situation and finally make teachers more conducive to the above mentioned trend. However, certain policy directions, it will be argued, disingenuously show care and concern for teachers. Instead, they reveal, as it will be demonstrated, broader alignment with neo-liberal framework of the OECD. Furthermore, it will also be argued that certain convergent points of neo-liberal thinking seen in this document result in creation of a different role of a teacher. It will be demonstrated that *Teachers Matter* express OECD neo-liberal design for teachers in two aspects: first, in the way the OECD profiles teachers, that is supposed to bring about increased student performance; second, through the kind of school environment this policy document encourages.

The OECD sees through this policy document a specific profile of a teacher that can deliver the expected results. The profile requires teachers to possess not only "subject-matter knowledge and pedagogical skills" but also, now in the era of globalization, improved *"capacity to work effectively and contribute to school performance as well as the capacity to continue developing"* (OECD 2005, 9). Not only does this phrasing significantly broaden the teacher's role, which may lead to having less time to concentrate on the actual teaching, but it also demonstrates that by using the wording such as *effectiveness* and improved *performance*, commonly heard in jargon associated with business employees, the OECD is attempting to introduce market language in education. The emphasis placed in the document on a profile of a teacher who is skilled, flexible to learn according to the needs that arise, and performance-conscious also reminds of what Robertson (2007) has defined as transformation of *self* under the influence of neo-liberal framework. The potential consequence for more entrepreneurial *self* of teachers is that the role of somebody commonly regarded as humanitarian, knowledge-oriented and enlightening is to be substituted by the one who is doing his/her economic job.

In line with the neo-liberal notion of competitiveness and demands for improved efficiency is yet another set of proposals affecting teachers in their working environment by seeking to re-organize school. Thus, the policy goes on to suggest that in order to ensure that quality teachers enter a school, it is necessary to provide *"schools with more responsibility for teacher personnel management"* (OECD 2005, 11). In order to achieve this *'many schools*

will need more skilled leadership teams' (OECD 2005, 11). Such recommendations provide some useful insights into how the OECD sees schools and seem to reflect the emergence of a school working environment resembling that of an enterprise, where everyone has strictly determined responsibilities and tasks depending on the position on the company ladder. Furthermore, *Teachers Matter* says that beginner teachers are from now on to undergo *"mandatory probationary period"* as well as to be allowed to have *"flexible working hours"* (OECD 2005, 10). This recalls a typical trial period in an enterprise, during which an employee is closely monitored whether he/she can perform the job well so as to bring enough revenue to the company and in that way justify his/her hiring. Also, it is a period when an employee lives with "a threat" of losing a job in case he/she fails to perform. Therefore, because they incorporate elements of business management (trial periods, more defined leadership roles, working hours flexibility), these proposals redefine teacher-principal relationship. As a result, it is becoming more the one of an employee versus manager and more hierarchical.

In short, *Teachers Matter* just seemingly shows an interest to help teachers significantly improve their student's learning and their professional development. This is because these recommendations are covertly underscored by neo-liberal framework that brings the rules of the market into school and teacher profession. In particular, these are entrepreneurial orientation of a teacher profile and the control of teachers through elements of business management. Thus, by proposing significant changes on two levels of teachers' work: professional, and organizational; the role of a teacher is less and less about the one who inspires and nurses values and knowledge. Rather, it is more about the one of an efficient worker, capable of meeting the set targets. And the efficiency of this worker is to be controlled through another policy document, which will be discussed in the following section.

Teacher evaluation and performance-related payments

Teachers Matter represents OECD's more general directions on teachers and schools. When these have been determined, the OECD published in 2009 another document in which more particular actions are proposed. Unlike with the previous document, *Evaluating and Rewarding the Quality of Teachers* (OECD 2009) specifically elaborates on the concrete steps to be undertaken in order to secure the best place for schools in knowledge economy. Taking this into consideration, this part will continue to argue that the presence of market relations in OECD policy, this time incarnated through evaluation and reward, entails grave implications for teachers as professionals.

The need for evaluation is seen by the OECD as crucial, as in today's globalized economy; teachers are "no longer among best educated people in society". Therefore, evaluation is supposed to alert teachers to develop *"competencies and skills in their field of work"* (OECD

2009, 16). Such discourse is telling not only of the penetration of market language into teachers' practices through the use of words competency and skills, but also of, as it will be demonstrated from certain directions of evaluation policy, the shift in teachers' work which nudges them to concentrate on the output, rather than the process of student learning.

In its extensive document on teacher evaluation, the OECD takes as its starting empirical point student performance in PISA, which tests and compares students' skills of particular subject areas at the end of compulsory education across OECD countries. PISA tests are to be read as indicators of how well countries are preparing their students for knowledge economy. Taking this as the basis for the introduction of teacher evaluation is controversial since it demonstrates as Neave says, how evaluation is employed for *"'strategic change', where education is being used increasingly for the establishment of benchmark against which the performance of particular areas of the national economy may be placed and the allocation of recourses undertaken"* (Neave 1988, 8) The problem with such strategy, like the one here proposed by the OECD, is that it "seeks to elicit how far goals have been reached through the evaluation of *"product"* (Neave 1988, 9). In the case of OECD proposals, "the goals" are here enshrined in PISA test results, which, again, are supposed to be indicative of quality in education of a particular country.

Interestingly enough, it seems that OECD teacher proposals and emphasis on the so-called *value-added-model* for teacher evaluation whereby external assessors try to *"isolate the contribution that individual teachers make towards student achievement"* (OECD 2009, 130), relying on student tests, also shows how evaluation is focused not on the process, but on the outcome of learning whereby isolating single factors (teachers) to explain it. This strategy stands in line with the creation of the utility of education in the light of purposes framed in terms of '*national priorities', construed in market terms"* (Neave 1988, 9).

Once the best ones have been identified through external evaluation, the OECD suggests rewarding those teachers who achieved best performance. This notion is termed incentives or merit pay for teachers and appears in the same document as evaluation. Actually, it represents the other side of the same coin because the OECD hopes to, by proposing financial rewards for teachers, encourage them to continue their professional development. This kind of OECD proposal illustrates the congruence with market practices, because as Mohrman et al. note *"skill and competency-based pay draw upon parallels from business and industry, based on creating 'high involvement' management strategies"* (1996, 125). Even more so, since the purpose of incentives is to develop adaptable teachers, able and ready to acquire new skills whenever required, it fosters the establishment of teacher relationships and school culture similar to that of the market, which rests in the words of Nicholls (1995) on the notions of flexibility and discourse of Human Resources Management (HRM) and Total Quality Management (TQM). As a consequence of insertion of business relations in teacher profession, researchers agree that this kind of practices are more likely to nurse competition

and deterioration in teacher responsibility, rather than produce desired pre-determined effects. For example, Bacharach et al. speak about teacher reward as “merit pay” or “career ladder scheme”, which are, just like in the case of the OECD proposal, *“based in part on some form of evaluation of their performance”* (1990, 123). They see this as having devastating effects on teachers as professionals and say:

“That usually results in discouraging cooperation and sharing of job knowledge among teachers, by forcing them to compete with each other. [Merit pays] “*typically create hierarchies among teachers and provide for promotion from one level to the next [usually based on] some reduction in the amount of classroom teaching as the teacher advances up the ladder”* (Bacharach, et al. 1990, 123).

Similarly, Smyth et al. warn of the repercussions of teacher incentives in their study on Australian primary schools, where it has been found that “competitive model is not only outdated, but it may actually be highly counter-productive to schools” (1998, 94). They note that p.94

> *“… not only was there shame, humiliation, anger and loss of confidence at failure, but after years of positive peer and community affirmation, good teaching could be quickly shattered through a failure at critical assessment. [Moreover], the inextricable embeddedness of self-worth in teaching meant that failure produced huge emotional and social disjuncture”* (1998, 94)

In summary, since evaluation and incentives primarily derive its origin from business practices, they are destructive for teachers, because their work relies as Wartron et al. (1992) have explained on a different set of images. These are mainly interpersonal dimension (relationships with young children and colleagues) and personal aspects (the intellectual satisfaction of the work or the feeling of being isolated as a classroom teacher). Insistence on introduction of evaluation and reward is, as it was discussed above, likely to produce two side-effects on teachers: the former concentrates on the outcome rather than the learning process whereas the latter triggers competition and emotional break-down among teachers.

Conclusion

Among myriads of reforms, proposals and policies for all levels of educational system, the OECD, as an expert in the field of education, has not skipped teachers. They are regarded as one of the key factors accountable for the performance of student learning as well as for the provision of quality education. Furthermore, the OECD offers advice to help teachers improve their standing whereas schools how to attract and retain the best ones. This is particularly visible in policy documents *Teachers Matter* and *Evaluating and Rewarding the Quality of Teachers*. However, when broader context of OECD policies orientation is more closely examined, end-goals emerge. Because teacher policies are embedded with competitiveness, flexibility, commoditization of education, deregulation and individualism, it is, actually, unveiled that they reflect the overall neo-liberal framework of the OECD, which uses education as a vehicle for economic competition and growth on the global market. As a consequence of policies' neo-liberal proclivity, teachers seem to be affected at two levels: professional and organizational.

Professional can be seen in recommendations for a broader profile of a teacher. In so doing, the policies are pressing for altering the very *self* (Robertson 2007) of teachers. Hence, teachers are being turned into efficient and effective workers. Additionally, teacher professionalism is further altered by proposals for external evaluation that has as a consequence focus on the output of student learning as an indication of how good or bad evaluated teacher is. Lastly, teachers as professionals also seem to be immersed into competing against each other so as to deserve their merit pay.

As for the organizational level, through its proposals for teachers, which contain elements of business management, the OECD seems to foster a school that is becoming similar to a company. As a result of this, school is becoming an organization with determined hierarchical positions. In such context, teachers are deprived of their voice and their relationship with principal is employee/manager.

References

Apple, Michael. 2009. *Changing Teacher Professionalism.* NY: Routledge

Bacharach, Samuel; Conley, Sheron; Shedd, Joseph. 1990. *Evaluating teachers for career awards and merit pay.* Beverly Hills, CA: Sage publications.

Beck, Ulrich. 2006. *Power in the global age (Vol. 1).* (K. Cross, Trans.) Cambridge & Malden, United Kingdom & United States of America: Polity Press.

Connell, Robert. 1996. *Prepare for interesting times: education in a fractured world.* Sydney: University of Sydney.

Dale, Roger. 2000. Globalization and education: demonstration a “common world educational culture” or locating a “globally structured educational agenda”?. *Educational theory,* 50 (4): 427-448.

Drucker, Peter. 1993. *Post-capitalist society.* New York: Harper.

Harvey, David. 2007. *A brief history of neoliberalism.* Oxford: Oxford University Press.

Henry, Miriam; Lingard, Bob; Rizvi, Fazal; Taylor, Sandra. 2001. *The OECD, globalisation and education policy.* Oxford: Pergamon.

Hoi, An, and Viet, Nam. 2006. APEC-OECD Integrated Checklist on Regulatory Reform: Addressing Regulatory, Competition Policy, and Market Openness Policy Issues - Hong Kong, China. OECD. Retrieved from: http://www.oecd.org/dataoecd/19/63/37521641.pdf

IMF (n.d.). About Us. Retrieved from: http://www.imf.org/external/about/howwedo.htm#lending

Klees, J. Steven. 2008. A quarter century of neoliberal thinking in education: misleading analyses and failed policies. *Globalization, societies and education,* 6 (4): 311-348.

Marginson, Simon. 1999. After globalization: Emerging politics of education. *Journal of Education Policy*, 19-32.

Martens, Kerstin, Rusconi, Alessandra, & Leuze, Kathrin (Eds.). 2007. *New arenas of education governance: the impact of international organizations and markets on educational policy making.* Hampshire & New York: Macmillan Palgrave.

Mohrman, Allan; Mohrman, Susan; Odden, Allan. 1996. Aligning teacher compensation with systemic school reform: skilled-based pay and group-based performance awards. *Educational Evaluation and Policy Analysis,* 18 (1): 51-71.

Moutsios, Stavros. 2009. International organizations and transnational education policy. *Compare*, 39 (4): 467-478.

Neave, Guy. 1988. On the cultivation of quality, efficiency and enterprise: an overview of recent trends in higher education in western Europe. *European Journal of Education*, 23 (1-2): 7-23.

Nicholls, Peter. 1995. Manufacturing consent through the market: the case of the service sector. Paper presented at the Research Seminar Series. Murdoch University.

OECD. 2005. Teachers Matter. Retrieved from: http://www.oecd.org/document/52/0,3343,en_2649_39263231_34991988_1_1_1_1,00.html

OECD. (2005, June 28). Attracting, Developing and Retaining Effective Teachers. Retrieved from: http://www.oecd.org/document/52/0,3343,en_2649_39263231_34991988_1_1_1_1,00.html

OECD. (2009, June 16). Creating Effective Teaching and Learning; Result from TALIS. Retrieved from: http://www.oecd.org/document/54/0,3343,en_2649_39263231_42980662_1_1_1_ 1,00.html

OECD. (2009, November 20). Evaluating and Rewarding the Quality of Teachers. Retrieved from: http://www.oecd.org/document/20/0,3343,en_2649_39263231_44111636_1_1_1_37455,00.html

Papadopoulos, George. 1994. *Education 1960-1990.* Paris: OECD.

Robertson, Susan. 2000. *A Class Act.* NY: Taylor & Francis

Robertson, Susan. 2007. 'Teachers Matter...Don't They: Placing Teachers and Their Work in the Global Knowledge Economy. Bristol: Centre for Globalisation, Education and Societies; University of Bristol.

Smyth, John; Shacklock, Geoffrey. 1998. *Re-making teaching: ideology, policy and practice.* London and New York: Routledge.

Spring, Joel. 1998. *Education and the rise of the global economy.* New York: Lawrence Erlbaum Associates, Mahwah.

Warton, Pamela; Goodnow, Jacqueline; Bowes, Jennifer. 1992. Teaching as a form of work: effects of teachers' roles and role of definition on working to rule. *Australian Journal of Education*, 170-80.

PERSPECTIVES OF THE COUNTRIES

Lifelong Learning in Educational Amsterdam: Quality of Accredition of Prior Learning

Inge Oudkerk Pool, Janneke Riksen, Seerp de Blauw, Ben Snoeiijnk

Abstract

The Cooperation of Amsterdam Teachers Education Institutes (SAL) has developed a joint Accredition of Prior Learning (APL) policy in Amsterdam to react adequately to teacher shortage in schools. The APL policy is carried out in accordance with the national APL quality code.

The various parts of the APL instrument : procedure and methodology, instruments and portfolio and reporting are described. The focus of the article is on the quality of portfolio assessments, of output and instruments, assessors and of the organization of the whole assessment. But the key link in the quality is the assessor in portfolio assessments. So the assessor profile and the concepts of intersubjectivity and moderation are reviewed in this article about Lifelong Learning in educational Amsterdam.

Keywords: *P*ortfolio assessment; quality of the assessor; Accredition of Prior Learning (APL); professional development

Introduction

In this paper we will first explain in what way lifelong learning has been implemented in the context of Accreditation of Prior Learning (APL) assessments within teacher education in the Amsterdam region. We will describe what the APL assessment looks like and will give a short clarification of the concepts before proceeding to a description of the quality standards. Finally we will describe the development of the professionalization of assessors so far and the focus of the research into the professionalization of assessors by one of the members of the working group.

The APL code

The Dutch Knowledge Centre APL is happy to introduce the quality code for APL. National actors, among which APL providers, employers and accreditation bodies, have joined hands to develop a quality code for APL. Based on existing quality methods and the Common European Principles for the identification and validation of non-formal and informal learning, an APL code has been developed, which enables all actors in the Netherlands to bring APL to a higher quality level. We hope to inspire our colleagues at the European level.

- The goal of APL is to define, evaluate and acknowledge individual competencies.
- APL primarily meets the individual's needs. Entitlements and arrangements are clearly defined and guaranteed.
- Procedures and instruments are reliable and based on solid standards.
- Assessors and supervisors are competent, impartial and independent.
- The quality of the APL procedure is guaranteed and is being improved on an ongoing basis.

Context

Since 2007 there has been an APL working group within the Cooperation of Amsterdam Teacher Education Institutes (SAL), in which the Amsterdam University of Applied Sciences (HvA), University of Applied Science Inholland, the University of Amsterdam (UvA), the Free University, Centre for Educational Training, Assessment and Research (CETAR) (Vu) and Interconfessional Training College (Ipabo) participate. The working group has developed a joint APL policy and matching set of instruments as one of the tools to react adequately to teacher shortage in schools in the region and to recruit more qualified teachers (increase teacher intake) who will stay in the teaching profession longer (decrease teacher attrition), acting on the government's policy document on teacher education and on the impulse from the Government department of Education (OC&W) to promote cooperation on a regional level.

APL makes it possible to recognize formal and informal learning and is therefore an important item on the agenda of the European Commission in the development of lifelong learning. APL can be regarded as an instrument for lowering the threshold for following a training course in higher education and it fits in with the effort to make higher education more flexible by offering tailor-made training programmes.

SAL tries to reach four aims. Increasing cooperation, transparency and uniformity in the APL policy between teacher education and the educational sector, the unambiguous use of concepts, the joint management of a pool of assessors (trainers and teachers) and the set of

instruments and as a final aim guaranteeing the APL quality through professionalization of assessors (from beginner to excellent).
For this purpose SAL has the APL covenant, in which the agreements can be found about the APL procedure, methodology, set of instruments and reporting, the joint training of assessors, the joint responsibility for guaranteeing the quality of the APL methodology in the region and the way in which the agreements about APL and about the prices will be carried out.
In an APL procedure we examine to what extent a candidate has reached the required level of competence of a Bachelor of Education PO (Primary Sector) for teaching certification for primary education, a Bachelor of Education VO/BVE (Secondary level and middle vocational level) for teaching certification for the lower secondary sector and the Profile of university teacher education (ULO) for teaching certification for the upper secondary sector. The recognition and evaluation of APLs preceding or following enrolment results in a tailor-made training track and is intended for unqualified and under qualified teachers and persons with relevant APLs who want to transfer to the educational sector.
The APL policy is carried out in accordance with the national APL quality code. The institutions themselves are responsible for carrying out the APL policy and administering and reporting on the APL assessment.

Clarification of concepts assessment, competence and portfolio

The word assessment derives from the Latin words *assessare* and *assidere* (Roelofs & Straetmans 2006). The translation of *assessare* is to impose a tax or to determine a rate. *Assidere* means to sit beside somebody. The word has entered the educational sector via selection psychology, where assessment and assessment centre are key concept. It means: the process of purposefully collecting and editing information about persons' achievements in a certain field, with a view to taking decisions about those persons (Athanasou 1997). Dochy and Nickman (2005) make an attempt to arrive at a synthesis of the definitions of the concepts of competence. A competence is a personal skill which manifests itself in showing successful behaviour in a certain, context related situation. A competence is variable in time and is to a certain extent capable of being developed. A competence consists of an integrated complex of knowledge, skills, insights and attitudes, where personal characteristics and aspects of professional functioning also exert an influence on (the development of) competences in a certain way.
Finally, Tartwijk e. a. (2003) describe portfolios, as they are used in higher education, as digital or physical folders, which often contain the following elements:

Overviews – Overviews may have the form of curricula vitae or tables. In these the candidate explains clearly in what contexts he has worked on what, what training he has received when and where, what skills he has and to what extent he regards himself as competent.
Material - The candidate can collect material in his portfolio. This may be his own work, evaluation by others, video recordings etc. Sometimes students are free to choose the material, sometimes the material that is to be found in the portfolio is prescribed. With this material the candidate gives insight into the quality of his actions.
Reflections – In these the candidate reflects on his own competences and his own professional and/or academic profile.
In addition to the above elements SAL always uses the *Self assessment* – The candidate judges his own knowledge, skills, insights and attitudes and relates these to the assessment standard. The assessment standard has been worked out in behavioural indicators on which the candidate indicates how he ranks himself and on what grounds.

The various parts of the APL instrument

Procedure and methodology

The teacher education institutes in the Cooperation of Amsterdam Teacher Education Institutes use the same APL procedure and APL methodology. In an APL procedure the extent to which a candidate has reached the level of competence required for a Bachelor of Education Primary Sector for teacher certification for primary school, a Bachelor of Education VO/BVE for teacher certification for lower secondary school and the Profile of university teacher education I (ULO) for teacher certification for upper secondary school is examined. The APL procedure consists of the following parts:

A. *Orientation and advice*
   0 APL quick scan (optional, not for all profiles);
   1 Information talk;
   2 Registration form.
B. *Recognizing, assessing and acknowledging competences*
   3 Compiling a portfolio;
   4 Assessing the portfolio;
   5 Criterion directed interview;
   6 Feedback & provisional assessment assessors;
   7 Drawing up APL Report.
C. *Acknowledging of competences by training institute*
   8 Appraisal of APL report by examining board; overview of exemptions received and training track to be completed.

Instruments and portfolio

In the APL procedure the following instruments are used:

a. Registration form and introduction to determine if the APL track is relevant.
b. A portfolio, with the following items:

- Name and address of the candidate;
- Candidate's intentions as to APL;
- Curriculum vitae: description of work experience and education;
- Motivation;
- Results of instruments and reflections (amongst which mastery of the body of knowledge);
- Self assessment, related to the assessment standard used;
- Evidence to support the self evaluation.

In addition to the practical examples the portfolio may contain the following, if relevant:

- diplomas, certificates or testimonials of courses followed in which knowledge and skills have been acquired and which are related to the self assessment.
- assessment by third parties such as managers, clients and/or colleagues.

c. An assessment interview, in the form of a criterion directed interview.

Reporting

The APL report contains:

- the candidate's profile;
- justification and procedure;
- assessment per competence on three levels.

The APL report is submitted as advice to the examining board of the training institute (chosen). On this basis the examining board decides on a suitable training track.
The Teacher Education Institutes in the cooperation accept each others' APL reports.
APL: a vision on learning
Accreditation of Prior Learning (APL) assessments are assessments for qualification. The assessors assess the evidence submitted by the candidate for qualifying decisions independent of the training track. The assessment of competences and the awarding of qualifications take place against a background of intensification of technological changes, mobility of labour and greater flexibility of education. About this Klarus (1998, 2006) says that:

a. technological changes and changes in production processes have consequences for durability of competences as well as for durability of qualifications. Individuals will have to adapt and renew their competences constantly and the useful life of qualifications is becoming shorter and shorter.
b. more and more groups of employees will have to change jobs or positions regularly. Greater mobility presupposes a high degree of transfer of competences and insight into previously acquired competences. Constant changes in required qualifications necessitate constant renewal of competences that are present already. This is done the more efficiently if competences that have already been acquired are used (human capital accounting).
c. the educational system is expected to take up these developments flexibly and moreover to ensure that more individuals have qualifications that are relevant for the labour market. The prevention of waste requires training institutes to adapt their course offerings to the specific requirements of the labour marker and at the same time take into account competences that an individual may have acquired already.

In her inaugural lecture Joosten-ten Brinke (2011) writes that in the present educational system students and pupils often learn for the test. The educational sector should aim at results of learning being available not only at the moment of testing but at results of learning being durable, i.e. remaining for a longer period (Boud 2000; Simons & Lodewijks 1999; Sluijsmans 2008). Knowledge of and insight into the possibilities and consequences of assessment and recognition of informal and non-formal learning determine the quality of testing at the level of life long learning.

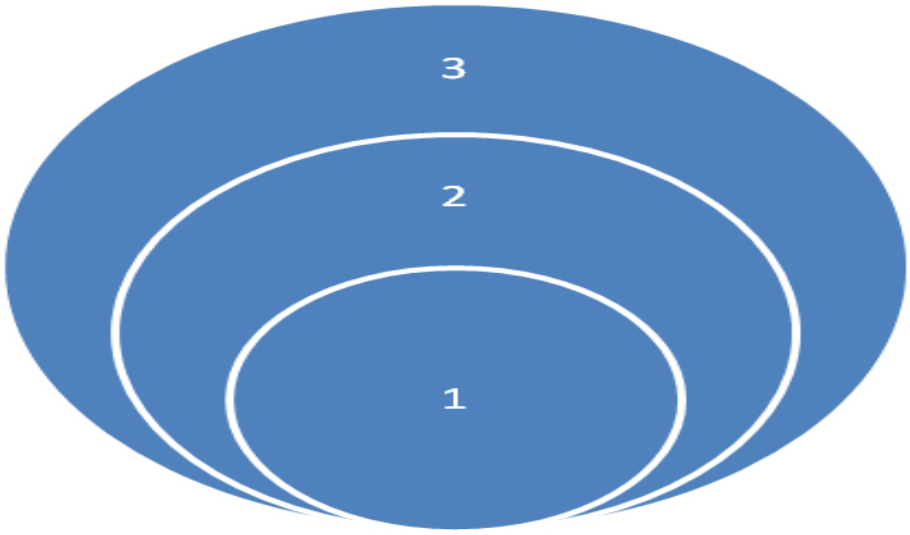
APL is a vision on learning. In the context of life long learning what people have learned already in informal, non-formal and formal contexts is analysed. APL has advantages for students as well as the teacher education institute. Students can be given exemptions by the examining board for those elements of the course of which the contents match the competences that they have already acquired. As a result of this the track that these students need to follow can be adapted to their needs and in this way the details of the course may be added in a more meaningful manner. For training institutes APL is interesting because the accessibility of the courses is improved. Students that could not be admitted in the past because they did not possess the right diplomas or certificates can now use the APL assessment in order to gain admission. Moreover, the course that the student still has to follow is determined on the basis of the APL report – which makes the training track more cost effective.

The quality of assessments and the quality standards of portfolio assessments

In portfolio assessments attention is paid to the assessment of various results in connection with each other (the integrative assessment). About this Dierick e.a. (2002) state: "Assessment means measuring students' competences at different moments and in different ways, by different assessors if so desired. An assessment must be regarded as a whole not as a series of separate parts. It follows that the reliability of the whole is what matters, not the reliability of the separate parts. It makes more sense to ascertain if the behaviour shown is capable of being generalised or transferred to the reality of the profession and how many tasks, tests and assessors are necessary for this."
It is important to guard the quality of the entire procedure: from measurement until decision. The quality standards were described for the first time in 2004.
The quality standards[1] are a guide for the assessments which are developed and carried out by SAL. The quality standards address three qualities:

1. quality of the output of the assessment procedure ;
2. quality of the instruments and assessors;
3. quality of the organisation.

Each of the quality standards is explained below.



[1] The quality standards are found in the ADEF brochures (2004 and amended in 2009). ADEF is short for Algemeen Directeurenoverleg Educatieve Faculteiten projectgroep competentiegericht opleiden en beoordelen

1. *The quality of the output of the assessment procedure* In order to judge the quality, the desired output of the assessment is examined. In an APL the framework of the assessment is examined, at master or bachelor level. This framework must be worked out transparently and unambiguously in distinct and clear indications of the levels and caesuras.

In the assessment report the candidate is informed of what he has mastered and on what aspects he still needs to work. This implies that the report and the advice give a clear and correct picture of the candidate's competences and that the candidate knows that he is known and recognized. Also the teacher education institutes concerned and the educational sector must recognize and accept the outcome. The same goes for the assessors; they must be satisfied with the course of the assessment as well as with the quality of the outcome.

2. *The quality of instruments and assessors*

The degree of satisfaction and acceptation is to a large extent determined by the quality of the instruments, the assessment framework, the assessors and coaches, if any.
The instruments must invite the candidate to show his qualities. The assessment instruments are valid and reliable and the procedure is transparent. The assessors need to be capable of recognizing and acknowledging the candidate's competences and to relate these to the phase of the candidate's development and to the assessment framework. The assessors create such a climate that this is possible.

3. *The quality of the organisation*

Here we are referring to the organisational aspects of the assessment, the information to and the communication with all those concerned in the assessment.
With the quality of the information we mean that it is clear to the candidate that the APLs are important and that he himself is responsible for charting, demonstrating and accounting for his APLs. He knows what is expected from him as far as procedure and contents are concerned. Other aspects concern the accessibility of the bureau, the organisation and the duration of the assessment, the internal communication and the general transfer of information to all those concerned.
In the various APL assessment networks people have become convinced that the quality of the assessors is the decisive factor for the quality of (the report on) the assessment. Hence the emphasis that is laid on the professionalization of the assessor. The set of instruments for the assessment and the organisation may be good, but if the assessor is incapable of recognizing and acknowledging the competences and relating these to the candidate's / student's phase of development and to the regulations in force in the teacher education institute the other persons concerned will not be pleased with the assessment.
Professionalization of Assessors

From the above it appears that the assessor is the strongest as well as the weakest link in the quality of portfolio assessments. Therefore the professionalization of assessors is such an important factor.

The assessor training was designed to develop basic skills that each assessor himself must possess. This requires knowledge of the profession, an open, listening but also confrontational attitude and the ability to make the correct analysis. Justifying the assessment to the candidate, the examining board of the teacher education institute and the school and writing the assessment form the core of the training.

In spite of this it appears that carrying out many assessments and having followed an assessor training do not guarantee the quality of assessors. Therefore a quality certification was designed in which the assessor shows that he is competent during an authentic assessment.

The APL Centre of the HVA developed the authentic certification of assessors some years ago. For this the following assessor behaviour indicators, which must be demonstrated during the assessment, were specified. The Cooperation of Amsterdam Teacher Education Institutes has adopted these criteria (see assessor profile APL Centre of the HvA; this profile was adopted by the national assessment working group of lower secondary school teacher education institutes).

APL Assessor Profile

Central assessor tasks

1. determines if a candidate's portfolio is sufficient as a basis for the assessment interview;
2. conducts a criterion directed interview (= assessment interview) on the basis of the portfolio to determine the level of competence;
3. determines the level of the candidate's competence (and informs the candidate);
4. gives development directed feedback, if necessary;
5. records findings and final judgement on the appropriate forms;
6. writes the final report in the appropriate format.

Basic assessor qualifications

- has relevant and extensive expertise and practical experience in the field of the training;
- is active in the training (internal assessor) or in a relevant professional setting (external assessor);
- has extensive experience in supervising student teachers (university students) or newly appointed colleagues;
- has a bachelor's or master's or higher degree;
- is customer oriented and genuinely interested in the candidate's professional development;
- is sensitive: can place himself in the candidate's environment;
- is conscious of his own frame of reference and uses it adequately in carrying out his tasks;
- works efficiently and accurately and meets his appointments;
- communicates in an accessible and persuasive manner, both orally and in writing;
- is inquisitive and prepared to invest in himself.

Assessor qualities[2]

The assessor can professionally determine if the candidate has acquired the competences required. As the development and assessment of competences may take place in various highly diverse practical situations and as all roads lead to Rome, it is particularly important that an assessor shows that he knows the world behind the indicators, that is to say that he can relate competences to various practical situations and behaviour.

Behavioural indicators:

- creates an atmosphere in which full justice can be done to the candidate;
- gives structure to the assessment talk;
- applies various question and conversation techniques at the right moment in order to discover the candidate's competence;
- direct the conversation;
- relates experiences, methodology and evidence produced by the candidate to relevant competence criteria (assessment triangle);
- recognizes products that have not been mentioned in the self evaluation model as usable evidence;

[2] Development of the qualities mentioned is central in the assessor training. In the certification of assessors the behavioural criteria are used as assessment criteria.

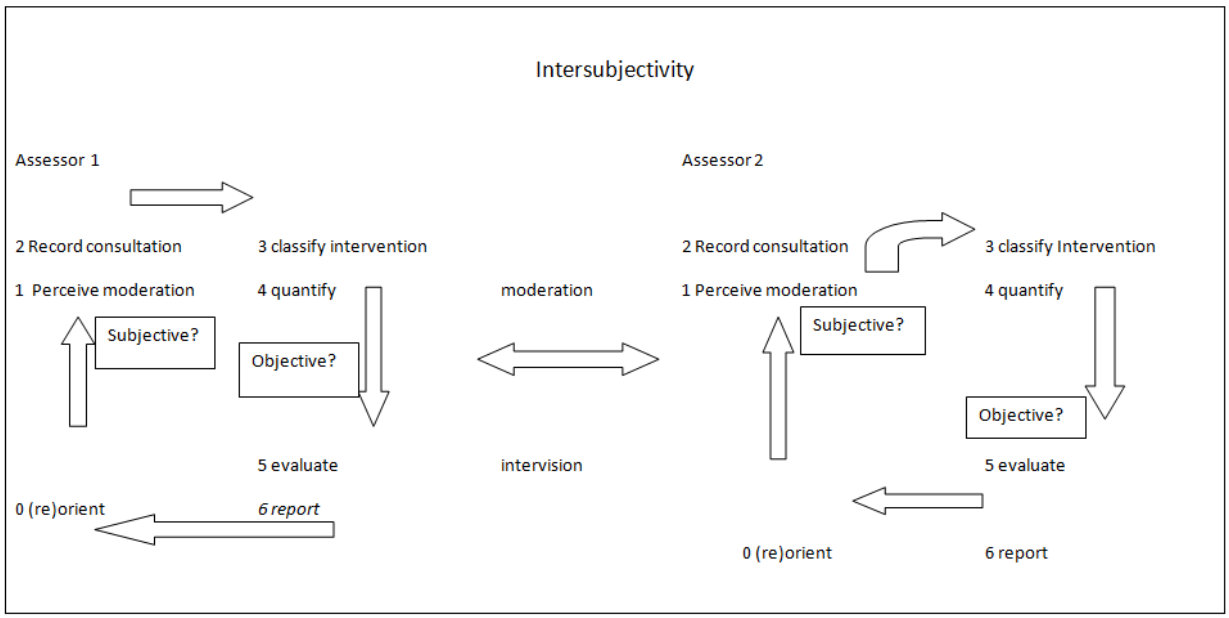
- arrives at a well founded final judgement and communicates this in a persuasive and constructive manner;
- gives constructive feedback;
- records the judgement in a report in an accessible manner;
- deals adequately and in a customer-oriented way with possible objections to the final judgement.

These indicators concern the structuring of the conversation, the application of different conversation and questioning techniques to determine the level of the candidate's competence and keep control of the conversation. Relating experiences, methods and evidence offered by the candidate to relevant competence criteria so as to give feedback directed at the candidate's development and arrive at a well-founded final judgment; the assessor does this in a convincing and constructive manner and knows how to deal with objections against the final judgment, if any, in a customer-oriented way.

Intersubjectivity and moderation

In his book Sinke (2006) describes the importance of the concepts of intersubjectivity and moderation in the assessment. Moderation is constant consultation between assessors. In this consultation they must be prepared to bring their own actions as well as the instruments and the way these are used up for discussion. Moderation ensures the continuous development of the assessors' professionalism and of the instruments used by them.
Because of the moderation the assessors develop intersubjectivity. Because of this they become less dependent upon detailed elaborations of assessment criteria and learn to rely on their own judgement. Intersubjectivity leads to confidence that the assessor's own judgement does not differ too much from the fellow assessor's judgement. In this way intersubjectivity develops into an instrument that provides an alternative to the classical assessment models which can approach objectivity in arriving at a judgement as much as possible.
The quality of the assessors can be improved through a thorough training and the continuous interchange of experiences and findings. In this, particular attention is needed for the intersubjectivity, that is to say: the agreement between the judgements of various assessors who judge the same individual's competences with the same competence indicators. This does not only increase the reliability but also guards the validity. Does the candidate sufficiently demonstrate his competence? The assessor's main task is to answer this question. On the basis of attention to intersubjectivity by the assessors an assessment track is never isolated and there is a continuous development of (the quality of) the assessment.

The figure below represents the intersubjectivity between two assessors. When these experiences are introduced and shared in meetings of assessors, the intersubjectivity is further developed in teams and many circles of arrows are created.



Research

An investigation has started in order to find out in what way assessors professionalize themselves and what interventions assessors carry out.
This study aims at describing the professional development of assessors, on the one hand as a legitimization and justification of training and certification of assessors and on the other hand as an attempt to make the assessor's qualities more transparent. The assessor's own profile and competencies are central. All this is aimed at guarding and guaranteeing the quality of competence directed assessments.

Activities of SAL

- Administering APL assessments and assessments of mid-career professionals who decide to change course via central registration;
- Training new APL assessors;
- Organising intervision/ harmonising meetings for assessors;
- Joint certification and improvement of procedure, exchanging reports and carrying out research;
- Research by one of the members into the quality profile of the assessors;
- Website: maintaining and updating <http://www.Leraarwordenmetevc.nl>

Workshops

- ATEE 2009: "On the road together, Good Practice APL and Teacher Training Colleges";
- Velon 2009: “Afstemming, Transparantie en Eenheid in EVC-beleid en procedure binnen en tussen lerarenopleidingen”.
- -EARLI 2010: "Lifelong learning in educational Amsterdam".
- -ATEE 2011: workshop " Assessors Life-cycle from leaner tot expert assessor.

References

Athanasou, J.A. 1997. *Introduction to educational testing.* Wentworth Falls: Social Science Press.

Berkel v. A, Dinther, M., Oudkerk Pool, I., Speetjes, J. 2008. Certificeren van assessoren in het hbo. Waarom en hoe? – Onderwijs Innovatie, nummer 2, juni pages 17-25.

Dierick, S., G. van de Watering & A. Muijtens in Dochy e.a. 2002. *Assessment in onderwijs.* Utrecht: Lemma.

Dochy, P, L. Heylen, H. van de Mosselaer. 2002. *Assessment in onderwijs. Nieuwe toetsvormen en examinering in studentgericht onderwijs en competentiegericht onderwijs.* Utrecht: Lemma.

Duvekot,R., e. a. 2007. *Managing European diversity in lifelong learning.* Vught: HAN University Foundation EC – VPL en Hogeschool van Amsterdam.

Joosten-ten Brinke, D. 2011. *Eigentijds toetsen en beoordelen.* Tilburg: Fontys Hogescholen.

Klarus, R. 1998. *Competenties erkennen.* ’s-Hertogenbosch: CINOP.

Meijs, v.d. M., Smulders, H., Wee, ter, E. 2004. *Het geschiktheidsonderzoek voor zij-instromers in de praktijk.* Wageningen: Stoas.

Oudkerk Pool,I., Haitink, A. 2009. Het één versterkt het ander – stages begeleiden en beoordelen-, De Academische Opleidingsschool, Samen opleiden, onderzoeken en onderwijs ontwikkelen, De Hogeschool van Amsterdam en de Amsterdamse Stichtingen voor Katholiek Onderwijs, Amsterdam: A5 Schrijfbedrijf.

Oudkerk Pool,I., Reinink, M., Scholte, W., Klink, v.d. M., Haan, J. 2008. De noodzaak en de inhoud van een standaard voor EVC in de lerarenopleidingen – *VELON tijdschrift* 29 (2) 2008, pages 14-21.

Roelofs, E., Straetmans, G. 2006. *Assessment in actie.* Arnhem: Cito.

SBO. 2008. Het managen van verwachtingen; Onderzoek naar de ervaringen en leerpunten van het zij-instromen in po,vo en bve, Den Haag: augustus.

Schoonman, W. 2009. *Handboek Assessment deel II, docentcompetenties.* Assen: Van Gorcum BV.

Sinke, G.P.J. 2009. Aan de slag met assessment – Toetsen en beoordelen in een competentiegerichte leeromgeving- Nuenen: OAB drs. M.A.F. Dekker BV.

Sluijsmans, D. 2008. Betrokken bij beoordelen. Nijmegen: Hogeschool van Arnhem en Nijmegen.

Tartwijk, J. v. 2003. Werken met een elektronisch portfolio. Groningen/Houten: Wolters-Noordhoff.

Tillema, H. 2001. Assessment van competenties. Alphen aan den Rijn: Kluwer.

Developing Quality Teachers for the Singapore School System: The Impact of the National Institute of Education and the Tripartite Relationship with the Ministry of Education and Schools

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Abstract

Since independence Singapore has attempted to build an education system with coherent curriculum, good teachers and effective school leaders form the cornerstone of that system. Researchers, policymakers and education leaders generally agree that teacher quality is a vital factor in helping students learn and improving outcomes. The purpose of this presentation is to provide a descriptive analysis of the different policies and strategies the Ministry of Education had adopted over the past decade and the latest initiatives to support the growth and development of a teacher-lead culture of professional excellence. The important role and influence of the National Institute of Education in the tripartite relationship with the Ministry and schools in helping to develop a quality workforce will also be discussed. Key elements of the presentation will include the following: induction and mentoring framework, professionalism and teacher academies, professional identity, professional development and learning communities, teaching standards and Master of Teaching postgraduate degree.

> *'Teachers lie at the heart of what we do in Education. They translate policies and initiatives in a way that makes lessons come alive for their students. We need good teachers, and enough of them, to help us do all the things that we want to do in our schools.'* (RAdm Teo Chee Hean, Minister for Education 2001)

Keywords: quality, teachers, Singapore education system Introduction

Introduction

Education has been both the key source of competitive strength and a necessity for the economic growth and social viability of Singapore as a nation for over half a century. It is fundamentally a system where we build up our only resource, our human resource, into human capital. In a process of continual development and on-going improvement, education policies and practices have been reviewed and numerous educational reforms and school improvement have taken place. Many of these legislative measures are not without its debates, critics, and controversies. However, internally these policy and structural changes have essentially been viewed as "successful" for a developing and unique city-state like Singapore (Ng 2008; Tan & Gopinathan 2000; Yip, Eng & Yap 1990). From an external perspective, Singapore too has not done too badly in education.

At the heart of the radical transformation of schooling in Singapore is the need for quality teachers capable of high quality instruction. Reports (Barber & Mourshed 2007, 2009; Barber, Whelan & Clark 2010; Darling-Hammond 2000; Goe & Stickler 2008) have identified effective school leadership and teacher quality as highly significant factors in promoting learning and raising student performance. These draw attention to issues relating to stringent teacher candidate selection, adequate teacher preparation and instruction, and effective school leadership. This would mean that, specific to the Singapore's context, the "professionalization" of the education service and responsive teacher education cannot remain static if they are to serve as a foundation for school leaders and teachers who are motivated to work in more collaborative and interactive ways, and to help students overcome challenges of mutual learning and knowledge exchange (Gopinathan, et al. 2008; Tan, Wong, Fang, Devi & Gopinathan 2011).

The purpose of this paper is to describe structurally how teachers are enabled within the Singapore education system to critically enhance the quality of the teacher service. The paper will first provide an overview of the Singapore education system, policies and strategies for creating a quality education service, and teacher education in Singapore. The main section of the paper will specifically address recent initiatives that are holistically situated within a comprehensive policy framework for the development of a teacher-lead culture of professional excellence. The involvement, impact and relationship of the National Institute of Education (as the sole teacher training institution) with the MOE and schools will also be discussed at relevant points in the paper.

Brief History of Singapore Education System

After gaining self-government in 1956 and independence in 1965, the new government of Singapore was gripped by uncertainty of survival with a largely uneducated population, growing unemployment rate, no natural resources, and a need to shift towards an industrialization-oriented mode. The government also had to unify a populace that spoke diverse languages and studied in schools with differing curricula. Therefore, from a four-media education system that was left behind by the Colonia era that mirrored the pluralistic nature of society, Singapore created a unified national education that would better suit the young nation's needs for social cohesion and an industrializing economy.

Given the multi-cultural and multi-racial characteristics of Singapore, the post-colonial curriculum emphasized the policies of multiracialism, meritocracy, and bilingual education. Under the bilingual policy, every pupil learns English which is the language for government and business transactions, as well as the common working language for inter-racial communication. To help the young Singaporeans retain their ethnic identity, culture, heritage and values, different mother tongue languages (Chinese, Malay or Tamil) are also taught in schools. This period from 1965-1978, has been called "survival-driven" education with its greater focus on technical and vocational education to produce the needed manpower to support the industrialization efforts (Goh & Gopinathan 2008).

From the period 1978-1997, the education system was modified with an effort to reducing educational wastage and an emphasis to increasing efficiency. Therefore, this period has been termed "efficiency-driven" education. The key component of the New Education System was the use of ability-based streaming that provided appropriate learning environments to suit students with varying abilities, rates of learning and inclinations. The separation of students with varying abilities into streams seeks to reduce "educational wastage," low literacy and non-attainment of effective bilingualism. This streaming system is consistent where meritocracy is stressed in Singapore's context; where the best students are encouraged to seek their potential according to their pace, and the weaker students are not discouraged by their pre-mature failures but to achieve the best possible educational outcomes for further training and eventual successful employment (Goh & Gopinathan 2008).

Since the 1990s, the world has been constantly changing due to globalization, rapid technological advancement, and the demand for greater intellectual capital. Both nationally and internationally, nations are being challenged by the emergence of a global knowledge economy. Such a knowledge-based economy inevitably ties education critically to the economy through making "knowledge' its core priority. No one would disagree that education systems are fundamental to the preparation and production of a knowledgeable workforce. This has challenged the MOE to make fundamental shifts in the strategic directions of the education system through an "ability-driven' phase so that it is geared to meet the needs of Singapore in the 21st century (Gopinathan 1999; Sharpe & Gopinathan

2002, Tan, et al. 2007). This momentous effort at reforming education in Singapore is anchored in the "Thinking School, Learning Nation" (TSLN)[1] vision launched in 1997 (Goh 1997). TSLN has the explicit aim of developing creative, innovative and lifelong learners who can meet the challenges of a global future where change is the only norm.

Policies and Strategies for Creating a Quality Education Service

To succeed in the new economy, education in Singapore must equip the youths with competencies and life skills to thrive in an intensely competitive global marketplace, to imbue them with moral attitudes, enterprising instincts and innovative mind-sets, and to ensure they are technologically savvy, flexible and willing to continually learn and upgrade their skills. To achieve this, Singapore depends on a high-quality teaching workforce on which we entrust with the heavy responsibility of moulding the lives of our young people.

A high-quality teacher workforce does not simply happen by chance. The challenges confronting building a unified and professional teaching force that would complement the education system were no less considerable. For a long time, there was a lack of an integrated policy to help support a comprehensive structure for the development of quality teachers in Singapore (Gopinathan, Wong, Ponnusamy, & Tan 2010). Even then in 1988, the Minister of Education, Dr. Tony Tan aptly stated ". . . And we will not get good teachers unless you pay them sufficiently well and the terms and conditions of service are competitive with that of the market" ("1985 Cut," 1988).

The MOE had already recognized the need for quality teachers, and the foremost way to achieve this goal is to increase the social standing of the teaching profession through attractive work benefits and monetary incentives. But it was not until embarking on the TSLN vision almost a decade later that the MOE actually put into place deliberate HR policy enhancements and development opportunities to help support a world class teaching force. The MOE's goal of building up a qualified teaching force is achieved through a process of meticulous planning, aggressive teacher recruitment, comprehensive training and effective teacher deployment, appointment and retention (Tan, et al. 2007). The paper will now briefly introduce the key developments for creating a quality education service.

[1] See Tan, J., & Ng, P. T. (Eds.). (2005). Shaping Singapore's future: Thinking schools, learning nation. Singapore: Pearson Prentice Hall for more information.

Status and Recognition of Teaching as a Profession

As in many other Asian countries, teaching is generally accepted as a respectable profession. However, this was not necessarily the case in the early development of the education service in Singapore. Even as early as the 1970s, the low status and morale of teachers saw comparatively high rates of teacher attrition (Goh & Gopinathan 2008). However, this has definitely changed over the past two decades.

Unlike other education systems where teachers are sometimes blamed or faulted for their inability to do their work adequately, the MOE has been be very cognizant of actively promoting the professional status of the education service and actively calling for the public and parents to give respect, appreciation and regard to teachers. Ministers and other MOE officials would take the opportunity to use public forums to recognize and show their support of teachers for the challenging work and responsibilities that they have to shoulder and accomplish. (Lee 1996, 2006; Ng 2010; Shanmugaratnam 2004, 2006a; Teo 1998). The teaching service is thus positioned as a choice career, with competitive monetary terms, sufficient pathways for career progression and opportunities for learning and development to help attract and retain the people we need to educate our young in Singapore.

Recruitment Policies and Practices

Responsibility for hiring and appointing teachers to meet the needs of the Singapore school system lies primarily with the MOE. This is not done in isolation, but in constant consultation with schools, the National Institute of Education (NIE) (see below on the contribution of NIE), and other stakeholders—for example, teachers, parents, other government ministries, universities, and businesses. As such, public recognition is important to the education service in Singapore as it allows the MOE to recruit prospective teachers from the top one-third of students, i.e., university-degree holders and those who have done well in the polytechnic institutions (Teo 2000). Many of these individuals have been drawn to the teaching profession as a meaningful career because of the positive impact from their own teachers.

Strong academics are essential, but as the teaching workforce expands, there is a need to ensure that aspiring teachers must have the aptitude, commitment and passion to nurture students. Quality is as important as numbers; nevertheless numbers do also count as this allows the MOE to add more qualified teachers to every school (Ng 2011a, 2011b; Tan, et al. 2007).

Since 2004, the profession has been attracting a steady flow of over 1,900 teachers per year, both fresh graduates and also mid-career professionals, and continues to recruit no more than approximately 14% out of about 18,000 applicants over the last several years.

Currently, there are more than 31,000 teachers, up from 24,000 in 2000. 80% of these teachers are graduates which is an increase from 55% in 2000. The target is to expand the teaching force to 33,000 by 2015 (Ng 2011a; Shanmugaratnam 2004). The Singapore Education Service is also moving towards hiring only graduates as new teachers by 2015. By 2020, it is anticipated that all teachers will be graduates, with 20% of teachers having the Master's qualification. This strategic direction is important for Singapore as the educational profile of our teachers needs to keep pace with the rising educational level of the people (Ng 2008).

Salary and Benefits

Countries around the world are concerned with attracting quality candidates into the teaching profession (OECD 2005). With globalisation and an ever expanding job market, there are numerous opportunities available for highly-qualified individuals. For the teaching profession to remain attractive and competitive in recruiting its share of good talent, the MOE constantly seeks ways to improve the pay and career package for teachers by benchmarking their salaries against a range of occupational starting salaries. In this way, both fresh and mid-career entry graduates who are recruited as new teachers are compensated competitively. Newly hired teachers undergoing their initial teacher education at NIE are also compensated with a salary equivalent to 60% of a beginning teacher's salary with full benefits[2]. Furthermore, MOE has since enhanced the pay (i.e., higher starting salary) and promotion prospects (i.e., faster promotion with additional pay increment after promotion) of both new and existing mid-career entrants since 2008 in recognition of the values, competencies and experiences these individuals bring into the profession (Shanmugaratnam 2007).

In a bid to promote teacher excellence and professionalism and to retain quality teachers, the MOE has introduced the "TEACH" framework (see Figure 1) recently—"T" for teacher professionalism, "E" for engagement, "A" for aspiration, "C" for career and "H" for harmony between work and life (Ng 2011a). The core of the "TEACH" framework will be efforts to strengthen the professional culture, support career aspirations, and create work-life harmony of teachers.

In summary, there will be greater avenues for professional sharing and collaborations and the developing of teachers' capacity and careers. The strategies include the development of an academy for teachers (see below), creation of professional learning communities, provision of high-quality human resource services, greater support for part-time employment, study awards and incentives, and the creation of additional middle-level leadership positions in schools and specialist positions in MOE HQ.

[2] See http://www.moe.gov.sg/careers/teach/career-info/salary/ for more information regarding salary and benefits

Figure 1. The "TEACH" Framework
(Ng, 2011a; Retrieved from http://www.moe.gov.sg/media/press/2011/03/new-teach-framework-to-enhance-quality-teaching-force.php)

New Career Structure

The Edu-Pac or (Education Service Professional Development and Career Plan) was announced in 2001[3] and consists of 3 components: (a) a new career structure, (b) a new recognition structure, and (c) enhancements to the performance management system. This paper will only provide information regarding the new career structure.

The career structure seeks to provide different and challenging career advancement paths for teachers to both better meet MOE's organizational needs and also to cater to the varied aspirations and talents of teachers. The purpose is to offer teachers good careers, professional upgrading opportunities and improved recognition packages so as to nurture and motivate teachers to achieve superior performance, maximize their potential, and also to encourage as

many of them to stay for a long and enriching career. Edu-Pac (Figure 2) comprises three career tracks (or fields of excellence) to cater to the different talents, abilities and ambitions of teachers:

- Teaching Track;
- Leadership Track; and
- Senior Specialist Track

[3] A set of enhancements to strengthen the Teaching Track was introduced in 2009 (Ng, 2009).

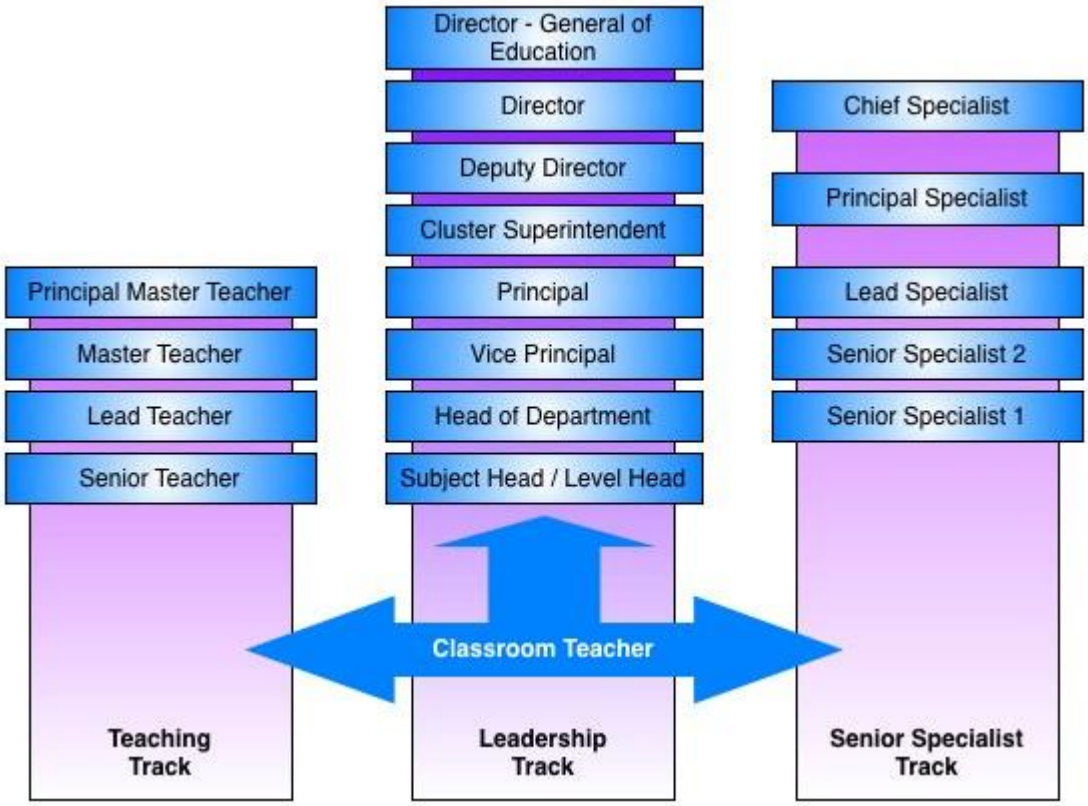

Figure 2. The "Education Service Professional Development And Career Plan" (Edu-Pac) Career Structure for Teachers.
(Ministry of Education, 2011; Retrieved from http://www.moe.gov.sg/careers/teach/career-info/)

For teachers whose aspiration is to make an impact in student lives and feel that teaching is their calling, the Teaching Track allows teachers to advance to a new pinnacle level of Principal Master Teacher (PMTT). These PMTTs will operate within the Academy of Singapore Teachers (AST) [see below], dividing their time between teaching, leading professional development, and engaging in pedagogical research and innovation.

The Leadership Track provides teachers the opportunities to assume leadership positions in schools and MOE's headquarters. Other teachers who are interested in developing deep knowledge and skills in specialised areas can opt for the Senior Specialist Track. Some of these specialist areas include: (a) curriculum and instructional design, (b) educational psychology; (c) education research and statistics, and (d) educational testing & measurement.

The GROW 2.0 Pay and Career Package

In 2007, the MOE unveiled the GROW 2.0 package (see Figure 3), which builds on the foundation of the GROW initiative introduced in 2006. Basically, the GROW 2.0 package[4] provides teachers with more attractive remuneration, increased career and professional development opportunities, and greater flexibility between work and family life.

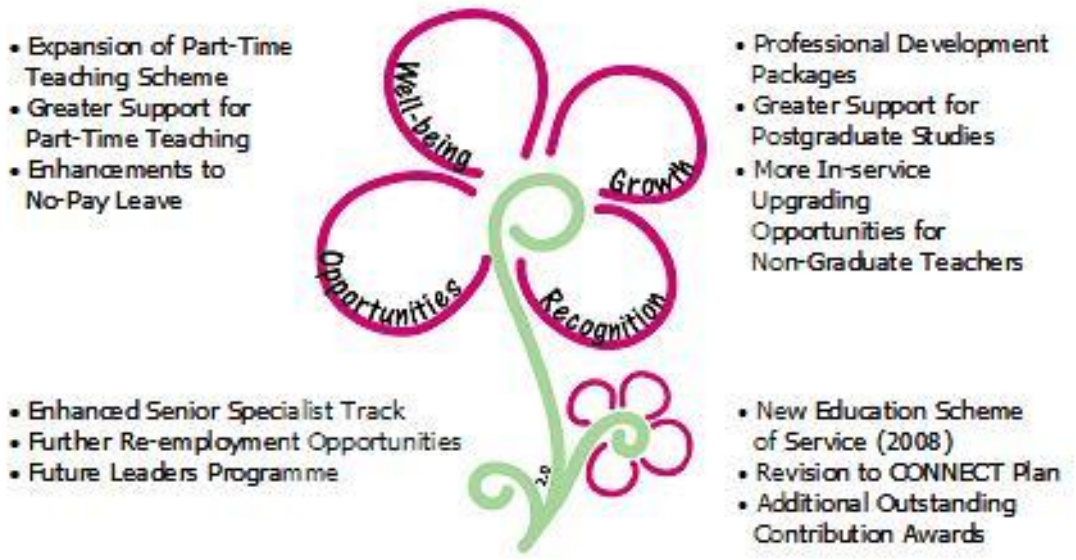

Figure 3. The Key Features of the GROW 2.0 Package
(Ministry of Education 2011; Retrieved from http://moe.gov.sg/careers/teach/)

The key features of the GROW 2.0 package (see Figure 3) include the following:

- GROWTH (through enhanced support for professional development)
- RECOGNITION (through salary incentives and rewards)
- OPPORTUNITIES (for career development) and
- WELL-BEING (through family-friendly arrangements)

The strength of the GROW 2.0 initiative lies in the structure to combine financial investment in education for quality change (through salary restructuring based on market wage movements and merit pay increments related to one's potential and performance) and adequate financial resourcing to develop teacher-capacity (through attractive part-time and full-time professional upgrading and advancement opportunities with improved academic and professional qualifications). More importantly, it also focuses on an issue that is close to teachers' hearts – greater work flexibility for better work-life harmony.

[4] For more information on the GROW 2.0 package (see http://www.moe.gov.sg/media/press/2007/pr20071228.htm)

Role of the National Institute of Education in Developing Quality Teachers

The National Institute of Education (NIE), part of Nanyang Technological University, is the national teacher training institute in Singapore. All teachers receive their initial teacher education and qualification at NIE. MOE hires the teachers, and NIE trains them. NIE collaborates with MOE to define academic qualification standards for hiring the different categories of teachers. Furthermore, NIE provides input into the MOE's interview-selection process and helps assess the level of proficiency (across different content areas) of new teacher-candidates.

All successful teachers who are hired by MOE and do not have the required pedagogical professional training are enrolled either in a diploma, postgraduate diploma or a degree course depending on their level of education at career entry. The teachers who have completed any one of these programmes automatically are certified to teach in the Singapore education system. NIE maintains the "expected professional teaching standards" that define what beginning teachers should know and be able to do through its Graduate Teacher Competencies (GTCs) framework. The GTCs articulates what NIE delivers in terms of the professional competencies of its graduating teachers that are aligned with MOE's professional competence of their teaching professionals.

These teachers do not have to take additional examination and/or seek additional certification or licensure through a teaching standards board. Technically, MOE, NIE and the school system, in this interrelated system act as the standards board. There is also no re-certification of teachers throughout their teaching career. This "certification" process of new teacher is made possible because it shares a symbiotic relationship with both the MOE and with the schools (Tan, et al. 2007).

The small size of Singapore coupled with a more centralized education system allows good communication and shared vision between the Ministry, the NIE and the schools. Besides helping to maintain the admission standards for the different programmes, NIE faculty are also invited to be in the various curriculum-review committees chaired by the Ministry, and are involved in proposing recommendations for any curriculum changes and initiatives. Such changes are reflected in timely revisions of NIE's teacher education programmes, including professional development, so that all new and practicing teachers are current and updated in their knowledge and qualifications (Tan, et al. 2007).

Recent Initiative for the Growth and Development of a Teacher-Driven Culture of Professional Excellence

The Singapore Government has done much to improve the public perception of the teaching profession. As a fraternity, teachers are held in high esteem by the community. To achieve this goal, the MOE needs to address teachers' expectations and motivations thus committing it to providing attractive work remunerations and merit rewards. To encourage teacher retention and satisfaction, working conditions, benefits and human resource processes are improved. To encourage teachers to seek to learn and improve their classroom teaching, numerous professional development opportunities and communities of practice are enhanced and created. To support the different aspirations of teachers, new career progressions and appointment grades are created within the Teaching and Senior Specialist tracks to allow them to specialize in their niche areas. Through all these initiatives, Singapore's teaching force is positioned as a choice career and generally recognized by its ability to help students learn and achieve. However, more can be done to shift teachers away from relying primarily on externally generated performance expectations and rewards, to deepening teachers' intrinsic motivations and personal ownership for professional excellence in alignment with MOE's strategic vision and outcomes of education.

The next step in transforming the education service is really about the professionalism of teachers and the teaching fraternity. Teachers must recognize their role and capacity in taking ownership of the teaching profession by providing the necessary leadership amongst peers in different ways in order to raise the professionalism and capacity of the teaching service as a whole. This is the crux of a teacher-lead culture of professional excellence where teachers are enabled to develop themselves as a community of professionals. The next section of this paper will introduce four strategies on how the MOE with the involvement and support of NIE seek to develop a teacher-lead culture of professional excellence.

New Professionalism and Teacher Academies

The "new" professionalism of the teaching fraternity is anchored, to a large extent, on the ethos of the teaching profession. This ethos helps teachers to articulate the shared understanding of the values, beliefs and attitudes that are essential to guide present and inspire future generations of teachers to a higher level of professional excellence (Gopinathan, et al. 2008). A distinctive feature of the Singapore's Education Service in supporting the professional ethos is the recent introduction of the Teacher's Pledge and the Teacher's Vision (see Figure 4).

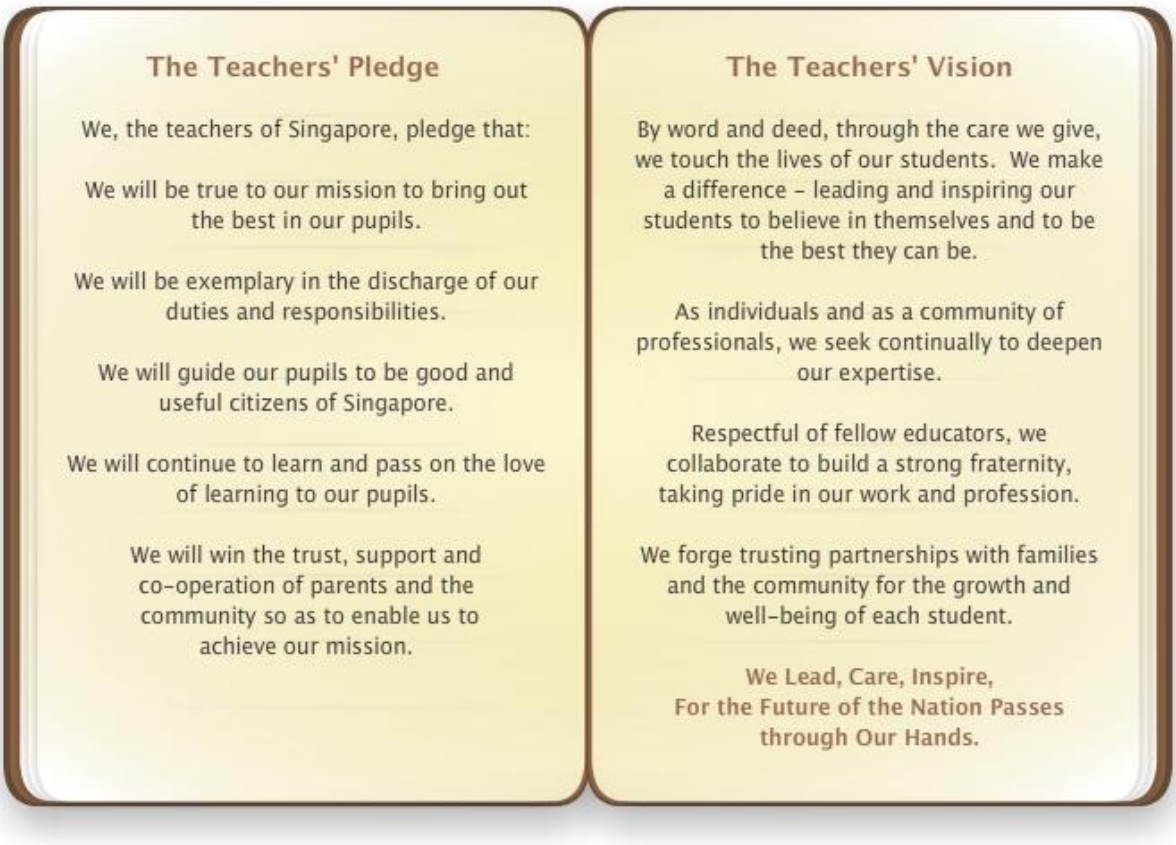

Figure 3. The Teacher's Pledge and Vision of the Singapore Teaching Service (The Academy of Singapore Teachers, Ministry of Education 2010; Retrieved from http://www.academyofsingaporeteachers.moe.gov.sg)

As a vehicle to further support and strengthen the professional ethos and create strong teacher commitment to the teachers' pledge and vision, the Academy of Singapore Teachers (ADT) was established in 2010 (Ministry of Education 2010a). The phrase "For teachers, by teachers" epitomizes the Academy's commitment and dedication to teacher professionalism, professional identity and to the growth and lifelong learning of teachers. The AST acts as a focal point for teachers to come together for sharing and professional development, for research to develop their expertise, and also for teacher renewal.

Spearheading and complementing the work of AST are different professional networks that provide various platforms and forums for teachers with common interests and subject-specific needs to gather to improve practices for student holistic development. These currently include the following: Subject Chapters, Professional Focus Groups, Professional Learning Communities Network, Master Teachers Network, Lead and Senior Teachers Network, Mentors Network, and Beginning Teachers Network (MOE 2010a).

The purpose of these "Networked Learning Communities" is to support the professional learning and development of teachers by drawing out pedagogical leadership from the fraternity, infusing expertise into the system, imbuing a sense of pride, identity and ownership

among teachers, strengthening content mastery, building instructional capacity, raising the standards of practice, driving pedagogical innovations and change, advancing continuous learning, cultivating a culture of collaboration, and most importantly, improving student learning and achievement (MOE 2010a).

Besides the main Academy of Singapore Teachers (aka AST), several other dedicated teacher academies and language institutes are also established: These include the Physical Education and Sports Teacher Academy (PESTA), the Singapore Teachers' Academy for the aRts (STAR), the English Language Institute of Singapore (ELIS), the Singapore Centre for Chinese Language (SCCL), the Umar Pulavar Tamil Language Centre (UPTLC) and the Malay Language Centre of Singapore (MLCS).

NIE's programme offices and individual faculty members currently are involved with all these entities in the provision of expertise consultancy, advisory board memberships, curriculum review and standards committee work, professional development and research services, and course certification design and planning.

Induction & Mentoring for Beginning Teachers

The MOE has been seeking ways to help beginning teachers start out right in their profession. Most importantly, developing quality teachers starts with beginning teachers sharpening their craft especially during their first few years in school, and continually throughout their career. For some, unfortunately, the learning curve is steep as starting out in any profession is tough, particularly in teaching, where teachers are expected to make multiple, simultaneous decisions and take actions in order to deal with the various issues and challenges occurring in the classroom. This could have a demoralizing effect on teachers especially when there is a lack of professional support for the beginning teachers. Research (Smith & Ingersoll 2004) has generally shown that comprehensive induction and mentoring programmes are generally associated with improved teacher retention.

To provide beginning teachers with more guidance and support at the start of their career so that these teachers can find their initial years of teaching experience rewarding, a Structured Mentoring Programme (SMP) was implemented in 2006. Previous to the SMP, schools had always been providing guidance to beginning teachers, but the implementation was not necessarily uniform across the school system. With the SMP, the induction, mentoring and professional learning of beginning teachers became more systematic and structured. Schools were therefore provided with resource packages and also helped with the development of their school mentors.

The induction process occurs at different levels; while beginning teachers are at NIE, in school and at the cluster level. Beginning teachers are also inducted at the MOE HQ level so that they become familiar with the structures and operations of the HQ. At the school

level, additional resources are provided to offload mentors so that they can help guide beginning teachers in their work roles and responsibilities and coach them in pedagogical competencies and classroom management skills. Beginning teachers also teach a lesser load, and have assistance with planning for their own practice-oriented learning and development over a two-year cycle. Furthermore, there will be platforms like the Learning Circles for beginning teachers to share their challenges and seek improvements to their teaching by tapping the collective wisdom of their colleagues (Shanmugaratnam 2006b).

More recently, the AST (see above section) and NIE have been working together towards enhancing aspects of the SMP with the development of a more comprehensive mentoring framework and professional development opportunities to support all staff[5] in the school system; from beginning teachers to new principals. Such a framework requires a commitment of resources to develop skilled and well-trained mentors who can help beginning teachers to teach specifically to establish expectations or standards (see below). The framework will also include components that are essential for a high quality induction and mentoring programme like sustained multi-year mentor-teacher involvement, adequate allotted time for mentoring activities, use of student achievement data for instructional and curriculum planning, established professional communities of learning for continual development, strong administrative support, and coherent partnerships with relevant stakeholders (New Teacher Center 2007).

Professional Identity, Professional Development and Learning Communities

Working together with the schools, the AST aims to build a strong sense of affiliation to the fraternity through a shared vision (see above section on Teachers' Vision) for the teaching service. Teachers are no longer expected to work in isolation and/or in their own classrooms. Another dimension to teachers driving this professionalism agenda with their ability to identify with the larger fraternity is to build capacity for teachers themselves to take the lead in professional learning and development at the school level; a culture of teacher-initiated collaborative professional development and collegiality amongst school colleagues.

To this end, the MOE will strengthen the network of Professional Learning Communities (PLCs) where teachers come together regularly for continuous dialogue to lead and drive improvements, hone classroom practices, and seek pedagogical solutions. The key is to improve instructional practices through the transfer of teachers' learning into their classroom practice, thus impacting student learning. Over time, it is hoped that such best practices could extend across schools, to the cluster level, and eventually to the national system.

[5] NIE offers milestone programmes to support the development of the different personnel in the school system: SMP, Middle Managers, Senior Teachers, Department Heads, and Principals.

The MOE provides key enablers in the form of additional staff positions and time-tabled time for the conduct of PLCs. A PLC starter resource pack (Ministry of Education, 2010b) was also provided to schools coupled with training sessions to equip key staff to manage successfully the creation of PLCs in schools. Success stories, challenges and frustrating experiences were also shared by schools who were involved in the pilot phase. The work of the PLCs is further enhanced with the establishment of AST. The AST help inject expertise into PLCs to promote content mastery and development of pedagogical content knowledge with the support of the Master Teachers and Principal Master Teachers. Furthermore, through the Professional Learning Community Network, good practices identified in schools will also be promoted across other schools to benefit the school system as a whole.

Teaching Standards and Master of Teaching Graduate Programme

The NIE is working closely with the MOE in developing a recommended set of Professional Teaching Standards (PTS) to help guide teachers in their quest for professional excellence. As mentioned in the introductory section (see role of NIE), teachers do not have to seek licensure or recertification of their teaching qualification. Therefore, the primary purpose of establishing the PTS is to help make explicit the professional expectations of teachers, i.e., common understanding of the values, attitudes, and competencies required for quality teaching, as teachers grow and mature in the profession. The use of a common vocabulary will help support the discourse of teachers as they collaborate and work together in different communities of practice.

The PTS will also provide a roadmap for the professional development of teachers' goals and plans to improve their teaching. The PTS will be useful to guide beginning teachers as well as to motivate the more experienced teachers towards practicing at a higher level. It is also envisioned that the PTS will eventually serve as a signpost to identify and nurture teacher leaders for leadership appointments in the Teaching track.

The Master of Teaching (M-Teach) programme is NIE's response to support MOE's initiatives in developing and sustaining a high quality teaching force for the next generation, and to leverage on the development of the PTS. More specifically, it helps teachers who are motivated to be recognised for their teaching excellence along the teaching track and also to aspire for leadership appointments at various levels (Tan, Wong, & Goh 2010).

The M-Teach seeks to prepare teachers (with two to five years of teaching experience) to be models of pedagogic change in their workplace and within the teaching community at large. The M-Teach programme is structured around university-based curriculum, so that teachers can have access to the thinking of relevant researchers, as well as having it contextualized in actual school practice and learning communities, which affords these teachers the opportunity to examine the evidence of the research. This reflective process is crucial in

helping teachers to filter, challenge, transform, create and apply new knowledge (Tan, Wong, & Goh 2010).

This school-based endeavour is supported by a Professional Learning Mentor (PLM), usually an experienced teacher volunteered within the school. The PLM plays a critical supporting role by providing the relevant scaffolding for workplace learning and collaboration that is consistent with the evidence-based knowledge and at the same time helping to contextualize the practices for these teachers. PLMs are also co-learners with the M-Teach teachers. The goal is to help the M-Teach teachers and PLMs be involved in transformative pedagogical practices that are scalable and sustainable within their school contexts (Tan, Wong, & Goh 2010).

Another key feature in the M-Teach design is the requirement of teachers to complete a Professional Inquiry Project (PIP). The PIP is a semi-structured professional portfolio, which allows M-Teach teachers to document and trace the development of their own cognition, metacognition and pedagogy through guided professional reflections, dialogues, classroom and lesson experimentations and critiques[6]. Using the PIP as a basis of evidence and argument, M-Teach teachers will be expected to defend, to a panel of examiners, their development and attainment of outcomes and standards for what they should know and be able to do as a result of successfully completing the M-Teach programme.

Conclusion

Singapore is fortunate that it has travelled from a third-world to a first-world country in a relatively short period of time. In the process, it has created an education system that has worked reasonably well for this small nation and its people. Through heavy financial investment and strong reliance on infrastructure and technology, Singapore continues in its efforts to refine its education policy framework in order to build a highly sought-after teaching service of repute and a standard bearer for professional expertise that supports a world-class education system for the next generation.

References

1985 cut in teachers' starting pay likely to be restored. (1988, November 1). *The Straits Times*, p. 1.

Barber, M., & Mourshed, M. 2007. *How the world's best-performing school systems come out on top.* London, UK: McKinsey & Company.

[6] Teachers could use the different platforms or strategies existing in schools like Professional Learning Communities, Learning Circles™, Lesson Study, etc.

Barber, M., & Mourshed, M. 2009. *Shaping the future: How good education systems can become great in the decade ahead*. Report on the International Education Roundtable: 7 Jul 2009. London, UK: McKinsey & Company.

Barber, M., Whelan, F., & Clark, M. 2010. *Capturing the leadership premium*. London, UK: McKinsey & Company.

Darling-Hammond, L. 2000. Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives,* 8: 1-50. Retrieved from: http://epaa.asu.edu/ojs/article/viewFile/392/515

Goe, L., & Stickler, L. M. 2008. *Teacher quality and student achievement: Making the most of recent research*. Washington, DC: National Comprehensive Center for Teacher Quality.

Goh, C.T. 1997. 'Shaping our future: Thinking Schools, Learning Nation', speech by Prime Minister Goh Chok Tong at the Opening of the 7th International Conference on Thinking, 2 June 1997,Suntec City. Retrieved from: http://www.moe.gov.sg/speeches/1997/020697.htm

Goh, C. B., & Gopinathan, S. 2008. The development of education in Singapore since 1965. In *Towards a better future. Education and training for economic development in Singapore since 1965,* eds. S. K. Lee, C. B. Goh, B. Fredriksen, & J. P. Tan, 12-38. United States, Washington, D.C.: The World Bank. Co-published by Singapore: National Institute of Education.

Gopinathan, S. 1999. Preparing for the next rung: Economic restructuring and educational reform in Singapore. *Journal of Education and Work*, 12(3): 295-308.

Gopinathan, S., Tan, S., Fang, Y., Ponnusamy, L. D., Ramos, C., & Chao, E. 2008. *Transforming teacher education: Redefining professionals for 21st century schools*. Singapore: National Institute of Education.

Gopinathan, S., Wong, I. Y. F., Ponnusamy, L. D., & Tan, S. 2010 (November). *Teacher policies in Singapore.* Paper presented at the Regional Seminar on Teacher Policies in Asia-Pacific, UNESCO Bangkok.

Lee, H. L. 2006. Speech by Lee Hsien Loong, Prime Minister, at the Teachers' Day Rally 2006 on August 31, 2006. Retrieved from: http://www.moe.gov.sg/speeches/2006/sp20060831.htm

Lee, Y. S. 1996. Speech by Mr Lee Yock Suan, Minister for Education at the Promotion Ceremony and Launch of the Education Service Mission Statement on 28 October 1996. Retrieved from: http://www.moe.gov.sg/press/1996/st00396.htm

Ministry of Education 2010a. *The Academy of Singapore Teachers*. Singapore: Ministry of Education. Retrieved from http://www.academyofsingaporeteachers.moe.gov.sg

Ministry of Education 2010b. *Schools as Professional Learning Communities*. Singapore: Training and Development Division, Ministry of Education.

Ministry of Education, 2011. Retrieved from: http://www.moe.gov.sg/careers/teach/career-info/

New Teacher Center. 2007. *High quality mentoring and induction practices* (Policy Report). CA: NTC. Retrieved from: http://www.newteachercenter.org/pdfs/Cap_Hill_HQM_final.pdf

Ng, E.H. 2008. Speech by Dr Ng Eng Hean, Minister for Education and 2nd Minister for Defence, at the MOE Workplan Seminar 2008 at Ngee Ann Polytechnic Convention Centre on 25 September 2008. Retrieved from: http://www.moe.gov.sg/media/speeches/2008/09/25/speech-by-dr-ng-eng-hen-at-the-moe-work-plan-seminar-2008.php

Ng, E.H. 2009. Speech by Dr Ng Eng Hean, Minister for Education and 2nd Minister for Defence, at the MOE Workplan Seminar 2009 at Ngee Ann Polytechnic Convention Centre on 17 September 2009. Retrieved from: http://www.moe.gov.sg/media/speeches/2009/09/17/work-plan-seminar.php

Ng. E.H. 2010. Speech by Dr Ng Eng Hean, Minister for Education and 2nd Minister for Defence, at the 5th Teachers' Conference 2010 at the Singapore International Convention and Exhibition Centre, 6 September 2010. Retrieved from: http://www.moe.gov.sg/media/ speeches/2010/09/06/5th-teachers-conference-2010.php

Ng, E.H. 2011a. Social mobility—The Singapore Story: Past, present and future, Ministry of Education Committee of Supply Debate Fiscal Year 2011, Minister's 1st Reply on March 7, 2011. Retrieved from: http://www.moe.gov.sg/media/speeches/2011/03/07/fy-2011-committee-of-supply-de-1.php

Ng, E.H. 2011b. Speech by Dr Ng Eng Hean, Minister for Education and 2nd Minister for Defence, at the 2011 MOE Promotion Ceremony at Suntec City Ballroom 2 on 8 April 2011. Retrieved from: http://www.moe.gov.sg/media/speeches/2011/04/08/2011-moe-promotion-ceremony.php

Ng, P.T. 2008. Educational reform in Singapore: From quantity to quality. *Educational Research for Policy and Practice*, 7: 5-15. Doi: 10.1007/s10671-007-9042-x.

Organisation for Economic Cooperation and Development. 2005. *Attracting, developing and retaining effective teachers - Final Report: Teachers Matter*. Paris, France: OECD.

Shanmugaratnam, T. 2004. Speech by Mr Tharman Shanmugaratnam, Minister for Education, at the MOE Work Plan Seminar 2004 at Ngee Ann Polytechnic, 29 September 2004. Retrieved from: http://www.moe.gov.sg/speeches/2004/sp20040929.htm

Shanmugaratnam, T. 2006a. Speech by Mr Tharman Shanmugaratnam, Minister for Education and 2nd Minister for Finance, at the Teachers' Mass Lecture 2006 at the Singapore Expo, 4 September 2006. Retrieved from: http://www.moe.gov.sg/speeches/2006/sp20060904.htm

Shanmugaratnam, T. 2006b. Speech by Mr Tharman Shanmugaratnam, Minister for Education at the NIE Teachers Investiture Ceremony on 26 January 2006. Retrieved from: http://www.moe.gov.sg/media/speeches/2006/sp20060126.htm

Shanmugaratnam, T. 2007. Speech by Mr Tharman Shanmugaratnam, Minister for Education, at the MOE Workplan Seminar 2007 at Ngee Ann Polytechnic Convention Centre on 2 October 2007. Retrieved from: http://www.moe.gov.sg/media/speeches /2007/sp20071002.htm

Sharpe, L., & Gopinathan, S. 2002. After effectiveness: New directions in the Singapore school system? *Journal of Educational Policy*, 17(2): 151-166.

Smith, T. M., & Ingersoll, R. M. 2004. What are the effects of induction and mentoring on beginning teacher turnover? *American Educational research Journal,* 41(3): 681-714.

Tan, J., & Gopinathan, S. 2000. Education reform in Singapore: Towards greater creativity and innovation? *NIRA Review (Quarterly),* 7(3): 5-10.

Tan, S. K. S., Wong, A. F. L., Gopinathan, S., Goh, K. C., Wong, I. Y. F., & Ong, K. H. 2007. The qualifications of the teaching force in Singapore. In *A comparative study of teacher preparation and qualifications in six nations,* ed. R. M. Ingersoll, 71-84. Philadelphia, USA: Consortium for Policy Research in Education (CPRE).

Tan, S. K. S., Wong, I. Y. F., Fang, Y., Devi, L., & Gopinathan, S. 2011. Education collaboration across borders: The preparation of the Transforming teacher education. Redefined professionals for 21st century school report. *Journal of Education for teaching,* 36(4): 477-493. Doi: 10.1080/02607476.2010.513863.

Tan, S., Wong, I., & Goh, C. 2010. Strategic teacher professional development. In *Transforming teaching, inspiring learning: 60 years of teacher education in Singapore* (1950-2010), eds. A. Y. Chen, & S. L. Koay, 147-158. Singapore: National Institute of Education.

Teo, C.H. 1998. Ministerial statement by Radm (NS) Teo Chee Hean, Minister for Education, at the Budget Debate on March 19, 1998. Retrieved from: http://www.moe.gov.sg/speeches/ 1998/190398.htm

Teo, C.H. 2000. Speech by RAdm (NS) Teo Chee Hean, Minister for Education & 2nd Minister for Defence at the 2nd Teaching Scholarship Presentation Ceremony on July 15, 2000. Retrieved from: http://www.moe.gov.sg/speeches/2000/sp15072000a.htm

Teo, C.H. 2001. Speech by RAdm (NS) Teo Chee Hean, Minister for Education & 2nd Minister for Defence at the 3rd Teaching Scholarship Presentation ceremony on Saturday, 4 August 2001. Retrieved from: http://www.moe.gov.sg/ speeches/2001/sp04082001.htm

Yip, J. S. K., Eng, S. P., & Yap, J. Y. C. 1990. 25 years of educational reform. In *Evolution of educational excellence. 25 years of education in the Republic of Singapore,* eds. J.S.K. Yip, W. K. Sim, 1-30. Singapore: Longman.

External Evaluation of Schools in Portugal: Main Tendencies of the Results

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Abstract

In this work, an analysis of data published in reports of the Portuguese School Inspectorate, institution that is responsible for the external evaluation of schools is presented. The process, that is now (2010-2011) approaching the end of its first cycle, has been developed within a theoretical framework that includes five domains: i) Results, ii) Provision of Educational Services, iii) School Organization and Management, iv) Leadership and v) Capacity for Self-Regulation and School Improvement). Each of these factors is decomposed in two to five factors. A qualitative evaluation scale with four grades was used and the methodology involved document analysis, school observation and panel interviews.

The results evidenced that schools reveal differences in performance depending on the factors evaluated, leading to the hypothesis of the influence of the theoretical framework and methodology on the evaluation process. Results also evidenced the tension between the two present approaches in purposes of the external evaluation of schools: the formative approach, addressing school improvement and the summative approach, directed to accountability. The redundancy of some factors, the hierarchy of domains and their weighting factors were also highlighted on the conclusions.

Keywords: External evaluation of school, theoretical framework

Introduction

The external evaluation process of schools in Portugal is conducted by the Portuguese General Inspectorate of Education, following the publication of Law No. 31/2002 on the evaluation of non-university schools. This process has gone through several stages and in the academic year 2010-2011 completed the first cycle of external evaluation of schools.

The reference of the external evaluation of schools took into account prominent authors reflections (e.g., Martin 2005; Scheerens 2004; Swaffield & MacBeath 2005) and national and international experiences, namely the Integrated Evaluation of Schools held by the General Inspectorate of Education between 1999 and 2002, the model European Foundation for Quality Management (EFQM) and the methodology developed by Her Majesty's Inspectorate of Education in Scotland on How Good is Our School (Inspecção-Geral da Educação 2009a; ME 2006). The rationale used by the external evaluation of schools has five key domains and these domains comprise between two and five subdomains, in a total of 19 factors. The domains are Results, Provision of Educational Services, School Organization and Management, Leadership, and Adjustment Capacity and School Improvement and are assigned in a qualitative scale with four levels: Very Good, Good, Sufficient and Insufficient.

Opinions of the National Board of Education on the evaluation reference used in the external evaluation of schools (Conselho Nacional de Educação 2008, 2010a, 2010b) warned either the framework, either the methodology. First, it seems that there is a tension between two purposes of evaluation, the formative purpose of school improvement and the summative purpose, the accountability and the responsibility of educational institutions. Regarding the methodology used, the National Board of Education (Conselho Nacional de Educação 2010b) considers that the panel interviews should be improved by ensuring greater representation of different education stakeholders, and the observation of teaching activities to become a prime parameter in the domain of Provision of Educational Services.

Thus, adjustments should be made in the process and framework of reference of the external evaluation process of schools in order to strengthen the central findings. As the process completed the first cycle it seems, therefore, appropriate to disseminate the main results obtained in this process, presenting a first reading and analysis of published data, trying to show some trends

Methodology

Results published by the General Inspectorate of Education in the Reports on the External Evaluation of School since 2006 until 2010 were analysed (Inspecção-Geral da Educação 2008, 2009a, 2009b, 2010, 2011), namely the obtained marks in the domains of the framework of reference and the ratings assigned to the factors that constitute them. The qualitative scale was converted into scores 1, 2, 3 and 4 and for each academic year, the score was calculated for each domain by weighting each value of the scale with the percentage with which the domain. This procedure was also used to analyse the ratings of the factors and their relationship with the domain and to calculate the average value of the differences between the ratings of each factor and the domain rating.

Results

A predominance of positive rating levels

The percentages of the classification levels that comprise the framework of reference, over the observed academic years, points to predominance of high levels of Good/Very Good, with the exception of the domain Adjustment Capacity and School Improvement (Table 1).

Table 1. Percentages of the classification levels assigned to schools according to the domains of the framework of reference (column-percentages per school year)

Ratings	Academic Year	Results	Provision of Educational Services	School Organization and Management	Leadership	Adjustment Capacity and School Improvement
Very Good	**2006-2007**	10	14	29	40	11
	2007-2008	4	10	24	32	6
	2008-2009	7	9	23	33	4
	2009-2010	12	13	29	36	4
Good	**2006-2007**	55	63	61	43	48
	2007-2008	56	59	64	52	37
	2008-2009	60	73	67	51	36
	2009-2010	64	70	63	56	46
Sufficient	**2006-2007**	34	22	9	16	39
	2007-2008	37	31	11	15	50
	2008-2009	33	18	10	15	54
	2009-2010	24	17	8	8	47
Insufficient	**2006-2007**	1	1	1	1	2
	2007-2008	3	0	0	1	7
	2008-2009	0	0	0	1	6
	2009-2010	0	0	0	0	3

This trend has not only remained the same, as it has been growing, with the exception of the academic years 2007-2008.

Different standards depending on the domains

There are variations depending on the domains. Indeed, the *School Organization and Management and Leadership* are those which get a higher percentage of the rating levels *Good and Very Good* The domain where these levels are lower is the *Adjustment Capacity and School Improvement*.

Correlation between domains

It is also possible to verify that the ratings in the domain of *School Organization and Management* are much alike with the ones obtained in the domain of *Leadership*, while the ratings of *Results* are close to the domain of *Provision of Educational Services*.
These data raise the possibility that the interpretation of the goals of *School Improvement and Accountability* of the model itself may be driving to a linkage between *Results* and *Provision of Educational Services*, with the removal of the rating in relation to the other domains.

Under and over evaluated factors

The analysis of the ratings of the factors that characterize the domain *Results* and its evolution as well as the value of the difference between the rating of each factor and the rating of the domain shows that the average rating of the *Academic Success* factor has consistently lower values than those obtained in the domain, while the other factors, particularly the factor *Behaviour and Discipline* have a higher average ratings than those obtained in the same domain (Figure 1). That is, the difference of the value between the ratings obtained in the factors and the rating obtained in the domain varies depending on the factors, verifying that the minimum value of that difference corresponds to the factor *Participation and Civic Development.*

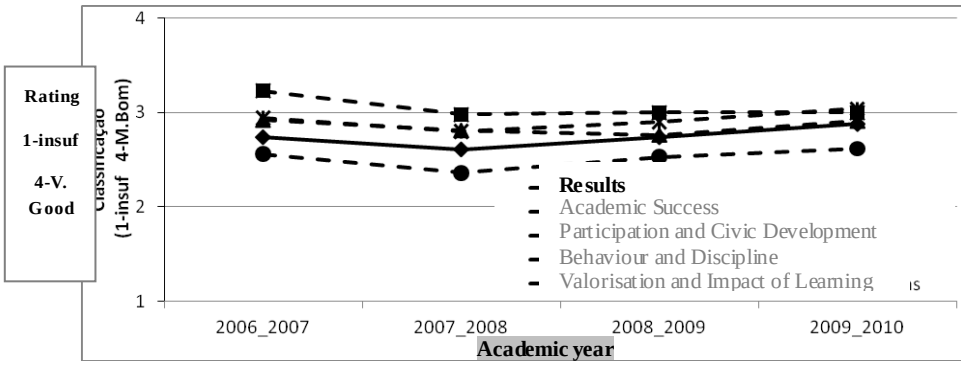

Figure 1. Evolution of the ratings obtained in the domain Results and related factors

When we consider the ratings of the factors included in the domain of *Provision of Educational Services*, it appears that here too there are factors whose average ratings are also consistently lower than those of the domain, namely the factors *Coordination and Monitoring and Follow-up the Teaching Practice in Class*, while the factors *Differentiation and Supports and Curriculum Support and Knowledge Enhancement* always present higher average ratings than the observed in the domain. The factor *Follow-up the Teaching Practice in Class* always get average ratings below 2.5 (Figure 2).

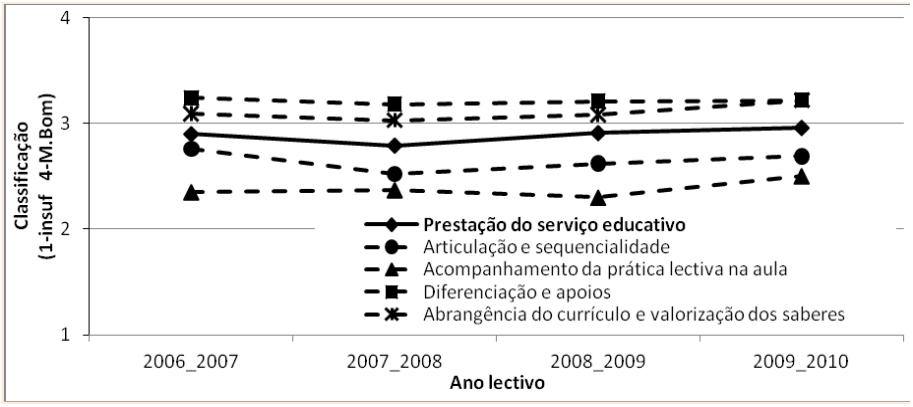

Figure 2. Evolution of the ratings obtained in the domain of Provision of Educational Services and related factors

Regarding the domain School Organization and Management and related factors, we verify that the factors of Human Resources Management and Equity and Justice obtained ratings slightly higher than those obtained in the domain itself, while factors Design and Activity Planning and Participation of Parents and other members of the Educational Community obtained ratings well below the ratings obtained in the domain. The factor, which average rating closely matches the rating of the domain is the factor of Human Resources Management (Figure 3).

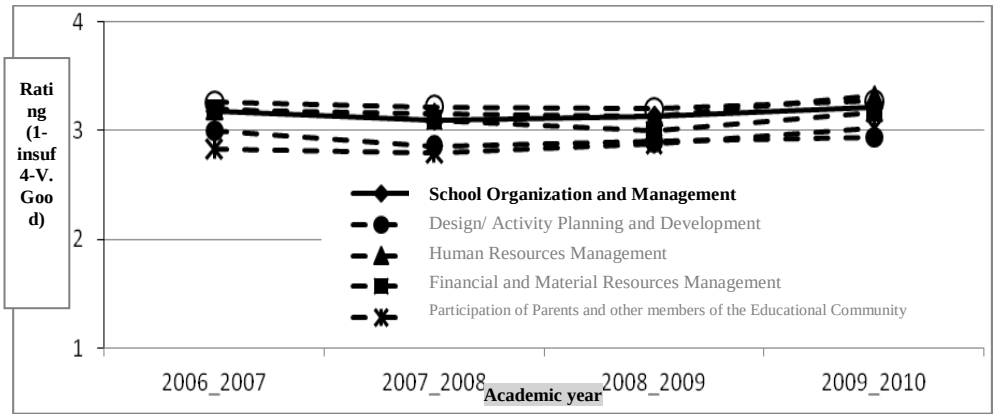

Figure 3. Evolution of the ratings obtained in the domain School Organization and Management and related factors

In the domain of Leadership, the factors *Motivation and commitment* and *Partnerships, protocols and projects* obtained slightly higher ratings than those obtained in the domain itself, while factors *Vision and strategy* and *Innovation opening* present average ratings lower than those obtained in the domain. The rating of the factor *Motivation and commitment* is the factor that matches closely to the rating obtained in the domain (Figure 4).

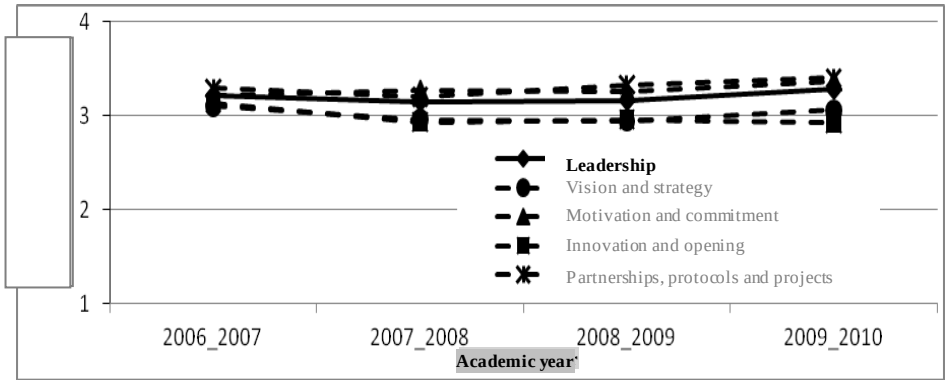

Figure 4. Evolution of the ratings obtained in the domain Leadership and related factors.

The exception

With regard to the factors that constitute the domain *Adjustment Capacity and School Improvement*, we observed both in the domain and in the two factors there are average ratings below 2.5, and the ratings obtained in the factors are close to those obtained in the domain (Figure 5).

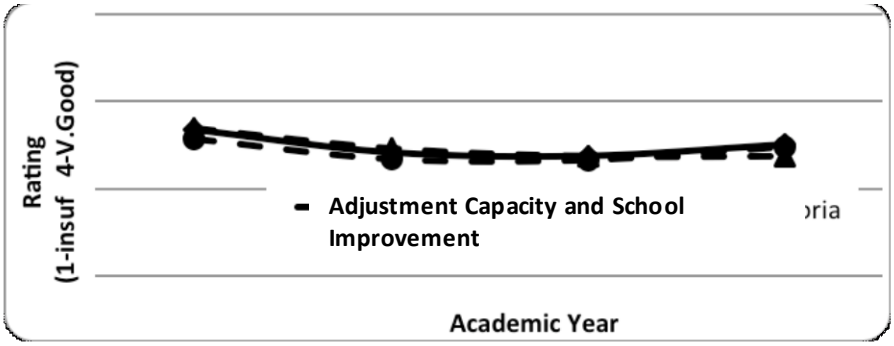

Figure 5. Evolution of the ratings obtained in the domain of Adjustment Capacity and School Improvement and related factors

Conclusion

The data presented show that in general the schools have achieved good ratings in all domains, except on the *Adjustment Capacity and School Improvement*. We also observed that there are domains whose ratings are consistently higher and very close, namely, *Leadership and School Organization and Management*, being the ratings of the domains of *Results and Provision of Educational Services* consistently close in numbers.

However, these data also suggest the existence of a differential valuing of the domains in accordance with the purposes of the model, there is greater latitude in the evaluation of instrumental domains less directly linked to *Results*, such as *School Organization and Management and Leadership*, except for the domain *Adjustment Capacity and School Improvement* that go in the opposite direction.

The observation of a certain regularity of the ratings over the years under review, and the fact that the contribution of different factors for the domain ranking varies between them, suggests that, although there is no weighting factors in the framework of reference, and defending that it should exist, it is somehow inherent in the evaluation process, when we verify the ups and downs of the ratings in the factors related to the corresponding domain.

The presented data even allow raising questions about the conceptualization of their own domains and the factors that characterize them. These aspects appeared to us to be of much interest and relevance for further study, which is already underway, on a framework of reference and the effects on evaluation related to ratings in the domains and the factors of the schools under evaluation.

References

Conselho Nacional de Educação. 2008. Parecer n.º 5, *Diário da República 2ª Série – Nº 113* – de 13 de Junho.

Conselho Nacional de Educação. 2010a. Parecer n.º 3, *Diário da República , 2ª Série – N.º 111 – 9 de Junho*.

Conselho Nacional de Educação. 2010b. *Recomendação sobre avaliação das escolas* (relatores Jorge Miguel Marques da Silva e Paula Santos). Lisboa: CNE.

Inspecção-Geral da Educação. 2008. *Avaliação externa de escolas - Relatório 2006-2007.* Lisboa: Ministério da Educação - IGE.

Inspecção-Geral da Educação. 2009a. *Avaliação externa de escolas - Referentes e instrumentos de trabalho*. Lisboa: Ministério da Educação - IGE.

Inspecção-Geral da Educação. 2009b. *Avaliação externa de escolas - Relatório 2007-2008.* Lisboa: Ministério da Educação - IGE.

Inspecção-Geral da Educação. 2010. *Avaliação externa de escolas - Relatório 2008-2009.* Lisboa: Ministério da Educação - IGE.

Inspecção-Geral da Educação. 2011. *Avaliação externa de escolas - Relatório 2009-2010.* Lisboa: Ministério da Educação - IGE.

Lei n.º 31/2002. Diário da República – I Série - A Nº 294 de 20 de Dezembro (aprova o sistema de avaliação da educação e do ensino não superior).

Martin, S. 2005. Evaluation, inspection and the improvement agenda: Contrasting fortunes in an era of evidenced-based policy maker. *Evaluation*, 11 (4): 496 - 504.

Ministério da Educação 2006. *Relatório final da actividade do Grupo de Trabalho para Avaliação das Escolas*. Lisboa: CNE.

Scheerens, J. 2004. The evaluation culture. *Studies in education evaluation.* 30 (2): 105 – 124.

Swaffield, S. & MacBeath, J. 2005. School self-evaluation and the role of a critical friend. *Cambridge Journal of Education*, 35 (2): 239 – 252.

Students Questions and School Evaluation Grades. An Exploratory Study on Elementary Education

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Abstract

The aims of this study are to characterize pupils' questions on the topic of plate tectonics, to analyze its relations with academic grades and to identify main comprehension difficulties on the topic. If there is already consensus on the regulatory role of students' questions on comprehension, it was not yet systematically analyzed the relationship between the characteristics of questions, academics grades and associated learning difficulties. This exploratory study was conducted with 16 students of the 7th grade and focused on the topic of plate tectonics. This is a topic of great importance in the programs of Natural Sciences of Portuguese elementary education also associated with difficulties in learning concepts and processes involved. Students were asked to formulate at least 3 questions that should express the doubts they still had about the topic after it has been taught. The questions were classified according to the typology developed by Otero (2009). Results evidenced that questions formulated are mostly of level I and that there is a tendency of higher level questions to be associated with higher academic ratings. Based on the results a list of difficulties associated with learning of the topic under review was further established.

Keywords: elementary education, students, evaluation grades.

Introduction

On science education, questioning is an important skill promoting student involvement, knowledge development and self-regulation, learners' questions being a powerful metacognitive activity. Questioning may be considered either as a facilitator of learning, favoring the explanation of students prior knowledge and the improvement of observation and research skill, either as a result of that learning process (Graesser 2009; Keelong 2009; Schein and Coelho 2006).

Several studies developed in school contexts have been analyzing the connection between the characteristics of the pedagogical contexts and questioning (Palma and Leite 2006; Pedrosa de Jesus 2005). However, if there is already consensus on the regulatory role of students' questions on comprehension, it was not yet systematically analyzed the relationship between the characteristics of questions, academics grades and associated learning difficulties. Thus, it's justified the interest by student's questions as an indicator, both for students themselves and for teachers, about the "state of the knowledge", an indicator that may give information similar to an evaluation test. Moreira (2006) refers some exploratory studies about using student's questioning as an alternative method of evaluation, namely Biddulph, Osborne and Freyberg (1983), Dori (2003), Dori and Herscovitz (1999), Zoller (2001), also indicated by Maskill and Pedrosa de Jesus (1997) the potential of student's questions as an indicator of their learning difficulties.

The main aim of this study was to analyze the relation between the type of questions formulated by students about the themes: Theory of Continental Drift, Theory of Plate Tectonics, Types of Faults and Folds and Seafloor spreading; and the school results obtained in the evaluation test about the referred themes and to establish a list of difficulties associated with learning of the topic under review.

Methodology

An exploratory study was developed aiming to characterize pupils' questions on the topic of plate tectonics, to analyze its relations with academic grades and to identify main comprehension difficulties on the topic.

Subjects

Sixteen 7th grade students participated in the study, aged 11 to 15 years old. Six students have at least one retention and during this academic year the class had some misbehaviour problems.

Procedures

After teaching the Theory of Continental Drift, the Theory of Plate Tectonics and starting the study of Volcanism the students of one 7th grade classes were asked to write 3 questions, about any doubt that they had about the themes.
This activity on formulating questions occurred in a class of "*Área de Projecto*", in the 2nd term, the day previous to the evaluation test.
The test lasted for 45 minutes, had two equivalent versions and included four groups of questions about the following themes: Theory of Continental Drift; Theory of Plate Tectonics; Types of Faults and Folds and Seafloor spreading.

Measuring

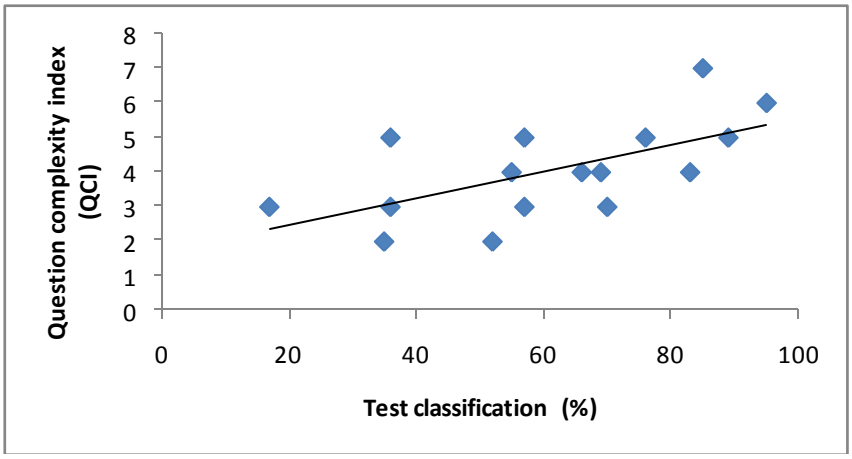
Students questions where classified according to the typology of Otero (2009), with three main categories: type I, questions about entities and their characteristics, type II, explanation questions, and type III, prediction questions.
The questions were also classified according to their complexity level. They are considered as simple or complex, according to the approach to the themes in the curricular orientations. The concepts and the processes, classified as easier, were inserted in level I of complexity and those which require a greater cognitive involvement were inserted in level II of complexity.
The questions considered as "simple" had the value of 1 and the "complex" had the value of 2.

Results

In the 54 questions written by the students, 46 were classified as type I, 6 were considered type II and 2 questions were considered type III.
Averagely, students wrote 3.38 questions.
Since the study aims to establish a relationship between the type of questions that students and the result obtained in the evaluation test, regarding the studied subjects, it was made an analysis of variance.
To this purpose, the marks obtained in the test were considered in three levels – Level 1: up to 50%, Level 2: 51% to 80% and Level 3: from 80% to 100%.
The results obtained show that there aren't any statistically significant differences between the type of questions and the mark obtained in the evaluation test. That is, the formulation of questions Type I didn't varied in a way statistically significant, according to the pre-set levels $F(4) = 0.464$, $p = 0.761$, as do questions of type II $F(4) = 0.70$, $p = 0.514$.

However, it was also made an analysis of the relationship between the complexity of the questions, according to the criteria outlined in the previous paragraph and the results obtained in the test. In order to carry out a statistical analysis of this relationship for each subject, it was calculated a question complexity index (QCI), resulting from the sum of the various multiplications of the level of complexity by its frequency.

In this context, it was made an analysis of correlation between the two studied variables, obtaining a statistically significant correlation between both $r = .58$, $p < 0.05$. That is, the complexity of the questions (yy) are moderately positive correlated with the school results (xx).



This result evidence that students questioning is a reliable indicator of students learning processes, of what they understand but also of what they don't understand.

Conclusions

The results, although with exploratory character, show that subjects predominantly formulate low cognitive level questions, results that will corroborate the results obtained in other studies on this subject.

Also according to the results, the type of questions, established according to a classification which refers to the cognitive level of questions, doesn't show a statistically significant correlation with the results of school evaluation process developed on the theme under study. However, this relationship becomes significant when one considers, in an exploratory basis, another classification based on the difficulty of the concepts and processes of the analyzed contents.

Despite the small number of analyzed subjects constitute a limitation to the study, the referred results show the importance of developing question classification systems, that allows to analyze different elements involved in the process of questioning.

References

Biddulph, F., R. Osborne, and P. Freyberg, 1983. Investigating Learning in Science at the Primary School Level. *Research in Science Education*, 13: 223-232.

Dillon, J. 1988. The remedial status of student questioning. *Journal of Curriculum Studies*, 20: 197-210.

Dori, Y.J. 2003. From Nationwide Standardized Testing to School-Based Alternative Embedded Assessment in Israel: Students' Performance in the Matriculation 2000 Project. *Journal of Research in Science Teaching*, 40(1): 34-52.

Dori, Y.J., and O. Herscovitz, 1999. Question-Posing Capability as an Alternative Evaluation Method: Analysis of an Environmental Case Study. *Journal of Research in Science Teaching*, 36(4): 411-430.

Gobert, J. 2005. The effects of different learning tasks on model-building in plate tectonics: diagramming versus explaining. *Journal of Geoscience Education*, 2005(4): 444-455.

Graesser, A., Y. Ozuru, and J. Sullins. 2009. What is a good question? In *Threads of coherence in research on the development of reading ability*, eds. M. G. McKeown & L. Kucan, 112-141. New York. Guilford.

Keeling, E., K. Polacek, and E. Ingram, 2009. A Statistical Analysis of Student Questions in a Cell Biology Laboratory. *CBE-Life Sciences Education,* 8(2): 131-139.

Márquez, C., J. Bonil, and R. Pujol, 2005. Las preguntas mediadoras como recursos para favorecer la construcción de modelos científicos complejos. *Enseñanza de las Ciências*. Número extra. CDRom. Universidad de Granada. ISBN: 0212-4521

Maskill, R., and H. Pedrosa de Jesus, 1997. Pupils' questions, alternative frameworks and the design of science teaching. *International Journal of Science Education*, 19(7): 781-799.

Moreira, A. 2006. *As questões dos alunos na avaliação em Química*. Dissertação apresentada à Universidade de Aveiro para obtenção do grau de Mestre. Policopiado.

Otero, J. 2009. Question generation and anomaly detection in texts. In *Handbook of Metacognition in Education*, eds. D. Hacker, J. Dunlosky and A. Graesser. Routledge. ISBN 978-0-8058-6354-3.

Palma, C. and L. Leite, 2006. Formulação de questões, educação em ciências e aprendizagem baseada na resolução de problemas: Um estudo com alunos portugueses do 8º ano de escolaridade. In *Actas do Congresso Internacional PBL2006ABRP* (CD-Rom). Lima (Peru): Pontifícia Universidad Católica del Perú.

Pedrosa de Jesus, H., F. Neri de Souza, J.J.C. Teixeira-Dias, and M. Watts, 2005. Organising the chemistry of question-based learning: a case study. *Research in Science & Technological Education*, 23(2): 179-193.

Schein, Z. and S. Coelho, 2006. O papel do questionamento: intervenções do professor e do aluno na construção do conhecimento. *Caderno Brasileiro de Ensino de Física*, 23(1): 68-92.

Zoller, U. 2001. Alternative assessment as (critical) means of facilitating HOCS promoting teaching and learning in chemistry education. *Chemistry Education: Research and Practice in Europe*, 2(1): 9-17.

Transformation of the Human Pedagogical Image in the Post-Soviet Space: Contrast of Values

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Abstract

Although 20 years have passed since the disintegration of the Soviet Union, numerous aspects of the human pedagogical image are still based on the specific interpretation of Enlightenment ideals cultivated by the Soviet ideology.

Lack of knowledge of the modern theoretical tendencies of contemporary pedagogical anthropology can be explained by the difficulties that the post-soviet society encountered in the transformation period from socialism to capitalism, from conservatism to liberalism, from a single system of values to pluralism.

The implementation of values in education and upbringing creates the pedagogical image and generates the concept of education as a whole.

The objective of the research is to demonstrate 1) how the established values change the pedagogical image and function in the post - soviet space; 2) what are the main problems, the possibilities and difficulties of solving them; 3) what are the principal questions to deal with in the context of contrasting values and transforming society.

The theoretical background of the research will be supplemented with analysis of legislative texts that will show how the present indefinite interpretation of pedagogical values can lead to misunderstanding of pedagogical goals in the society.

Keywords: pedagogical anthropology, post-soviet education space, values, human pedagogical image

Introduction

Latvia is a country that has been subjected to numerous political collisions and cultural changes. Since 2004 when Latvia entered European Union, the discussion about the formation of European identity has become a rather topical question and thus an important research subject in the field of humanitarian sciences, including pedagogy.

It is particularly the 20th century that brought Latvia into the turmoil of complicated political transformations that considerably influenced the development of academic education and

science. Pedagogy, not being an exception, has also developed in a specific way in the post-soviet space, and quite differently from the historical and political context of the Western Europe.

Judging by the legislative documents formulating and describing the targets of education both in Latvia and European Union, comprehension of education is viewed in the liberal tradition, where the most important place is assigned for rights and autonomy of individuals, ability and possibilities to make independent decisions, tolerance and respect for different points of view, critical thinking and ability to apply pragmatic knowledge to a given concrete situation.

Any educational process includes the factor of the desirable and preferable results. From this point of view education and the system of education will always contain a normative aspect, which means that the comprehension of education will always embody a system of values. Which values to chose as the point of reference in the concrete educational development, is the question that will help to make this process more purposeful, transparent and possibly more productive.

The „Concept of Education in Latvia" outlines as the main task „ to promote the development of such a democratic citizen that has the ability to see and solve different problems of life independently, who recognizes belonging to his/her family, nation, country and humanity, is responsible for his/her own actions, and is free and tolerant in opinions, as well as in actions." (Latvijas Izglītības koncepcija 1994/95, 6)

The model of education based on the ideals of liberalism, encounters various difficulties in the post – soviet societies. There are several reasons, but one of them is differences in the existing values recognized by liberal democracies, and those that were accepted and promoted in Soviet society. (Rubene, Geikina, Svece 2008)

Although 20 years have passed since the disintegration of the Soviet Union, numerous aspects of the human pedagogical image are still based on the specific interpretation of Enlightenment ideals cultivated by the Soviet ideology.

Man is viewed in the light of secular humanism tradition, reducing the importance of biogenetical aspects, and emphasizing the importance of upbringing as the driving transformation force of an individual to meet the demands of the society.

Lack of knowledge of the modern theoretical tendencies of contemporary pedagogical anthropology can be explained by the difficulties that the post-soviet society encountered in the transformation period from socialism to capitalism, from conservatism to liberalism, from one system of values applied to pluralism.

It is these difficulties that lie at the basis of uncritical acceptance of the dissemination of capitalist values, misinterpreted democracy, as well as neglectance of individual responsibility in education and society as a whole.

Problem of research

Since the disintegration of the Soviet Union educational reforms have been carried out in all the post-soviet countries, including those who were in the area of soviet influence. Transformation process from one system of society to another one is accompanied by essential changes in the consciousness of the society, and it has given rise to many questions about the system of values integrated in the former ideological system and its influence on contemporary education. Not less interesting, is the orientation of values towards educational reform of those who graduated from the universities in Soviet times and are now working in the field of education and its reform.

The discussion about values is of great importance because of two reasons: education contributes to the development of individuals and their ability to adapt in the processes of life, and it can be considered as the promoter of values of society. The implementation of values in education and upbringing creates the pedagogical image and generates the notion of education as whole. (Values in education and education in values 1996)

In the context of society of Latvia, this is a particularly topical question because contemporary situation is often characterized as chaos and the values are considered in the light of subjective motivation and interests. Such phenomena are defined as postmodern with the consequences of cultural relativism, domination and rapid development of information and computer technologies, failure of the project of Enlightenment, disbelief in grand – narratives, re-evaluation of modernism, loss of absolute truth when knowledge is not the way to truth, but the reflection of power relationships, symbols, signs and other communication forms. In such circumstances discussion on educational values is very necessary to stabilise the current situation and remember that pedagogy as the normative science carries the values of society.

Pedagogical anthropology as a discipline of pedagogy emerged in the 60-ies of 20th century, as a result of theoretical discourse about human pedagogical image and the striking conclusion that a unified and clear human pedagogical image did not exist anymore, and the contemporary scientific picture of the world made it even more complicated. This conclusion is based on the study of changes brought about by the development of information, science and technologies that directly influenced and changed self-comprehension of humans which has become a typical phenomenon in modern scientific environment.

The lack of universal human pedagogical image is very closely related to the loss of religiosity in the Western European culture that provokes the development of unlimited anthropological pride and all permissiveness (Bēme 2006)**.** This problem should be also addressed in pedagogy by laying emphasis on the theoretical research of the formation of human pedagogical image since without clear knowledge about human nature the targets of pedagogy are unclear.

Context of research

Soviet occupation of 1940 radically changed the development of academic education and alongside it, pedagogy as well. Moreover, those were not only formal and structural reforms, but also deep ideological changes aimed at eliminating *bourgeois* science and developing a soviet science in Latvia that had become a new Soviet republic. (Rubene 2010) Soviet period that cannot be regarded as a uniform and gradual development process, actually terminated the acquisition of European spiritual values in the country and isolated it from the western academic and scientific space.

The introduction of the new soviet educational system started with eliminating the previous one – the Baltic education system was unified according to the USSR example - private schools eliminated, curriculum radically changed, Christian religion studies and classical languages excluded, but history of the USSR and Russian language introduced (Ķestere 2005).

In fact„ the history was re-written" on the basis of Soviet ideology, and fortified by a notorious censorship that included the interpretation of concepts, especially in the field of humanitarian sciences. Pedagogy, alongside with philosophy, politology, and economics, became a source of soviet propaganda. Philosophical ideas were strongly controlled since the dialectic materialism became the only world-view, but reference to idealism - indecent language. (Rubene, Krūze 2009)

The only acceptable classification of sciences in the USSR was the one developed by Friedrich Engels (Filozofijas vārdnīca 1974). Based on the movement of matter, F. Engels classifies sciences in natural, technical and social, excluding spiritual or religious and philosophical aspects of science, that have no place in the materialistic concept of the world. Philosophy by Engels is interpreted as one of forms of social consciousness determined by socio – economic relationships, and it studies the relationship between the mind and the material world. (Filozofijas vārdnīca 1974)

Education in Soviet era had unified characteristics defined by the ruling ideology. Not all the characteristics should be considered as negative, for example, the links between schools and production that definitely guaranteed employment for everyone. However, the ideologisation and politisation of the study process meant that the educational work was, in fact, guided by Communist Party and used as an important tool to support and promote Soviet politics. Thus, the intellectual isolation of education from the processes in the Western Europe, was implemented with the idea to ensure that studies were carried out according to Marxism and excluded any critical approach to Marx, Engels and Lenin's doctrines. The result of the above mentioned was enforced, one-sided, ideologised point of view, strong censorship and hidden information. (Ķestere 2005)

The authors of the book „ School in Soviet Latvia" published in 1977, emphasize that the Communistic party of Soviet Union has always introduced definite requirements for teachers

as ideological workers. (Skola Padomju Latvijā 1977) The organizer of the ideological work in schools were school party organisations which in those days comprised about 8000 members, and thus every third teacher in Latvia was a member of the Communist Party, but every fifth – a Comsomol member. These facts clearly demonstrate that Soviet Latvia's education space was highly ideologized and the idea of educating teachers as ideological workers successfully implemented.

However, from the view point of pedagogical anthropology the most important feature of the soviet schools was *the education of new person* that was planned according to state and Communist Party politics. A fully and well- rounded development and formation of a personality was based on five main postulates of communist education – the Soviet citizen was educated to acquire ideological, intellectual, moral, esthetical and physical characteristics that would serve for the benefit of the whole system. (Ķestere 2005). And the main goal of the education system in the Soviet Union was to bring up a personality loyal to communist thinking and accepting values common and recognized by citizens of other societies – honesty, truthfulness and helpfulness.

After the re-establishment of the Republic of Latvia in 1991, both the scientific and academic environment was in need of a substantial and functional reform. Immediate changes were introduced in the higher educational establishments of all Baltic countries aimed at the implementation of principles and processes of democracy, cancellation of the previously existing content and methodical restrictions, especially in social and humanitarian sciences, transformation from soviet scientific and academic degrees to western models and educational settings.

However, due to the fifty years long isolation of Latvia from current European and world scientific developments, certain difficulties and specific problems stood in the way of the development of humanitarian sciences in the post–soviet period. Isolation from the western research achievements created a situation when soviet raised professors were not acquainted and ignorant of the main theories studied and taught in the West European universities.

Thus the 90-ties of the 20th century in Baltic countries experienced a remarkable diversion from communist to western ideas and disassociation with the traditions of Soviet and Russian culture and science that once more gave way to one-sided point of view in science and thinking (Rubene 2010).

The new conception of education ensured rights of everyone for education, acquisition of knowledge and skills in order to improve and develop themselves according to their aspirations and targets and, of course, according to the principles of a democratic state.

The above conception was introduced with the objective of providing qualitative education for everyone in Latvia. It puts forward the idea of a value oriented education, without outlining values to be implemented, and thus is restricted to general phrases like development of

democratic personality, development of skills necessary for contemporary situation and market requirements, the promotion of lifelong learning. This conception does not give any insight in the values that will be of utmost importance in the future, so they become a result of individual decisions and interests without common guidelines.

Collective responsibility practiced in soviet system still has consequences today, and is observed as lack of individual responsibility for the results of work and actions, and inability for orientation in pluralistic society. However, individualism, that is a typical democratic and liberal value, is very often not understood as a prerequisite for the society respecting every individual's rights, but rather is interpreted as a tool for self-demonstration, justification to avoid rules, and disrespect to others. Therefore educational establishments are fighting for equal rights to both parties – teachers and students, since it seems that in post – soviet society only the latter are taken into account. (Education, Autonomy and Democratic Citizenship 1997)

The new situation has given rise to interest in pedagogical anthropology that was one of the unknown and ignored disciplines of Western philosophy of education in soviet times.

General characteristics of pedagogical anthropology

Pedagogical anthropology is a discipline that studies, analyses and interprets the concept of *anthropos* – human being accordingly to the social, historical, and cultural context, and is mainly based on pedagogy and its development. The subject of pedagogical anthropology is a human as educator and educated, and education as one of most important elements of human development. The target of the studies of pedagogical anthropology is to define the human pedagogical image as a specific form of human existence and nature.

Whatever are the problems discussed from the pedagogical viewpoint, it is crucial to understand the notion of human being through ages and times, and thus in different historical, cultural and socio economic environment. Therefore the objective of pedagogical anthropology is to study questions of the essence of human being with regard to pedagogical categories related to the interpretations of human pedagogical image in different contexts (Kneller 1965).

Pedagogical anthropology shows the explicit and implicit relationship between models of upbringing and education, and human pedagogical image. It also explains the concept of education, upbringing and socialization in given time and society. Thus the subject of pedagogical anthropology is the human being in the context of upbringing and education, i.e., the human pedagogical image and studies about it.

The subject of pedagogical anthropology is not a new concept in the western theoretical discourse – there have been comprehensive discussions about human being and its relationship to education and upbringing in the framework of philosophy and later on in that

of pedagogical sciences. The most recognized theoretical positions in the pedagogical anthropology are: 1) human as a deficient being – biologically deficient creature, that needs to be educated and brought up (discipline, punishment) to became a cultural being; 2) anthropology of needs – humans have to be educated to develop their abilities and possibilities; 3) optimistic anthropology – development of freedom and reason by implementing the idea of humanism as the objective of education. (Scheuerl 1982; Zirfas 2004)

The classical interpretation of human being in the pedagogical anthropology is related to Enlightenment period that created the principle of autonomy of humans, a principle most important to pedagogy, on the basis of which the pedagogical science was founded (Scheuerl 1982; Zirfas 2004; Wulf, Zirfas 1994).

In the centre of the discourse of Enlightenment is human identity (self), its self realization and self-perfection. It is nothing else but human mind and thinking, „an organ" given by nature to develop self-cognition and further development. The Enlightenment brought the idea that reasonable and enlightened human being will be able to solve all the problems of life, as well as promote chances for the moral and economic growth of all humankind. And to be more exact - human reason will prevail to provide scientific progress and make life a happy event. The autonomous subject becomes the essence of modernism.

Contemporary paradigm of western thought – modernity – is under doubt – the illusions about objective knowledge and systematic understanding diminish, that earlier helped to define the notion of thinking, independent subject as responsible for the destiny of all the humanity (Liotārs 2008).

The thought about the principle of human autonomy became the subject of discussions and reason of diversity of pedagogical anthropology and its approaches. How can an individual be autonomous if he is forced to be involved in certain social relations and his fate is often determined by circumstances of life? And is it possible to recognize humans as autonomous in pedagogy if the task of pedagogy as a science is to bring up, educate and change human nature? If pedagogy considered humans as autonomous, then it's target would be lost. (Огурцов, Платонов 2004)

In the 60-ties and 70-ies of the 20th century the search for the comprehension of human being in the theories of pedagogical anthropology were defined in the following approaches: 1) integral approach – *homo educandus* and *homo educabilis* – human as educable and perfectionable being; 2) philosophical approach – human as „undefined animal" and opened system; 3) phenomenological approach – *homo distinctus* – human as the player of social roles, for example, children and adult, teacher and pupil, mother and father etc.; 4) dialectical – reflexive approach: *zoon politicon* – human as individual and in social self-determination; 5) implicit approach – *imago hominis* – human in self – illustration process; 6) textual approach:

human as anagram; 7) pluralistic – historical approach: *homo absconditus* – hidden human as a heuristic category, plurality, reflection, historical factor. (Wulf, Zirfas 1994)
Transformations in the political and economic world in the last decade of 20th century encouraged changes in accents of the pedagogical anthropology of the 21th century.

Comprehension of human pedagogical image in soviet pedagogy and changes in post - soviet space

The objective of communistic education is to raise all-rounded and perfectly developed personality which harmonically combines moral and physical perfection (highly developed moral, practical, theoretical and esthetical characteristics). The ideological background of such an education is Marxism – Leninism theory that sets targets for the formation of the future human beings, their principles, way and essence of life**.** Communistic education includes: development of one scientific world conception for all the members of society, creation of communist scrupulosity, education of the communist virtue of work and communist attitude to work and production for the benefit of society as a necessity and personal goal of every citizen, promotion of peoples culture to the highest level of all the worlds human theoretical thought, technology, literature and arts. And on the basis of the above to develop social activities of masses, their creativeness and self-performance, so that they not only acquire cultural values but became inventors and organizers of production themselves, as well as take active part in the creation of artistic and esthetical values, and to strengthen the development of genuine human relationship amongst people according to the principles of communist morals and physical upbringing, with the aim to form a healthy and strong citizen. (Ētikas vārdnīca 1987)
Humanism in the Soviet ideology is recognized as a principle of world view based on the assurance that human abilities are infinite and self-perfection knows no borders, on the requirement to defend human dignity and peoples strive for freedom, on the idea about human rights for happiness, and view that the goal of development of society is to ensure peoples necessities and fulfill their interests. If in the centre of attention of the Western European humanists were individuals as autonomous and independent beings with the rights to private capital and property, Marxist theory was governed by the view that an individual can develop his multiple and many-sided skills only in a collective environment, and only a collective happiness can serve as a background for personal freedom. Alongside that communist morality is the most humane morality in the world. (Ētikas vārdnīca 1987)
The problem of a holistic and unified personality originates from the comprehension of the contradictory character of social progress caused by the distribution of labour. The result of it is that a human being performs only a small part of what is considered to be the holism of human activities, thus becomes one-sided and the level of his abilities falls far behind the

cultural level of the whole society. Thus demands set forth by social needs become the necessary essence of human activities, or in other words – social needs become individuals own needs. In this way the unity is reached of individual goals and those of the society. The Marxist view of human uniformity contradicts to that of diversity which is considered to be a manifestation of egoistic values and principles**.** Therefore there is no need to oppose individual and egoistic needs to those of the moral and social duty, and the soviet citizen should be content living and working for the benefit of the society, leaving his own, individual welfare far behind. (Ētikas vārdnīca 1987)

Regarding the psychological aspects of the human nature, the soviet pedagogy prophesizes the idea that humans have no inherited abilities, which cannot be impacted by well planned and conducted socialist education. The emphasis is laid on education, environment and living conditions as a defining factor for the development of human skills. There are no inherited and unchangeable features but all the skills are acquired during human life time. A certain influence of inheritance is admitted, however, it is not considered unchangeable, and can be easily modified during life time. Western pedagogy and psychology have promoted and develop a reactionary theory about the congenital character of intellectual abilities, which as if determine individual achievements and his ability to be educated. That lies at the basis of the pseudoscientific policy in the field of education which is directed at restricting the benefits of education to the working class and different race and nationality children. From the point of view of soviet physiology and biology all the intellectual properties of a personality are acquired, and they form and develop throughout human's life time. Inheritance has some minor influence, but it doesn't happen to be the decisive and leading factor. (Iljina 1971)

The aim of introducing the propaganda of atheism in soviet schools and universities was to bring up youth in the spirit of fighting atheism, so that it will not be contaminated with religious ignorance and prejudices in whatever way the manifest themselves. Youth had to become an active tool for the propaganda of scientific world view to the broad working class masses. (Zinātniskā ateisma pamati 1965)

The main point of moral philosophy in Marxism is the explanation of relations between morality and impartiality, rationality and self-interest, self – assertion and self- sacrifice.

In Marx view people are restricted by their location in the material production, the technologies, work relations and relations of control involved in the production of material goods. Thus the moral education of the proletariat takes place through activities that transform the prerequisites of self – respect, creating new needs to help in the liberation of others. (Oksenberg Rorty 1998)

Why can we assert that the pedagogy of soviet times that is undeniably based on the postulates of Marxism – Leninism is also influenced by the ideas of Enlightenment? Four basic ideas can be traced that are deeply embodied in the thinking of soviet times:

1.Rationality - absolute belief in the power of scientific mind and preaching of atheism, conviction that the world is functioning according to the rules of nature and there cannot be any religious explanations It is natural sciences and their studies that can give answers to all the questions of life. The same belief was prophesized by the educators of the Enlightenment, which refused to accept any religious and prejudiced assertions that could prevent the development of scientific thinking. (Lawton, Gordon 2002)

2. Belief in progress – the discoveries made in natural sciences gave the way to unexpected developments and raised the level of life to higher standards. In the context of Enlightenment progress was understood as a continued process during which humans diverted from religious opinions to scientific cognition, from supernatural to scientific. (Lawton, Gordon, 2002) Human mind together with natural sciences was to produce the environment and basis for the happiness of human existence. Similarly in Marxism, the progress was also interpreted as the result of scientific thinking but a very important component added – the target of progress was communism – the absolutely ideal and righteous social society where inequality was abolished and did not exist.

3. Autonomy of individuals – ability to think critically, to have independent decisions and to have a rational explanation of the world and developments. It is extremely difficult to speak about the autonomy of individuals in Marxism, since everything was controlled and censored to comply with the ruling ideology. However, soviet pedagogy considered autonomy to be an important factor of communist upbringing because every citizen was to make his decisions independently and voluntarily, and every human who exhibited common sense was supposed to recognize the cognitions of Marxism – Leninism as the only righteous and acceptable ones, and to live embodying the ideals of communism was the only reasonable option of choice. The contradiction between compulsory social requirements and individual demands was not recognized in communist morality because they did not exist since the right opinion was given by the party, and people well educated in communist tradition perceived their decisions as a result of autonomous thinking and independent choice.

4. Education in the Enlightenment was considered to be a tool for the implementation of the above mentioned *ideas about rationality, progress and autonomy*. The same can be said about soviet era where inheritance of human qualities was not recognised, and education was the means to influence and change people according to the needs of the ruling morality and the existing social system.

The above mentioned four ideas were the background for the human pedagogical image in soviet space**:** rational, progressive, and autonomous and at the same time well educated citizen with excellent comprehension of the needs of whole society.

During the radical reforms in the post – soviet period the above image started to change and is undergoing transformation until today which is why there is still no clear definition of the new image and its values.

The rational subject has become an illusion and its knowledge is the instrument and result of different power relations and discourses. Humans cannot be autonomous because of their involvement in different social, cultural, political and economic interactions. Progress is questioned as the road to happiness and perfection.

Transformation of values in the post-soviet countries have a double effect. First, humans experienced huge political and economic changes due to the disintegration of the Soviet Union, and secondly, the above changes that were more or less of a local character were accompanied by global ones, related to the development of information technologies that brought about enormous changes in human thinking and conception all over the world.

Humans in post-soviet space had not only to adapt to the requirements of the new social and political environment, but also to be integrated in the global processes. They had to accept democratic values instead of totalitarian, to work, survive and develop in market economy instead of centralized and planned economy, to learn to become individually responsible for their own actions and not to rely on the state as the main advisor. In fact the above transformations caused numerous problems and today raise a lot of questions to be answered about human values. On the one hand, individuals are content to live in society where the freedom of thought prevails, on the other hand, being confronted with the freedom of choice, and having nobody to prompt the right decision, they have to rely on themselves when choosing the right option. Thus the individual responsibility turns out to be very inconvenient for some people, who still tend to think that the state and government is responsible for everything, including giving advice and opinion for the necessary actions. (Education, Autonomy and Democratic Citizenship 1997)

Confusion exists in the system of education as well, that has been declared as democratic and liberal – teachers are puzzled how to direct educational processes without unified system of values. An example: for several years there was a discussion in the educational establishments and society about the teaching of history of Latvia. Should it be a separate course in schools of Latvia or should the history of Latvia be taught as an integrated part of the Western and world history. The answer was directly related to the existing interpretation of values. Those who thought that the national history and values are very important and that children should be educated as patriots claimed that the history of Latvia has to be a separate course. Those who argued that Latvia belongs to the European Union and as citizens of multicultural society we cannot regard history of the country outside the context of

the world history supported the latter view. However, the first argument won because of the sensitivity of the loss of national values and worries about self-determination of Latvia in the European Union. Thus starting with the next school year the history of Latvia will be taught parallel to that of the world.

There are numerous other questions in the field of education that are based on the interpretation of values. For example, is family still a value? In Marxist theory family was declared to be the basic cell of society, and people could not imagine involving into intimate relationships without founding a family. In the modern society, however, the individuals' life and self – success prevails over the family life and care about children. Autonomy is no more understood as serving to the needs of society but as self – realization manifested by career and improvement of one's own welfare.

Progress also can be doubted as possible category of success of human kind. The development of natural sciences demonstrates that there is no way to complete human happiness and satisfaction since every new discovery raises new questions and even new problems. Who can assert that the high development of technologies makes life happier? It cannot be denied that changes in modern society have brought uncountable benefits to human life, at the same time they cannot be defined as the solution of problems and give answers to questions about humans and humanity. Moreover, with the development of biogenetics and stunning discoveries on the nature of human beings, their structure and functioning, it is even more complicated and difficult to give answers to the eternal question about who we are.

Conclusions

It is necessary to define targets and values of contemporary education, including ideals and goals of modern educational processes that correspond to actual changes and requirements of information society, to determine the system of values that would form the basis of educational axiology and totality of attitude of humans towards self, society and world.

It seems impossible to find answer to the eternal question what a human being is, but at the same time pedagogy has to strive to find the possible answer, because without defining the essence of human being, there can be no discussion about it's qualitative improvement. However, this should be always considered in the light and close relation to the interpretation of values.

References

Bēme, G. 2006. Humānisms un mūsdienu cilvēks. *Skolotājs*, 2006./5: 5. – 10.

Education, Autonomy and Democratic Citizenship. 1997. Ed. Daveid Bridges. Routledge. London and New York.

Ētikas vārdnīca. 1987. Rīga: Avots.

Filozofijas vārdnīca. 1974. Rīga: Liesma.

Iļjina, T. 1971. *Pedagoģija.* Rīga: Zvaigzne.

Ķestere, I. 2005. *Pedagoģijas vēsture. Skola, skolotājs, skolēns.* Rīga: Zvaigzne ABC.

Kneller, G.F. 1965. *Educational Anthropology.* John Wiley & Sons, Inc. New York, London, Sydney.

Latvijas izglītības koncepcija. 1994./1995.Rīga: IZM.

Lawton, D, Gordon, P. 2002. *A history of Western Educational Ideas.* London: Woburn Press.

Liotārs, Ž.F. 2008. *Postmodernais stāvoklis. Pārskats par zināšanām*. Rīga: Laikmetīgās mākslas centrs.

Philosophers on Education. 1998. Ed. by Amelie Oksenberg Rorty, London and New York, Routledge. p. 375 - 381

Rubene, Z., Krūze, A. 2009. Rezeption der deutschen Erziehungsphilosophie in Lettland. *Theodor - Litt- Jahrbuch 2009/6.* Leipzig: Leipziger Universitätsverlag, S. 75 – 89.

Rubene, Z. 2010. Geisteswissenschaften und akademische Bildung in Lettland. *Theodor – Litt*. Jahrbuch 2010/7 – Leipzig: Leipziger Universitätsverlag, S. 57 – 73.

Rubene, Z., Geikina, L., Svece, A. 2008. Implications of Totalitarian Values in the Post-Soviet Educational Space: The Theoretical and Methodological Research Basis. *Quality Education for Quality Teaching. ATEE Spring University 2008.* Riga: LU Akadēmiskais apgāds, p. 773.-781.

Scheuerl, H. 1982. *Pädagogische Anthropologie*. Stuttgart: Kohlhammer.

Skola Padomju Latvijā. 1977. Rīga: Zvaigzne.

Values in education and education in values. 1996. ed. by J. Mark Halstead, Monica J. Taylor. Basingstoke. Falmer.

Wulf, C. 2001. *Antropologie der Erziehung*. Weinheim, Basel: Beltz Verlag.

Wulf, C., Zirfas, J. 1994. *Theorien und Konzepte der pädagogischen Anthropologie*. Donauwörth: Verlag Ludwig Auer.

Zinātniskā ateisma pamati. 1965. Rīga: Liesma.

Zirfas, J. 2004. *Pädagogik und Anthropologie*. Stuttgart: Verlag W. Kohlhammer.

Огурцов, А. П., Платонов, В.В. 2004. *Образы образования. Западная философия образования - XX век.* Санкт-Петербург: Издательство Русского Христианского гуманитарного института.

A Review of Teacher Training System in Turkey

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Abstract

Until 1981, most of the teachers had been educated by teacher training high schools and education institutes under Ministry of National Education in Turkey. When the teacher training transferred to universities, there were 34 higher teacher training institutions in universities. 39,684 students were being educated in these institutions. In 2009 – 2010 terms, number of education faculties increased to 72. Student population in these institutes, continually increased until 2005 – 2006 term, but then partly decreased. As it can be seen on Table, number of faculties continually increased.

Table. Numbers of education faculties, students and faculty (1983 - 2009)

Term	*Faculty (Higher Ed.)*	*Student*	*Instructor*
1983-84	34	39684	1591
1990-91	40	50964	2342
1995-96	27	86127	2965
2000-01	50	140074	3694
2005-06	64	171794	4513
2006-07	65	167214	4740
2007-08	66	160547	5087
2008-09	69	163212	5155
2009-10	72	-	-

Resource: For 1983 – 1996 YOK (2007), for 2000 – 2009 OSYM Book of Higher Education Statistics.

In addition, more than half of in education faculties consist of instructors without PhD. When the number of students per instructor with PhD considered, it's 65% in education faculties but most of the other faculties it's nearly 40%. According to YOK, 2007 statistics, this ratio is more than 100% in newly found universities. Between 2000 – 2001 the number of students increased 17% percent but the number of faculty increased 40%. In addition to this, number of instructors with PhD increased from 37% to 51%.

Another problem is the faculties are given more quota than their capacities that's why the courses are done in crowded classrooms. Although restructuring studies between 1997 an 2006 suggests active learning and emphasis applications in education faculties, it seems very difficult in crowded schools. And also it's not evident that how the teachers trained in this way will apply teaching practices.

In 2009 – 2010 educational terms, the 49 of 72 education faculty have evening education (OSYM 2009). It's not as high as education faculties in other faculties. This practice brings instructors extensive teaching duty and makes difficult for them to spend time to renew their knowledge and to write papers on their fields. Also some teaching branches (physics, chemistry, biology) have graduate students more than needed. Opening evening schools for these branches are heavily argued by the public. When these criticisms are considered, it can be seen that there are serious difficulties training qualified teachers.

In this study, teacher training system in Turkey is comparatively studied to the educational statistics of some of the European Countries (Finland, Germany and French) which had high Program for International Student Assessment (PISA) scores. According to these analyses, it's evident that there is a need for a reform for teacher training system.

Keywords: teacher training, PISA, Turkey

Introduction

The Five ways of Educating students according to European Union norms has been determined. They are multiculturalism, mobility, education chance for everyone, professional information and openness to the world (Eşme 2002)

Turkish education system consists of pre-school, primary, secondary and higher education. Pre-School education is the first step of Turkish educational system. There are kindergarten schools, pre-school classes and applied kindergarten. They are voluntary and educate 36 – 72 months children. Pre-school enrolment rate is 43% in Turkey (www.worldbank.org).

Table 1. Teacher – Student ratio in some OECD countries (www.worldbank.org)

	Teacher-Student Ratio (%)
Finland	15
Germany	14
France	19
Turkey	*24*

Compulsory schooling lasts 8 years, contains 6 – 14 age children's education and offered primary schools. According to 2009 data, primary school enrolment rate is 96, 49% and secondary school enrolment rate is 58, 52% (www.egitimsen.org.tr).

Secondary education is a four year education, based on primary school there are general, vocational and technical education. There are varieties of general and vocational high schools. Higher education institutions are consisting of “universities”, “higher technology institutes” and “independent trust vocational colleges”. Except the little number of trust vocational colleges, all the higher education institutes are gathered under universities (or high technology institutes).

MEB (Board of Education and Discipline) is authorized to preparing and updating teaching programs. National program is used for pre-school, primary school and secondary school education. But schools contribute the process specifying their views and criticisms. Teachers are responsible to applying educational programs. But school principals are responsible to watch and control the applications.

To support decision making progress there are advisory committees (National Education Council, Vocational Education Council, Specialization Commission, Principles Commission, School Council).

There are no specifically teacher training programs in Turkey. Under universities, education faculties, vocational education faculties, technical education faculties took over teacher training. These institutions graduate bachelors (4 years) (E.C., 2009/10).

At any level teacher training programs and standards are arranged by incorporation of MEB and Higher Education Council (YOK) in Turkey. To train high school teachers, a teacher training program started in 1997. The students have 3 and a half year education from faculty of arts and science, and then they have pedagogical courses which they had to take as undergraduate courses, as a master’s degree for one and a half year. This model for increasing the importance of the field knowledge has been criticized by some scientists but still partly applied (www.egitimsen.org.tr). Although increasing the secondary education teacher training to five year seems a good step to improve quality, it’s an urgent decision. There is no clear evidence about the improvement of teacher training quality. In addition, it doesn’t seem ethical to give master’s degree over undergraduate courses (Özoğlu 2010).

The program prepared by YOK is applied in all the education faculties in Turkey. But these courses are generally at theoretical phase (Table 2). Accompanying with, by an introduced law in 1981, all the teacher training institutes were taken from MEB and conveyed to universities. But education faculties are not considered important in most of the universities. That’s why in most of the universities, laboratories and application facilities are insufficient. This situation effects teacher quality in Turkey negatively.

Table 2. Undergraduate program in primary education in Faculty of Education in Turkey (YOK, 2006)

1. Year 1. Semester					
Subject	*Credit*	*Theo.*	*Pac.*	*Lab.*	*ECTS*
Basic Mathematic I	2	2	0	0	5
General Biology	2	2	0	0	5
History of Civilization	2	2	0	0	4
Introduction to Education Science	2	2	0	0	5
Turkish I:	2	2	0	0	4
Computer Application I	3	2	2	0	7
Foreign Language I	0	3	0	0	2
Attar's Principles and Revolutionary History I	0	2	0	0	2

1. Year 2. Semester					
Subject	*Credit*	*Theo.*	*Pac.*	*Lab.*	*ECTS*
Basic Mathematic II	2	2	0	0	4
General Chemistry	2	2	0	0	4
History of Turkish and Cultural	2	2	0	0	4
General Geography	2	2	0	0	4
Educational Psychology	3	3	0	0	4
Turkish II: Oral Expression	2	2	0	0	4
Computer Application II	3	2	2	0	6
Foreign Language II	0	3	0	0	3
Ataturk's Principles and Revolutionary History II	0	3	0	0	3

2. Year 1. Semester					
Subject	*Credit*	*Theo.*	*Pac.*	*Lab.*	*ECTS*
Turkish Language I : Knowledge of sound and structure	2	2	0	0	3
General Physics	2	2	0	0	3
Music	2	1	2	0	4
Physical Education and sport culture	2	1	2	0	4
Application of Science and Technology I	1	0	0	2	4
Environmental Education	2	2	0	0	3
Principles and Methods of Teaching	2	2	0	0	3
Philosophy	2	2	0	0	3
Sociology	3	3	0	0	3
2. Year 2. Semester					
Subject	*Credit*	*Theo.*	*Pac.*	*Lab.*	*ECTS*
Turkish Language II: Knowledge of sentence and text	2	2	0	0	2
Children's Literature	2	2	0	0	2
Geography of Turkey and Geopolitics	3	3	0	0	3
Art Education	2	1	2	0	4
Science and Technology Laboratory Application II	1	0	0	2	3
Education of Music	2	1	2	0	3
Physical Education and Teaching Games	2	1	2	0	3
Methods of Technical Writing	2	1	2	0	3
Scientific Research Methods	2	2	0	0	2
Teaching Technology And Designing Materials	3	2	2	0	5

3. Year 1. Semester					
Subject	*Credit*	*Theo.*	*Pac.*	*Lab.*	*ECTS*
Teaching Science and Technology I	3	3	0	0	4
Teaching of Reading and Writing In Elementary Education	3	3	0	0	4
Teaching Life Information's	3	3	0	0	4
Teaching Mathematics I	3	3	0	0	5
Drama	3	2	2	0	5
Measurement and Evaluation	3	3	0	0	5
Classroom Management	2	2	0	0	3
3. Year 2. Semester					
Subject	*Credit*	*Theo.*	*Pac.*	*Lab.*	*ECTS*
Teaching Science and Technology II	3	3	0	0	4
Teaching Turkish	3	3	0	0	4
Teaching Social Studies	3	3	0	0	4
Teaching Mathematics II	3	3	0	0	4
Early Childhood Education	2	2	0	0	3
Social Maintenance Practice	2	1	2	0	4
School Experience	3	1	4	0	7
4. Year 1. Semester					
Teaching Visual Arts	2	1	2	0	3
Religious Culture and Moral Knowledge's	2	2	0	0	3
Traffic and First Aid	2	2	0	0	3
Turkish Literature of Republic Era	2	2	0	0	3
Effective Communication	3	3	0	0	3
Practice Teaching I	5	2	6	0	10
Guidance	3	3	0	0	3
Special Education	2	2	0	0	2

4. Year 2. Semester					
Subject	*Credit*	*Theo.*	*Pac.*	*Lab.*	*ECTS*
Education in Integrated Classrooms	2	2	0	0	4
Inclusion in Primary Education	2	2	0	0	4
Practice Teaching II	5	2	6	0	10
Turkish Educational System and School Management	2	2	0	0	3
History of Turkish Education	2	2	0	0	3
Elective I (Content knowledge)	2	2	0	0	3
Elective II (Vocational knowledge)	2	2	0	0	3

In Germany, Teacher training is basically divided into two stages: a course of higher education and practical pedagogic training. Teacher training courses are offered at universities, Technische Hochschulen / Technische Universitäten, Pädagogische Hochschulen (colleges of education) and colleges of art and music. Practicadagogic training in the form of a preparatory service takes place in teacher training institutes (*Studienseminare*) and training schools. At universities in some Land's institutions (e.g. centres for teacher training) have been established to coordinate teacher training among the faculties and guarantee an adequate relationship to teaching practice (http://www.helsinki.fi).

In Finland, the law on the university degree system contains a separate section on teacher education. Other laws determine what teacher education programmes individual universities are entitled to provide. Teacher education is given either in faculties/departments of education or in subject faculties such as humanities, science, or theology. First, students take a Bachelor's degree, which comprises 180 ECTS credits, and after that a 120-credit Master's degree. They take basic, intermediate and advanced studies (120 credits) in their major subjects and basic and intermediate studies (60 credits) in their minor subject. The complete 300-credit degree takes about five years (http://www.oaj.fi).

Until 1981, most of the teachers had been educated by teacher training high schools and education institutes under Ministry of National Education in Turkey. When the teacher training transferred to universities, there were 34 higher teacher training institutions in universities. 39,684 students were being educated in these institutions. In 2009 – 2010 terms, number of education faculties increased to 72. Student population in these institutes, continually increased until 2005 – 2006 term, but then partly decreased. As it can be seen on Table 3, number of faculties continually increased (Özoğlu 2010).

In addition, more than half of in education faculties consist of instructors without PhD. When the number of students per instructor with PhD considered, it's 65% in education faculties but most of the other faculties it's nearly 40%. According to YOK, 2007 statistics, this ratio is

more than 100% in newly found universities. From 2000 till 2001 the number of students increased 17% percent but the number of faculty increased 40%. In addition to this, number of instructors with PhD increased from 37% to 51%. As it can be seen on Table 3, number of faculties continually increased.

Table 3. Numbers of education faculties, students and faculty (1983 - 2009)

Term	*Faculty (Higher Ed.)*	*Student*	*Instructor*
1983-84	34	39684	1591
1990-91	40	50964	2342
1995-96	27	86127	2965
2000-01	50	140074	3694
2005-06	64	171794	4513
2006-07	65	167214	4740
2007-08	66	160547	5087
2008-09	69	163212	5155
2009-10	72	-	-

Resource: For 1983 – 1996 YÖK (2007), for 2000 – 2009 OSYM Book of Higher Education Statistics.

Another problem is the faculties are given more quota than their capacities that's why the courses are done in crowded classrooms. Although restructuring studies between 1997 an 2006 suggests active learning and emphasis applications in education faculties, it seems very difficult in crowded schools. And also it's not evident that how the teachers trained in this way will apply teaching practices.

In 2009 – 2010 educational terms, the 49 of 72 education faculty have evening education (OSYM 2009). It's not as high as education faculties in other faculties. This practice brings instructors extensive teaching duty and makes difficult for them to spend time to renew their knowledge and to write papers on their fields. Also some teaching branches (physics, chemistry, biology) have graduate students more than needed. Opening evening schools for these branches are heavily argued by the public. When these criticisms are considered, it can be seen that there are serious difficulties training qualified teachers.

When the 2003 – 2006 – 2009 Pisa scored are analyzed, it can be seen that Turkey had low grades (Table 4). On the other hand, the reason of at high level PISA mean success grades' being 0.0 (Table 5) in Turkey is students are educated without analytic thinking and they memorize. When the students prepare themselves to the secondary school entrance exam (SBS), higher education entrance exam (YGS) and placement exam (LYS), most of them

(approximately 90%) feel themselves in need of going to a special course to pass them. Special Courses instead of teaching concepts encourage students to answer questions by memorizing. This leads to decrease of personal of group activities like performances or project works. Since the students and their parents focused on multiple choice questions, they oppress the teachers. This situation effects students' analytical thinking. And also, effects teachers' professional success negatively and limits personal improvements.

Table 4. According to PISA scores (2003, 2006 & 2009), the mean performances of some Countries in Science

	2003	*2006*	*2009*
Finland	548	563	554
Germany	502	516	520
France	511	495	498
Turkey	*434*	*424*	*454*

Table 5. The highest level (5th and 6th) PISA science mean success grades of some countries (5. Level: from 633.33 to less than 707.93 score points); (6. Level: above 707.93 score points)

	2003 (OECD 2003 PISA database)		*2006 (OECD 2006 PISA database)*		*2009 (OECD 2009 PISA database)*	
	Level		*Level*		*Level*	
	5.	*6.*	*5.*	*6.*	*5.*	*6.*
Finland	-	-	17.0	3.9	15.4	3.3
Germany	-	-	10.0	1.8	10.9	1.9
France	-	-	7.2	0.8	7.3	0.8
Turkey	-	-	*0.9*	*0.0*	*1.1*	*0.0*

Conclusions and recommendations

Because of the exam system of Turkey, teachers cannot allow enough applications and activities in syllabuses. So, according to PISA scores, the number of students with high level thinking (5th and 6th levels) ability is extremely low. It can be explained by the main reason - memorizing and exam focused teaching. For that reason:

1. Instead of the current exam system, a new system which evaluates the student's learning process should be designed.
2. For every university with the faculty of education in it, laboratory and application facilities should be improved.
3. To meet the contemporary needs, teachers should have improved in-service training opportunities.
4. Teachers should pass the professional performance exams periodically. The failed ones should have mandatory in-service training.

As a conclusion, according to our analyses, it is evident that there is a need for a reform of teacher training system in Turkey.

References

Eşme, İ. 2002. New Tendencies and Private Schools in The European Union Context. *Private Schools and Quality in Education Symposium*, 14-17 February 2002, Antalya.

E. C. 2010. *Structure of Education and Teaching Systems in Europe.* European Commission, Turkish Press, 2009/10.

http://data.worldbank.org/sites/default/files/wdi-final.pdf

http://e-kutuphane.egitimsen.org.tr/pdf/375.pdf

http://www.egitimsen.org.tr/down/230909_egitimrapor.pdf

http://www.helsinki.fi/luma/eutrain/outputs/teacher_education_germany.pdf

http://www.oaj.fi/pls/portal/docs/page/oaj_ınternet/01fı/05tıedotteet/03julkaısut/opekoulutusen g.pdf

https://www.ssatrust.org.uk/subjects/14-19/leonardostudyvisits/Pages/Trainingtobeateacherin France.aspx

OECD. 2005. PISA 2003 Data Analysis Manual. Organisation for Economic Co-operation and Development (OECD).

OECD. 2009. PISA 2006 results. Organisation for Economic Co-operation and Development (OECD).

OECD. 2010. PISA 2009 Results: What students know and can dostudent performance in reading, mathematics and science. Volume I. Organisation for Economic Co-operation and Development (OECD).

OSYM. 2009. The book of higher educatin choices for candidates of student placement system. Higher education council student selection and placement center (OSYM) Ankara.

http://www.uis.unesco.org/template/pdf/ged/2010/GED_2010_EN.pdf

ÖZOĞLU, M. 2010. *Teacher training issues in Turkey*. Seta Analiz Ankara: Politics, Economy and Society Studies Foundation.

YOK. 2006. Undergraduate program in Faculty of Education in Turkey. The Counsil of Higher Education (YOK), Ankara.

YOK. 2007. Higher Education Strategy of Turkey. The Counsil of Higher Education (YOK), Ankara.

The Lifelong Learning Tendencies of the Prospective Teachers in Turkey in the Bologna Process

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Abstract

The lifelong learning tendencies of the prospective teachers in Turkey in the light of Bologna Process have been investigated. The subjects of the study were 210 fourth grade prospective teachers in the faculty of education in a university located in a city having a population about one hundred thousand in the north of Turkey. The data of the study were collected by the Lifelong Tendency Scale (LLTS) developed by Diker and Demirel (2010). The results of the study demonstrated that the lifelong tendencies of the prospective teachers were positive and high. Also, the results showed that the gender and department effects to lifelong tendencies of the prospective teachers were not significant.
Keywords: lifelong learning; the Bologna process; prospective teachers

Introduction

Globalization and development in science and technology have improved the importance of lifelong learning. Lifelong learning which increases the quality of life of people and society is one of the most important goals of education (Derrick 2003). Lifelong learning is a slogan of European Union to decide on educational values, ideas and politics of European educational systems (Dehmel 2006). Lifelong learning is an essential element for the future of Europe in order to solve social integration problems, use new technologies, provide opportunities for all people living in Europe and increase the quality of life (Commission of the European Communities 2000). Furthermore, higher educational systems in European are based on lifelong learning. The Bologna Declaration was signed in 1999 by ministers in charge of higher education in 29 European countries. The Declaration is the primary document to establish the general framework for the modernization and reform of European higher education. The process of reform is called the Bologna process. The main aim of the Bologna Process is to create a European Higher Education Area (EHEA) based on international cooperation in higher education. Turkey was accepted as a member of the Bologna Process after the meeting in Prague in 2001.

Now, there are 47 member countries participating in the Bologna Process. The aim of the Bologna Process is to create a European Higher Education Area (EHEA) based on international cooperation and academic exchange that is provocative to students and staffs in Europe and from other countries in the world. In the meeting in Prague in 2001 the communiqué emphasized the development of lifelong learning. The Prague Communiqué signals that in a Europe built on a knowledge-based society and economy, lifelong learning strategies are necessary to face the challenges of competitiveness and the use of new technologies, and to improve social cohesion, equal opportunities and quality of life (European Higher Education Area 2010a; EURYDICE 2010).

Lifelong learning is multidimensional and a complex concept (Nicholls 2000). Peck (1996, 645) defined lifelong learning as:

> *the development of human potential through a continuously supportive process which stimulates and empowers individuals to acquire all the knowledge, values, skills and understanding they will require throughout their lifetime and to apply them with confidence, creativity and enjoyment in all roles, circumstances and environments.*

There are several characteristics of lifelong learners: (1) they are active learners who are able to plan and assess their own learning; (2) they can integrate knowledge from different subjects areas; (3) they can use different learning skills and strategies for different situations; (4) they have a sense of curiosity, personal efficacy; (5) they have skills to research, manage, evaluate information; and (6) they have internal motivation to gain further knowledge (Candy 1991; Knapper and Cropley 2000; Livneh 1999). Lifelong learners have several attributions as motivation, curiosity and perseverance which are related to motivation and regulating learning.

Motivation which means a power performing and directing behaviour for a learning goal is a key for learning (Eggen and Kauchak 1994). McCombs (1991) defined motivation to learn and lifelong learning as:

> *motivation to learn is an internal, naturally occurring capacity of human beings that is enhanced and nurtured by quality supportive relationships, opportunities for personal choice and responsibility for learning, and a personally relevant and meaningful learning task. Lifelong learning is also a natural propensity of human beings to continue to learn, grow, and develop that is facilitated by "uncovering" natural learning tendencies and enjoyment of learning and by reducing or eliminating negative, insecure thoughts and belief systems.*

Natural tendency for learning is a common characteristic of both motivation to learn and lifelong learning. In the present study motivation means a power performing and directing behaviours for lifelong learning. The students who are highly motivated to learn understand self-regulation skills, control emotions and moods (McComb 1991). Particularly, intrinsic motivation which is more crucial for lifelong learning relates to learning curiosity, development needs and proficiency beliefs of students. Intrinsic motivation is correlated with learning products and performance (Kashdan and Yuen 2007). Motivation beliefs which are prerequisite for lifelong learning include interest in learning, task value, curiosity, self-efficacy beliefs, perseverance (Boekaerts 1999; Zimmerman 2000, Pintrich 1999).

Perseverance is a factor of student motivation. Caroll (1963) defined students' perseverance as "the amount of time the student was willing to spend actively engaged in learning." In this study perseverance means the amount of time which the learners voluntarily spend on lifelong learning. If students have similar perseverance, aptitudes, they need probably the same amount of time to learn a task. The students, who make more effort to learn, spend more time and will attain a higher achievement.

The students who have motivation for learning can direct and regulate their learning for lifelong learning. The students should be autonomous learners in the lifelong learning process. The students who have lifelong learning skills regulate and control their learning process. The schools should provide learning opportunities such as self-monitoring, self-directing and develop their interests and values of the students. Furthermore the schools should increase students' self-reflection, self-appraisal and self efficacy beliefs and provide them with flexible learning environments for lifelong learning (Derrick 2003). Regulating learning cognitively, motivationally and behaviourally is defined as self-regulation (Zimmerman 1986; Boekaerts 1999; Pintrich 1999). Zimmerman (1994) called regulating learning as "self-regulation or self-regulated learning". Zimmerman defined self-regulation as "learning that results from students' self-generated thoughts and behaviors that are systematically oriented toward the attainment of their learning goals." One of the most important skills of lifelong learning is self-regulation (or self-regulated learning). Self-regulation is ''an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features in the environment'' (Pintrich 2000, 453). Self-regulated learning involves goal-directed activities that students instigate, modify, and sustain. It consists of learning strategies such as cognitive, metacognitive, motivational and affective strategies influencing learning performance (Harpe and Radloff 2000). Pintrich (1999) pointed out that motivation is an important aspect of self-regulating. In the study regulating learning means self-regulated learning that is defined as regulating lifelong learning cognitively, motivationally and behaviourally.

Curiosity is one of the important aspects of intrinsic motivation. (Eggen and Kauchak 1994). Curiosity has been viewed variously as a drive, a personality characteristic, and a motivational state (Leonard 2007). Berlyne (1960) defined curiosity as a desire to know, to see, or to experience that motivates exploratory behavior directed towards the acquisition of new information. In the present study curiosity means a desire to know, to see, or to experience that motivates prospective teachers to learn. Curiosity stimulates exploratory behaviors, specifically observing, consulting, and thinking. Spielberger and Starr (1994) reported that curiosity as a personality trait influences the arousal of emotional states, which motivate approach or avoidance behavior. If learners perceive that they lack information, their curiosity will motivate them to learn new information by exploring their environments (Loewenstein 1994). Furthermore, curiosity is a key to learning and improves individuals' decision-making process. (Ravitz 1993; Smithson 1989; Stocking 1998). The information seeking or exploratory behaviors are motivated by curiosity (Day 1982; Fisher 2000). Kashdan, Rose and Fincham (2004) stated that highly curious people might be more responsive; and might be more likely to seek information and interaction with other learners. Learners with high levels of curiosity will put more effort into learning than those with low levels of curiosity. Curiosity might increase the levels of learning performance of the students (Reio & Wiswell 2000; Loewenstein 1994). Teachers, trainers, and professors may want to consider ways to develop curiosity among their students (Loewenstein 1994).

Tendency for lifelong learning is a prerequisite to have the lifelong learning attributions such as motivation, perseverance, regulating learning and curiosity. The Oxford English Dictionary defines "tendency" as "bent, leaning, inclined (towards, to …, to do)." Kilkku (2004) reported that tendency refers acts and movements that produce certain consequences. According to Rogers (1957) tendency is directional and a movement towards something and away from something else. Lifelong tendency is essential for the professional development of teachers and students who want to become lifelong learners. Bryce (2004) indicated that the teachers' attitudes and tendencies for lifelong learning is one of the factors that influence students' lifelong learning process. In this study lifelong learning tendencies including motivation, perseverance, regulating learning and curiosity mean acts and movements towards lifelong learning.

Prospective teachers' lifelong learning skills should be developed in their higher education. Professional development of teachers is one of the aspects of lifelong learning that means formal and informal continuous learning in their lives (Nicholls 2000). Brooks and Everett (2008) stated that higher education institutions can develop lifelong learning skills of the students. European University Association (EUA) has launched the first European Universities' Charter on Lifelong learning. The Charter includes 10 commitments on the development and implementation of lifelong learning strategies for universities:

- Embedding concepts of widening access and lifelong learning in their institutional strategies;
- Providing education and learning to a diversified student population;
- Adapting study programmes to ensure that they are designed to widen participation and attract returning adult learners;
- Providing appropriate guidance and counseling services;
- Recognizing prior learning;
- Embracing lifelong learning in quality culture;
- Strengthening the relationship between research, teaching and innovation in a perspective of lifelong learning;
- Consolidating reforms to promote a flexible and creative learning environment for all students;
- Developing partnerships at local, regional, national and international level to provide attractive and relevant programmes;
- Acting as role models of lifelong learning institutions (European University Association 2008).

Universities which have teacher education programmes must develop their students' lifelong learning strategies in line with the 10 commitments of the European Universities' Charter on lifelong learning. Also, the lifelong learning goals of Bologna process can be reached when the teacher and prospective teachers have positive attitudes and tendency toward lifelong learning in their university education term. Holdon (2010) showed that university students have positive attitudes towards lifelong learning. Also, the results of the study indicated that students reported that lifelong learning is necessary for their individual and professional development in their lives.

Turkey who aims to be a candidate of the European Union participated in the Bologna Process in 2001 at the end of the meeting held in Prague (European University Association 2008). Turkey has been making some legal changes and regulations in higher education system for the Bologna Process. The teacher education programmes conducted in the educational faculties in her higher education system in Turkey have been arranged according to the principles and standards of the Bologna Process. The teacher education programmes in the faculties of education in Turkey have to include lifelong learning and provide the prospective teachers with lifelong learning opportunities in the line with the requirements of the Bologna Process and European Universities' Charter on Lifelong learning. Now, it is expected that the prospective teachers in faculties of education will have lifelong learning skills and tendencies for their personal and professional development as a result of the Bologna Process. What are the lifelong learning tendencies of the prospective teachers? Is there a significant difference between female and male prospective teachers' lifelong

learning tendencies? Do the lifelong learning tendencies of the prospective teachers differ according to their departments?

The aim of this study was to investigate the lifelong learning tendencies of the prospective teachers in Turkey in the light of Bologna Process. Also, the results of the study will contribute to the evaluation of the effectiveness of the Bologna Process in the lifelong learning tendencies of the teacher education programmes in Turkey.

Method

Participants

The participants of the study were 210 fourth grade prospective teachers in the faculty of education in a university located in a city having a population about one hundred thousand in the north of Turkey. The sampling consists of 71 % females, 62% males. Also, 31% of the sampling comes from the department of classroom teachers, 20% comes from the department of social studies, 27.1% comes from the department of Science and 21.4% comes from the department of mathematics. The ages mean score of participants is 21.94, the standard deviation score of them is 2.02.

Data collection

The Lifelong Tendency Scale (LLTS) developed by Diker and Demirel (2010) was used to assess the lifelong tendencies of university students in Turkey. The scale contains 4 factors with 27 items: motivation (6 items), perseverance (6 items), lack of regulation learning (6 items) and lack of curiosity (9 items). The Cronbach alpha internal consistency coefficient of the scale for reliability is .89. The responses to the scale items were of the Likert type format. The possible responses ranged from 1 *(very suitable)* to 6 *(not suitable)*. In the general average of the scale, the minimum score was (27x1) 27, mid score was (27x3.5) 94.5, and the maximum score was (27x6) 162.

Data analysis

The mean (M) and standard deviation (SD) scores of the data were calculated to determine the lifelong learning tendencies of the prospective teachers. Independent t test was conducted to examine gender difference. Finally, OneWay ANOVA was conducted to examine if participants' responses differed according to their department.

Results

The findings of the study are shown below:

Research Question 1. What are the lifelong learning tendencies of the prospective teachers?

Table 1. Means and standard deviations of the prospective teachers' lifelong learning tendencies.

Sub-dimensions	Mean (M)	Standard Deviations (SD)
Motivation	30.46	3.46
Perseverance	27.44	6.29
Regulating learning	29.60	5.13
Curiosity	41.72	7.88
Total	129.22	16.42

Notes: Motivation Min 6≤30.46≤ Max 36; Perseverance Min 6≤ 27.44≤Max 36; Lack of regulation learning Min 6≤12.51≤ Max 36; Lack of curiosity Min 9≤21.73≤ Max 54; Total Min 27≤92.16≤ Max 162

The results in Table 1 showed that the mean scores of the prospective teachers on motivation (M = 30.46, SD = 3.46), perseverance (M = 27.44, SD = 6.29), regulation learning (M = 29.60, SD= 5.13) and curiosity (M = 41.72, SD = 7.88) were high. These results indicated that the lifelong learning tendencies of the prospective teachers were positive and high.

Research Question 2. Is there a significant difference between female and male prospective teachers' lifelong learning tendencies?

Table 2. The t-test results for gender of the prospective teachers

	Female Mean (SD)	Male Mean (SD)	t value	p
Motivation	30.39 (3.42)	30.62(3.60)	.43	.66
Perseverance	27.51 (6.85)	27.29 (4.70)	.22	.82
Regulating learning	29.76 (5.17)	29.21 (5.07)	.70	.48
Curiosity	41.42 (7.61)	40.01 (8.33)	2.02*	.04
Total	129.08 (23.05)	127.13 (21.07)	1.18	.23

*p< .05

The results in Table 2 showed that there are no statistically significant differences between male and female the prospective teachers' lifelong learning tendencies for motivation (t =.43, p =.66), perseverance (t =.22, p =.82), regulating learning (t =.70, p =.48). However, there is a statiscally significant difference between male and female prospective teachers' curiosity (t

=2.02, p =.04). The female prospective teachers were more curious than the male prospective teachers. These results indicated that the effect of gender on lifelong learning tendencies of the prospective teacher was not important.

Research Question 3. Do the lifelong learning tendencies of the prospective teachers differ according to their departments?

Table 3. OneWay ANOVA results for the department of the prospective teachers

		Sum of Squares	df	Mean Squares	F	p
Motivation	Between Groups	50.746	3	16.915	1.41	.240
	Within Groups	2465.449	206	11968		
	Total	2516.195	209			
Perseverance	Between Groups	155.456	3	51.819	1.31	.271
	Within Groups	8122.468	206	39.419		
	Total	877.924	209			
Regulating learning	Between Groups	66.172	3	22.057	.83	.477
	Within Groups	5452.024	206	26.466		
	Total	5518.195	209			
Curiosity	Between Groups	215.491	3	71.830	1.15	.327
	Within Groups	12774.037	206	62.010		
	Total	12989.529	209			
Total	Between Groups	373.576	3	124.532	.45	.712
	Within Groups	56027.018	206	271.976		
	Total	56400.614	209			

*p< .05

The OneWay ANOVA results in Table 3 showed that there were no statistically significant differences between the prospective teachers' lifelong learning tendencies for motivation (F=1.41, p=.240), perseverance (F=1.31, p=.271), regulating learning (F=.83, p=.477) and curiosity (F=1.15, p=.327). The results indicated that the effect of department on lifelong learning of the prospective teachers was not important.

Discussion

The results of the study showed that the lifelong learning tendencies of the prospective teachers were positive and high. According to the findings of the study, the prospective teachers have motivation, perseverance, regulating learning and curiosity which are important factors for lifelong learning tendencies. The findings of the study indicated that the prospective teachers have motivation for lifelong learning. Personal and professional development needs for teachers are one of the important motivation factors for lifelong

learning (McCombs and Whistler 1989). The prospective teachers' motivation for learning might positively affect their personal and professional development in the future. Teachers have to improve intrinsic motivation skills of their students (Slavin 2003). Furthermore the prospective teachers who have positive motivation for lifelong learning might motivate their students for learning a subject. The prospective teachers with motivation skills will build up their students' intrinsic motivation which is important for students to get new skills in their lifelong learning process. Moreover the prospective teachers will increase learning performance of their students when they have high motivation beliefs. Demir (2011) pointed out that the motivation level of teachers is a significant predictor of class attendance performance which is correlated with academic achievement of students. In order to improve the level of motivation beliefs and skills of students, teachers should control their motivation and should be a model to sustain their motivation in teaching and learning process. Bryce (2004) indicated that teachers must be models for their students by controlling their motivation and attitudes in lifelong learning.

The results showed that the prospective teachers have perseverance for lifelong learning. Caroll (1963) implied that perseverance positively affects the learning outcomes of students. Also, the literature showed that perseverance correlates strongly with learning performance of students (Amini, Dehghani, Kojuri, Malbudi, Bazrafkan, Saber, Karimian and Ardekain 2008). Perseverance of the prospective teachers will positively affect the learning of their students. The results showed that prospective teachers will voluntarily spend time for their personal and professional development in lifelong learning process.

According to the findings of the study, the prospective teachers' tendencies of regulating learning are positive and high. Nicholls (2000) pointed out that regulation of learning is essential for lifelong learning. Self-regulated learners are active and direct their learning towards their goals (Schunk and Zimmerman 2003). Lifelong learners have to be self-regulated learners by setting learning goals, monitoring and evaluating their learning performance. There are many studies investigating self-regulated learning of prospective teachers (Arsal 2010; Hayon and Tillema 1999; Ommundson, Haugen and Lund 2005; Tylor and Corrigan 2005). These studies demonstrated that self-regulation skills of the prospective teachers can be developed by planning and providing students with self-regulated learning experiences. The results indicated that the prospective teachers who are self-regulated learners will develop both their learning and teaching quality and students' learning performance by monitoring, controlling and evaluating their learning process. The prospective teachers will have positive and high self-regulated learning tendencies for their professional development.

The findings of the study showed that the prospective teachers have curiosity for lifelong learning. The prospective teachers who have learning curiosity are able to motivate themselves to learn in their lives by themselves. Teachers have to develop their students'

curiosity (Slavin, 2003). Arnono (2003) explained that teachers can develop their students' curiosity for learning by guiding learning experiences. Also, they can prompt their curiosity students to increase their by modeling. The results indicated that the prospective teacher will increase curiosity of their students in lifelong learning process.

The results of the study are consistent with the lifelong learning goals of the Bologna Process aimed at establishing the European Higher Education Area. In addition, the findings of this study indicated that the regulations and changes of education faculties relating to the Bologna process are positive. The National Report on the Bologna Process in Turkey (2007-2009) implied that Turkey has made significant progress and developed its implementations of Bologna Process since 2007 (European Higher Education Area 2010b).

The results suggested that the prospective teachers' experiences in the teacher education might positively affect their lifelong learning tendencies. Harpe and Radloff (2000) pointed out that learning experiences, content and evaluations in a school curriculum have to develop the skills of lifelong learning. Mayhew, Wolniak and Pascarella (2007) stated that educational experiences in a programme might improve lifelong learning skills and tendencies of learners. Although there is no course called lifelong learning in teacher education programme in Turkey. The experiences of the prospective teachers in the pedagogical courses such as educational science, educational psychology and curriculum development might have contributed to lifelong learning skills of the prospective teachers. In the light of the results of the study, there is no need to make regulations on the teacher education programme in Turkey in terms of lifelong learning. However, this study is limited to lifelong tendencies of the prospective teachers. All of the lifelong learning skills of the prospective teachers should be investigated in order to evaluate the effects the Bologna Process' arrangements on the goal of lifelong learning of the Bologna Process in higher education system in Turkey. The results of studies on lifelong learning skills of teachers and prospective teachers will contribute to the evaluation of the goals of Bologna Process in Turkey.

The results of study showed that the effects of gender and department factors on lifelong learning were not important. The courses in the teacher education programmes in Turkey differed from one educational department to another but the courses on pedagogy in the teacher education programme were not different in terms of the department of education (Kavak, Aydın and Akbaba 2007). The experiences of the prospective teachers in the pedagogical courses in the teacher education programme will affect the lifelong learning tendencies of the prospective teachers in a same way.

Conclusion

The study showed in the light of the Bologna Process in Turkey, that the lifelong learning tendencies of the prospective teachers were positive and high. Also the results demonstrated that the effects of gender and department of prospective teachers on the lifelong learning were not significant. The sampling of the study was limited to the prospective teachers in the faculty of education, the lifelong learning tendencies and skills of in-service teachers should also be investigated. Moreover, lifelong learning tendencies and skills of prospective and in-service teachers from different European countries should be investigated in order to evaluate the effectiveness of Bologna Process on lifelong learning.

References

Amini, M., M.R. Dehghani, J. Kojuri, A. Malbudi, L. Bazrafkan, M. Saber, Z. Karimian, G.S. Ardekain. 2008. A Qualitative Study of Factors Associated with Medical Students' Academic Success. *Journal of Social Sciences* 4, no.4: 347-351.

Arnone, M. 2003. Using instructional design strategies to foster curiosity, *ERIC Digest,* 3–4.

Arsal, Z. 2010. The effects of diaries on self-regulation strategies of pre-service science teachers. *International Journal of Environmental & Science Education* 3, no.3: 85-103.

Berlyne, D. E. 1960. *Conflict, arousal, and curiosity.* New York: McGraw-Hill.

Boekaerts, M. 1999. Self-regulated learning: where we are today. *International Journal of Educational Research* 31, no.6: 450-453.

Brooks, R.and G. Everett. 2008. The impact of higher education on lifelong learning. *International Journal of Lifelong Education* 27, no.3: 239–254.

Bryce, J. 2004. Different ways that secondary schools orient to lifelong learning. *Educational Studies* 30, no.1: 53-64.

Candy, P. 1991. *Self-direction for lifelong learning: A comprehensive guide to theory and practice.* San Francisco: Jossey-Bass.

Caroll, J.B. 1963. A model of school learning. *Teachers College Record* 64: 723-733.

Commision of the European Communities. 2000. *A Memorandum on Lifelong Learning. 30 October 2000*. Brussels: Commission of the European Communities.

Day, H. I. 1982. Curiosity and the interested explorer. *Performance and Instruction* 21: 19-22.

Dehmel, A. 2006. Making a European area of lifelong learning a reality? Some critical reflections on the European Union's lifelong learning policies. *Comparative Education* 42, no.1: 49-62.

Demir, K. 2011. Teachers' intrinsic and extrinsic motivation as predictors of student engagement. *e-Journal of New World Sciences Academy Education Sciences* 6, no.2: 1397-1409.

Derrick, M.G. 2003. Creating Environments Conducive for Lifelong Learning, *New Directions for Adult and Continuing Education* 100: 5-18.

Diker C.Y. and M. Demirel. 2010. Lifelong learning tendency scale: the study of validity and reliability. *Procedia Social and Behavioral Sciences* 5: 2343–2350.

Eggen, P. and D. Kauchak 1994. *Educational Psychology.* New York: Macmillan College Publish.

EURDICE. 2010. *Focus on Higher Education in Europe 2010: The impact of the Bologna process.* Brussels: Education, Audiovisual and Culture Executive Agency.

European Higher Education Area. 2010a. *History:* http://www.ehea.info/articledetails.aspx?ArticleId=3

European Higher Education Area. 2010b. *Bologna Process template for national reports: 2007-2009.* http://www.ehea.info/Uploads/Documents/National_Report_Turkey_2009.pdf

European University Association. 2008. European Universities' Charter on Lifelong Learning.http://www.eua.be/Home.aspxhttp://ec.europa.eu/education/higher-education/doc1290_en.htm

Harpe, B. and A. Radloff. 2000. Informed Teachers and Learners: The importance of assessing the characteristics. *Studies in Continuing Education* 22, no.2:169-182.

Hayon, L. K., and H. Tillema. 1999. Self-regulated learning in the context of teacher education. *Teaching and Teacher Education* 15, no.5: 520-521.

Holdon, I. 2010. Science Literacy and Lifelong Learning in the Classroom: A Measure of Attitudes among University Students. *Journal of Library Administration* 50: 265–282,

Fisher, K. 2000. Curiouser and curiouser: The virtue of wonder. *Journal of Education* 182: 87–96.

Kashdan, T.B. and M. Yuen. 2007. Whether highly curious students thrive academically depends on perceptions about the school learning environment: A study of Hong Kong adolescents. *Motivational Emotion* 31: 260–270.

Kashdan, T. B., Rose, P. and F. D. Fincham. 2004. Curiosity and exploration: Facilitating positive subjective experiences and personal growth opportunities. *Journal of Personality Assessment* 82: 291–305.

Kavak, Y., A. Aydın, S. Akbaba. 2007. *Yüksek Öğretim Kurumu: Öğretmen Yetiştirme ve Eğitim Fakülteleri.* Ankara: Meteksan Yayınları.

Kilkku, V. 2004. The significant of tendencies and intentions in the moral philosophy of J.S. Mill. *Utilttas* 16, no. 1: 80-95.

Knapper, C., and A.J. Cropley. 2000. *Lifelong learning in higher education.* London: Kogan Page.

Leonard, N.H. 2007. The trait of curiosity as a predictor of emotional intelligence. *Journal of Applied Social Psychology* 37, no.8: 1914-1929.

Livneh, C.H. 1999. Continuing professional education among educators: Predictors of participation in learning activities. *Adult Education Quarterly* 49: 91-106.

Loewenstein, G. 1994. The psychology of curiosity: A review and reinterpretation. *Psychological Bulletin* 116:75-98.

Mayhew, M.; Wolniak,G.C. and E.T: Pascarella. 2007. How Educational Practices Affect the Development. *Research Higher Education* 49: 337–356

McCombs, B.L. 1991. Motivation and lifelong learning. *Educational Psychology* 26, no.2: 117-127.

McCombs, B.L. and J.S. Whistler. 1989. The role of affective variables in autonomous learning. *Educational Psychologist* 24: 277–306.

Nicholls, G. 2000. Professional development, teaching, and lifelong learning: the implications for higher education. *International Journal of Lifelong Education* 19, no.4: 370-377.

Ommundson, Y., R. Haugen, and T. Lund. 2005. Academic self-concept, implicit theories of ability, and self-regulation strategies. *Scandinavian Journal of Educational Research* 49, no.5: 461-474.

Peck, B.T. 1996. European lifelong learning initiatives. *Phi Delta Kappan* 77, no.9: 645–647.

Pintrich, P. 1999. The role of motivation in promoting and sustaining self-regulated learning. *International Journal of Educational Research* 31, no.6: 459-470.

Pintrich, P. 2000. The role of goal orientation in self-regulated learning. In *Handbook of self-regulation,* ed. M. Boekaerts, P. Pintrich, and M. Zeidner, 451–502. San Diego: Academic Press.

Ravitz, J. 1993. The sin of ignorance: Ignorance of ignorance. *Knowledge: Creation, Diffusion, Utilization* 15:157–165.

Reio, T. G., Jr., and A.K. Wiswell. 2000. Field investigation of the relationship between adult curiosity, workplace learning and job performance. *Human Resource Development Quarterly* 11:1-36.

Rogers, C. R. 1957. The necessary and sufficient conditions of therapeutic personality change. *Journal of Consulting Psychology* 21, no.2: 95–103.

Schunk, D. and B.J. Zimmerman. 2003. Self-regulation and learning. In *Handbook of Psychology Volume 7*, ed. W.M. Reynolds and G. Miller, 59-78. John Wiley & Sons, Inc.

Slavin, R.E. 2003. *Educational Psychology.* 7th ed. Boston: Pearson Education Inc.

Smithson, M. 1989. *Ignorance and uncertainty: Emerging paradigms*. New York: Springer-Verlag.

Spielberger, C. D. and L.M. Starr. 1994. Curiosity and exploratory behavior. In *Motivation: Theory and research*, ed. H. F. O'Neil and M. Drillings, 221-243. NJ: Hillsdale Erlbaum.

Stocking, S. M. 1998. On drawing attention to ignorance. *Science Communication* 20: 165–178.

Taylor, N., and G. Corrigan. 2005. Empowerment and confidence: Pre-service teachers learning to teach science through a program of self-regulated learning. *Canadian Journal of Science, Mathematics and Technology Education* 5, no.1: 41-60.

Zimmerman, B. J. 1986. Development of self-regulated learning: Which are the key sub processes? *Contemporary Educational Psychology* 16: 307-313.

Zimmerman, B. J. 1994. Dimensions of academic self-regulation: A conceptual framework for education. In *Self-regulation of learning and performance: Issues and educational applications,* ed. D. H. Schunk and B. J. Zimmerman, 3–21. NJ: Hillsdale, Lawrence Erlbaum.

Zimmerman, B. J. 2000. Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology* 25, no.1: 83-89.NIVERSITIES'

Historical Experience of Teacher Education in Latvia: Pedagogical Heritage of Ludvigs Ernests Bērziņš (1870-1965)

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Abstract

At present teacher education in Latvia is implemented both at the universities and pedagogical higher educational institutions. The historical experience of teacher education is rich in the 20-30s of the 20th century when teacher education institutes operated in Riga, Jelgava, Rezekne and Daugavpils.
One of the most prominent personalities is the teacher of teachers Ludis Bērziņš who worked in three directions: the founder and director of Riga Teacher institute (RTI), professor of the University of Latvia (UL), the author of text books. The study actualizes the ideas gained in the life activity of L. Bērziņš; it reveals his pedagogical heritage which is useful to the future teachers and their educators: democratic, respectful management using the potential of every member of the team in the teaching and educational work; the ideas about positive environment as the facilitator of the sense of belonging in the educational institution; the development of text books for schools that are based on serious scientific studies and the requirement to promote the formation of a cultural personality; the importance of the personal model both with the visual image and the pedagogical strategies in the education of the future teachers.
The study employs the documents from the Latvia State History archive that have been little used so far, the materials of the L. Bērziņš memorial room of the Museum of Pedagogy, University of Latvia, the memories of the graduates from Riga Teacher institute as well as the memories of students and colleagues from the University of Latvia.
Keywords: teacher education, pedagogical heritage, Ludvigs Ernests Bērziņš

Pedagogical heritage of L. Bērziņš at Riga Teacher institute

L. Bērziņš, pedagogue, theologian, folklore specialist, literature scientist and poet had attended Dzukste parish school and Irlava Teacher seminary. He continued his education in Terbata University. He has worked outside Latvia as the teacher and the Latvian's priest. In 1909 he founded Dubulti gymnasium and in 1918 – science based secondary school at Limbazi. Since the establishment of Riga Teacher institute L. Bērziņš has been its director

(1922-1934), the assistant professor and later professor in University of Latvia (1922-1944). L. Bērziņš is the holder of the order Three Stars; he has been awarded with the award of the Fatherland and Humboldt medal and he has received Krisjanis Barons prize five times. L. Bērziņš emigrated to Germany in 1944, and in 1950 – to the USA where he actively worked in the field of culture and education. He died in 1965 in Denver and was reburied in 1997 in Dzukste. (Kaļķe 2001)

As the teacher of teachers Ludis Bērziņš worked in three directions:

- The founder and director of Riga Teacher institute,
- The professor at the University of Latvia,
- The author of text books.

The pedagogical heritage left by L. Bērziņš is rich. He started accumulating it when he himself was the students at Irlava Teacher seminary and continued when working at schools both as a teacher and the director. He handed down his experience to the students of Riga Teacher institute which he had founded in 1922 and directed its work for 12 years. “I worked in this institute for 12 years and during my time close to a thousand teachers have graduated it. A significant fact was that in the six classes of the institute there was one of our children among the students in each of them,” (Atmiņu gaismā 1990, 414/ In the light of memories/), therefore girls named the director our Father, boys – Dūcis (an angry man), because he looked like that when he was angry.

The image, spirit and ‘face’ of the institution largely depended on the personality of its director therefore 12 years which L. Bērziņš lived in RTI actually were spent under his sign.

The first two lines of the Latvian folk song that are inwrought in the flag of RTI

“I went along the edge of the forest.
Sowing the clover,
I wanted the land of the forest
Make beautiful”.

reflect those ideals and aims that were aspired by L. Bērziņš and his institute – to put into the world of education and culture every student. In 1926 the students were the initiators of the idea about the necessity of the flag. “The sketch for weaving the flag was prepared by Junge Emīls and Gailis Jānis under the supervision of the artist J.Saukums. The final design of the flag was prepared by girls under the guidance of the teacher L. Oškalne. J.Līnis made the flagstaff, the necessary strings and the golden fringes of the flag were bought in the shops.” (Baumanis) Next day after the flag had been presented at the graduation party on June 19, 1926, the graduates and 215 students of RTI – the participants of the choir followed the

presented flag, which for the first time led everyone in the parade to the VI General Song Festival in Esplanade.

This year also came with the introduction of school caps. It had “the form of the students’ cap; it was dark green with red and white edges and a golden stripe around the bottom of the cap. The bottom of the cap had stylized golden letters RTI. To differentiate the cap from students’ uniforms, the school administration attached a small fir branch in red- white-red colors and small stars on the left side of the caps. The senior students “lost” their fir branches. The school administration “did not notice” that they were missing.” (Baumanis) These signs of distinction formed the sense of belonging to the institute.

Over the years RTI acquires 3 houses – “quarters” in the territory of Hospital Nr. 2 in Pilsonu street 13 - the wooden houses in the form of letter E, with tarpaper roof and firewood heating. The entrance to the institute was through the gates next to the mortuary of the city. Jānis Dāvidsons, one of the graduates, wrote: “It is a sad background to the green tree of hope, which serves as a comparison for the student of the institute wearing the green cap and having good intentions and bright hopes in his heart. At the same time it is a memento – remember, the young man, the life is short therefore use purposefully every moment of your life!” (Dāvidsons 1995) The institute has its boarding house in Talsu street and model school. Until 1931/32 the studies at the institute last for five years, later- six years.

What can we today take as useful from the experience of L. Bērziņš as the director of the institute and a teacher? Firstly, the idea which had been implemented in practice that the future teacher without practice is incompetent therefore in the year the institute was founded, the resource (pilot) primary school was opened as well; it was housed in the premises of the institute. In the academic year 1926/1927 it was a full cycle six-year school with 149 learners. Four teachers and some 16 teaching staff of the institute taught at this school to link the theoretical knowledge with practice in a very practical way.

The senior students observed the lessons. They also had to deliver 8 compulsory lessons- 2 in Mathematics, 2 in the Latvian language, 1 in science, 1 in Geography, 1 in History and 1 according to the student’s personal choice in another subject included in the curriculum of the basic school. Many graduates remember what the director of the institute L. Bērziņš had said: “The one who will not have the stage fright entering the class; he will come shaking out of the class.” (Atmiņu gaismā 1990, 414)

Lesson preparation and delivering went along the studies. “Such work of the undergraduates at the resource (pilot) school disturbs the peaceful run of the studies a bit and makes it colorful but the enthusiasm and serious preparation for the lessons that the students have to deliver fully compensate these interferences thus at the end the academic success of the learners in the resource (pilot) school do not suffer from the interference of students in the schooling process. Together with delivering the lessons, students have to participate actively in the educational process of the learners; they also have to be on duty at the model school

so in such a way the students have a chance to become familiar with the school life and be prepared for their future task," wrote M. Celms, the teacher of mathematics of this school who was also the author of the text book in geometry. (Rīgas Skolotāju institūts 1928, 20-21) The students corrected pupils' home assignments, organized different events, for instance, the senior students were fully responsible for preparing the Christmas party of the resource (pilot) school.

A significant and topical sphere of the leader of the educational institution nowadays is the formation of appositive environment. One of the essential aspects in the activities of L. Bērziņš was the initiating of several very bright traditions which promoted the sense of belonging to the institute. One of the traditions of RTI was a joint excursion for the staff of the institute and all the pupils of the pilot school. It is huge organizational work to arrange the transportation (the ship, train), to prepare sandwiches, which is done by the cooks of the institute, a well-thought run of the event. The staff of the institute remembers well the excursions to Ložmetējkalns, Dobele, Jūrmala, Sigulda, Ogre. The choir traditions were also supported. The RTI choir was big; most of the students were singing in it. The choir had concerts in Dzukste; they participated in opening the monument to the perished heroes in Ķemeri, in the burial of the President of the State Jānis Čakste, in Brethren Cemetery; it had also sung in the radio and conservatoire. The choir singers have greeted the presidents of Finland and Estonia. They had waited for a long time on the platform in Valka for the king of Sweden and did not meet him – his Majesty had fallen asleep and only through his dreams heard the Latvian song „Pūt, vējiņi!"/ Blow the Wind/.

Authority is something every leader needs. Ludis Bērziņš was a personality respected by students and teachers. If his call "Please, be calm!" sounded in the corridor then everyone became quiet. L. Bērziņš by nature was quick-tempered; sometimes he could act rashly and in such a case he always admitted his fault. (Zvaigžņu sega 1967/ The blanket of stars/) Thus once when the teacher of mathematics due to his illness failed to come, the girls class being joyful and a bit bored started a song with the "au" in its refrain, Ludis Bērziņš did not hear it well from his office, and entering the girls' classroom he asked to lead out the inspector's dog from the classroom. Girls said that they had not heard the dog's barking. When the misunderstanding was clarified, "Beware provoking the class!". If there is no decency then the teacher's situation might be threatened because a full class is smarter and more cunning than one person. At the same time do not be afraid to admit your fault in front of the class. If you will be humane in the eyes of your students that will only raise your authority. (Kalniņš 1965, 260) The teacher is powerless if the whole class stands against him. It should never be provoked. His daughter Irēne also learned in this class and she suffered the most because Ludis Bērziņš always wanted to emphasize his fair attitude to other pupils thus exercising exaggerated strictness to his own children.

L. Bērziņš as a director was consistent in his principle – to trust, to rely on his staff. It was possible because such great personalities as Fricis Adamovičs (geography), Longīns Ausējs (mathematics), Juris Plāķis (Lithuanian language), Pauls Stradiņš (hygiene), Pēteris Šmits (mythology), Jānis Endzelīns (Latvian grammar), Aleksandrs Dauge (pedagogy), Zenta Mauriņa (latvian literature) and others.taught at the institute for a shorter or longer period of time. Thanks to such staff of pedagogues: "We, the future teachers, were not afraid of the coming difficulties of the work. We were all inspired by the willingness to work and enthusiasm which we had received from our teachers." (Berga)

In order to become an authority it is not enough to have the talent of a good organizer and profound knowledge in some sphere; you have to understand the situation and to find the right words and actions. It can be learnt from L. Bērziņš. He led the morning prayers at the institute. His short speeches were not confessional achievements but the teaching of life and the discovery of cultural values which the students remembered for all their lives. "Two foundations dominated in this formation of the world: the folk songs and the Christian conviction and they both united in the urge for generosity and improving the life." (Atmiņu gaismā, 1990) Total silence had to reign in the hall during the morning prayer. L. Bērziņš paid attention to the issue of discipline also in his publicist articles. For instance, the article "The school and the discipline" which was read in the Teachers' congress in 1936 was published. He considered that "discipline is the bottom of the stairs which lead the man who is ascending it to personal and social culture." (Bērziņš 1936) Ensuring the discipline, according to L. Bērziņš, is the secret of the teacher's personality. The indifferent teacher will be least useful because children have subtle instinct and they feel whether for the teacher they are people with whom he is seeking contact or only bodies that take up certain place in the school and in the class register. Children forgive everything except indifference. The class looks absolutely different if the teacher has contact with the class and is sincere with the children. The teacher without discipline, especially the restless, who running after the guilty ones rushes from one side of the class to the other, actually is a tragic figure… but children perceive such a teacher as a comic figure. As a result both sides suffer: the teacher has turned into a martyr and the children have not received their part in the studies or in the formation of the character. "An organized life of the country cannot exist without discipline; also school that prepares for life cannot exist without discipline." (Bērziņš 1936)

L. Bērziņš with his simplicity, generosity and the true wisdom of life had won the hearts of all his students, and therefore it was even more unpleasant to receive his condemnation. The graduate of 1926 class Bernhards Kasars remembered how one of the students had organized "a party in his dwelling place which ended in heavy drinking. The party at Oškalns had long extended over the midnight and students had not returned to the barding house. The teacher on duty reported the director that several students were missing. The director did not go to bed but was on duty in the yard waiting for the "lost sons" to return. They started

to come and some of them were so jolly that they could not stand on their legs. The gates were locked and the fence was really high. “The sons” had to overcome a serious obstacle. It was hard to drag over the fence those who were unable to do it themselves. Some were pushing the feeble ones; the others on the other side were receiving them. When the overcoming of the hard obstacle was in full swing, the director came out of the shadow. They say that his voice reminded the rumble of the thunder but may be it only seemed like that to those who had sinned and did not hope to experience such surprise in the small hours of the day that the director himself after the fight with the green dragon will greet them.” (Kasars)

Ludis Bērziņš taught school management. This subject was taught in the graduating class. There were no books in this subject but the director when founding, running and working in schools in Jēkabpils, Dubulti, Limbaži, had accumulated considerable experience. The graduate Jānis Dāvidsons: from 1929 class remembers: “The material was vast – all about the school as a kind of a state: the school house, school as the place for pupils to stay, school as the working place for teachers, school as to its spirit, school on the whole as the sum of the teachers’, parents’ and pupils’ endeavors. (Dāvidsons 1995) L. Bērziņš in his articles, too, paid much attention to the relations of the family and school in education and maintained that the primary in this process was parents because ” it depends on you what will become of your child.” (Bērziņš 1948)

The lessons by L. Bērziņš in school management were the improvisation enriched by examples and different cases. There were also numbers and measurements – the norms. And around them living, interesting experience and practical advice. J. Dāvidsons recalled the following advice: “If you have to learn something about the school start with the toilets! If it is dirty and not cleaned up, if the walls are inscribed with bawdry – it is clear that the school administration does not perform its duties.” (Dāvidsons 1995) The director looked upon different issues in this course, like, organizing and running the pedagogical meetings, the teacher-parent meetings, committee meetings. And almost always he had some advice to share, e.g., if an angry mother or a furious father comes to the school, ask her or him to sit, do not talk standing; it is not only politeness but when sitting the person calms down.

One of the topics during the school management lessons was the boarding houses. The most important in the pedagogical sphere was to plan well the ways of spending the free time. The free time should be filled with sports activities, music, staging of songs and plays, working in the school garden. If the pupil is reasonably loaded, the time goes unnoticed and he does not get bored. Standing water becomes stagnant and also inactive, leisured pupil might start spoiling morally. In Sunday mornings L. Bērziņš regularly visited students who lived in the boarding house and each of students had to him a letter addressed to the parents.

During the school management lessons L. Bērziņš talked much about school staff as the co-educators. Already more than 80 years ago he had been thinking about team work that only

with common effort you can achieve the aim, the expected results. Pupils have to feel the respect not only towards their teachers but also the other staff of the school. On the other hand, the employees of the school have to be aware that they are part of the school and that school is the cultural institution. All have to be mutually polite. L. Bērziņš educated with his personal example – he always addressed one of the oldest attendants of the institute as Gailīškundze /Madame Gailitis/ and consequently all students addressed her in the same way. L. Bērziņš used to say to the future teachers that it was not important who was doing what but how he was doing it.

The school life cannot be separated from what is happening outside the school. L. Bērziņš has said: "We will not permit that pupils absent-mindedly succumb to each insignificant impact from the outside but where the outside impacts could be used and offer experience and suggestions for theoretical ideas there we should not be pedantic and the distribution of lessons sometimes allows sensible freedom." (Kalniņš 1995, 209) When the airplane Zeppelin like a huge cigar is moving towards the Daugava river, all those at the institute are looking out of the window.

The teachers in the instate run by L. Bērziņš were sitting at an ordinary table together with the class and not behind the high desk in front of the class.

The election into the post of the director of RTI which happened by accident gave a possibility for the L. Bērziņš' talent of the teacher to be expressed in full.

The studies by Ludis Bērziņš and the text books- the help for teachers and pupils

An essential part of every person's pedagogical heritage is his scientific studies as well as developed or compiled study materials. Also in this aspect Ludis Bērziņš has left rich and still not fully studied and appreciated heritage which nowadays scientists, methodologists, book authors, teachers, students and pupils find useful.

The aim of this subchapter is to provide insight into L. Bērziņš' scientific and pedagogical activities.

L. Bērziņš had performed studies in several fields: literature science, linguistics, pedagogy, methods. His contributions to the literature science are more widely known in science.

Ludis Bērziņš is one of the first historians of literature who had studied the beginnings of Latvian religious and secular literature with great love and diligence. The literature scientist J. Bičolis admits that when doing the scientific work Ludis Bērziņš always kept in mind the practical aims: to help others understand the old poetry and to try as much as possible to bring back to life its traditions in modern life. He used also new research methods to be able to do that. When studying the cultural and historical activities of the authors belonging to the oldest stage of the history of Latvian literature Ludis Bērziņš used the biographical and philological method thus revealing the uniqueness of each representative of old Latvian

literature in the history of Latvian literature. His studies and essays prove that the author is very knowledgeable; they show that he had broad knowledge of theology, folklore, philology and historical facts. It is significant that he looks upon the development process of literature in its wholeness at the same time preserving the link with the past of the nation and pointing out particular personalities.

L. Bērziņš is one of the first researchers who has tried to evaluate objectively the written language of old Latvians and has been able to see the special importance of the authors who had written at this stage of the history in the development of the written Latvian language. The turning of the scientist to several significant workers in culture of the 17th century – G. Mancel, K. Fureker (1926), E. Glik (1935) - to a certain extent is connected with the fact that the kinship of theological and professional opinions bind together the researcher and the object of the study. Ludis Bērziņš admits that the Lutheran priest G. Mancel has been "a man who has advanced the development of the Latvian literature far beyond the rather feeble attempts of the 16th century and besides has been able to demonstrate the power of the expression and colorfulness of the Latvian language in a rather well-finished style of prose" (Rūķe – Draviņa 1967: 189); K. Fureker, in his turn, had been especially close mentally to L. Bērziņš and his influence can be felt also in his poetry, "has become the founder of our poetry of art and the greatest Latvian sacred bard" (Bērziņš 1935, 2.sēj.: 52) because "none of the activists of older times has so fully absorbed into himself the spirit of the Latvian nation as he, none also has influenced the Latvian soul with his talent so much as he" (LVVA, 7427.f., 13.apr., 178.l., 77.lp.).

Thorough, continuous work and love to the theme under the study characterize L. Bērziņš as a researcher. It is best approved by the assessment of professor Pēteris Šmits on January 20, 1929 about L. Bērziņš' monograph dedicated to K. Fureker: "On my part I can admit that nobody could compile such a monograph about k. Fureker as it was done by L. Bērziņš who had devoted to this study log years of work. My conviction is that such an article deserves the corresponding award." (LVVA, 7427.f., 13.apr., 178.l., 77.lp.) Also professor Jānis Endzelīns in his review on the suggestion to award the doctor's degree *honoris causa* in Balts' philology assesses his contribution in the following way: "The author consistently bases his work on primary sources and shows that he knows the literature of the respective field and has collected not only rich and partly new material but has also deepened the understanding of the poetry and literature of our nation." (LVVA, 7427.f., 13.apr., 178.l., 99., 100. lp.). It should be mentioned that when doing his studies L. Bērziņš has purposefully gathered information about all the available biographical news about the writer, has thoroughly assessed the works as well as has described both the author's language and the contribution in the development of the Latvian written language therefore his works can be successfully used nowadays both in the study process and at school to habituate pupils and

students to understand what a thorough, continuous and careful study that is based on the primary sources means.

The broad knowledge of the world culture and literature that L. Bērziņš possesses is best revealed in the significant study – the essay about the "Non-German Opica" by the priest of Dundaga Jāņis Višmanis which as regards its content can be considered the first theoretical work in Latvian poesy. L. Bērziņš sets the following objective for his essay: "To provide characteristic excerpts from the "Non-German Opica" with the necessary remarks as well as the overview on the relations between this book and the cultural life of that time" (Bērziņš 1925: 3). The scientist not only gives comments on and assesses the poesy of J. Višmanis but also compares the ideas expressed in this work with the trends in Western Europe at that time. L. Bērziņš' interest about "Non-German Opica" was caused by J. Višmanis indication that the Opica honor show go to K. Fureker.

Studying the old Latvians written language L. Bērziņš paid special attention to the importance of Old Stender, the enlightener of the 18th century, in developing the Latvian written language and his in-depth activities in the field of literature. The German writer and philosopher, the enlightener J. G. Herder has also earned L. Bērziņš' attention and respect (Bērziņš 1927). We can find interesting ideas in the essay "Latvian folk poetry in the age of Stender and Herder", where he compares the contribution of Old Stender and Johannes Gotfrid fon Herder in the development of the Latvian written language. L. Bērziņš has indicated that the Latvian language by nature is very stable and therefore in different times of age that are important for the nation we should not lose the thread of the language unit which links the nation both in earlier and later times. This would be the continuity that would give a possibility to the young people also nowadays to become aware of the diversity of their mother tongue in connection with the present culture. Today the statement of L. Bērziņš about the stability of the language and the necessity to preserve the sense of one's roots and to develop the language is important also today and it relates to his studies in the literature science, namely, the idea about the continuity of the development of literature, the close links between the language and literature. Like the activists of the national awakening L. Bērziņš, too, supports the idea about the nursing, polishing, respecting of one's language. Everyone should remember the wise thought expressed by the researcher about the importance of one's language: "Language is the unity bond of our nation and the consummate face of the language- our joint honor." (Bērziņš, Dravnieks 1932)

Professor L. Bērziņš has approvingly assessed the first Latvian poet Neredzīgo Indriķi /the Blind Indriķis/ considering that "a poet is the commemorative stone on the road of the nation's life" (Bērziņš 1979) because he "towers above the peers of his time and fate in the darkness of the ancient times and despite his own "sorrowful situation and the lack of sight" develops better than any of the Latvians who is able to see. Indriķis also now serves as a good incentive not to surrender to the conditions but to overcome these circumstances." In

spring 1898 “having followed the scent of Neredzīgais Indriķis in Apriķi, in 1900 L. Bērziņš publishes the first essay about the blind bard. He follows the formation of the personality of Neredzīgais Indriķis with affinity and respect, he expresses approving words to the patron and supporter of Neredzīgais Indriķis, one of the brightest priests of Kurzeme Elverfeld, assesses and analyzes the poetry and songs by Neredzīgais Indriķis and includes his songs from different sources in his essay. The second, recurrent enlarged edition of the essay was published in 1979 in exile and it is so far the most comprehensive and complete essay about Neredzīgais Indriķis which is still used in the study process and in the biographical studies about Neredzīgais Indriķis in the history of literature.

L. Bērziņš has also turned to such personalities of the national awakening as Jānis Ruģēns, Ansis Līventāls, Ernests Dinsberģis, Jānis Cimze, Juris Alunāns and others and tried to single out their uniqueness and importance in the history of Latvian culture and literature. The contemporary assessment of the contribution of these personalities also respects the studies of professor L. Bērziņš.

L. Bērziņš has always highly honored the teacher of his local Dzukste school Ansis Lerhe - Puškaitis about whom he had published articles in press and the lecturer of Terbata University J. Lautenbahs - Jūsmiņš, highly appreciating his attempts to renew the archaic epos. His work „Lautenbaha dzejas darbs „Niedrīšu Vidvuds jeb varenu vīru darbi Latvijas senatnē” (1891) is a whole corn-bin in the transformation of the national spirit” and in order to assess it one needs the knowledge of the scientist, folklorist, the researcher of the national songs thus declaring a comprehensive and scientific evaluation of the Latvian literary heritage.

One of the most important works of L. Bērziņš in literature science is the “History of the Latvian literature” (1-6, 1935-1937) under his editorship on which he worked together with a prominent group of the authors of the humanitarian sciences K. Kārkliņš, K. Egle, Z. Mauriņa and which offers a comprehensive assessment of literature in the historical development at the same time preserving the view based in L. Bērziņš’ personality about the personalities as the creator of the mental life. The editorial board points out that “the work pays much attention to the times and tendencies, the trends of mental development and the century old ideas that are present in the works of the most powerful writers of one or another time period and at the same time shows their individuality” (Latv.lit.vēst.I burtnīca 1935). L. Bērziņš was the chief editor of the “History of the Latvian Literature” and this is the first work of such scope in the history of Latvian humanitarian sciences. It should be mentioned that this history of the literature in six volumes which was published during the times of Independent Latvia (1935-1937) and which looks upon the history of literature in a broad scientifically profound and well-grounded approach to the writers and their works is still a rich source of information for every researcher of the history of literature, the teacher in planning and organizing the

literature lessons, the authors of the literature text books, students and pupils in their studies of the history of literature.

Besides the already mentioned merits the professor's literature and scientific activities include the following aspects: L. Bērziņš has worked on literature reviews, essays about the beginnings of poetry (1925), published articles in press („Latviešu Avīzēs", „Austrumā", „Brīvā Zeme", „Izglītības Ministrijas Mēnešraksts", „Audzinātājs") about different Latvian and foreign authors (A. Lerhs - Puškaitis, K. Barons, Apsīšu Jēkabs a.o..),, the essays about Homer's "Odyssey" (1894), "Theory of Latvian literature (1892) by J. Kalniņš, "History of Latvian literature for secondary schools part I, II"(1925, 1926) by V. Plūdonis, "Chrestomathy of oldest Latvian literature for secondary schools" (1933) by J. Bičolis, "Fairy tales and legends"(1925) by P. Šmits, the play "The New Teacher" (1896) by Zeiboltu Jēkabs, the novel by A. Niedra "The Land" (1903), poetry E. Stērste by (1935), E. Virza as the artist of poetry (1936) , about the style in poetry (1936), about the translations of dramas by world's classics (1936), about the trends in poetry by J. Sudrabkalns (1937), about K. Biezbārdis and Latvian folk poetry (1937), about the style in poetry (1946), etc.; he has delivered lectures on Old Stenders as the linguist (1895), he has presented reports in the summer meetings organized by the Commissionof Sciences about the issues of the original literature, the Russian writer L. Tolstoy (1899), about A. Grīns's novel „Nameja gredzens" (1935) etc., he has presented at the conference in Fishbach the report "The folk poetry at school"(1947), he has published memorial articles about Kažoku Dāvis, Kronvalda Atis, Jēkabs Lautenbahs, A. Lerhs-Puškaitis, V. Plūdonis, A. Niedra, Pavasaru Jānis. L. Bērziņš in the memorial articles has fixed the literary facts without giving the analysis, has emphasized the importance of the writers in the development process of literature, encouraging the readers to feel reverence towards the great masters of the nation's culture. He has also worked out entries for the „Latviešu konversācijas vārdnīcai" about the personalities in Latvian literature and culture (Elferfelds, K. Fīrekers, J. Fišers, E. Gliks, J. Herders, Kažoku Dāvis, J. Neikens, M. Opics, Pavasaru Jānis, about the theory of literature issues (epithet, metaphor, metrics, onomatopoeia, parallelisms, etc.) (Jēgers 1967).

L. Bērziņš has acted also as a reviewer. He has reviewed the edition of „Raksti" by E. Veidenbaums under the editorship of R. Egle (1926), the monograph by R. Egle „Poruku Jānis" (1931), the monograph by R. Klaustiņš „Mērnieku laiki kā sadzīves romāns" (1926), the drama by A. Niedra „Zeme" (1904), the story by A. Grīns „Klusie ciemiņi" (1935), the story by Ā. Erss „Zaļā krūze" (1936), „Ākstu" by M. Zīverts (1936). L. Bērziņš as a reviewer has his own opinion; he opposes the author, stresses the issues of the theme, genre and stylistics, avoids the political collisions of the time, however, the reviews are written in very correct style. Nowadays the evaluation about particular writers and their works given by L. Bērziņš in the literature criticism is really valuable.

The pedagogues might be interested in another very essential aspect of L. Bērziņš's life activities, namely, working out the text books and working on the issues of language methods. Being an outstanding teacher he was able to teach qualitatively 6-8 subjects – German, beginnings of the Latvian literature, metrics of the folk songs, history of pedagogy, didactics, religion and ethics (Boboka 2000, 182), - L. Bērziņš similarly to Aleksandrs Dauge considered that at school the serious work should be filled with pleasant joy. The conviction of the teacher about the acquisition of school subjects was the following: it is better to know less but more profoundly, it is necessary to teach pupils to think, which sounds very modern.

The issues of the theory of literature have always been in the centre of L. Bērziņš's attention. Based on the experience drawn from working at school and university, the study by L. Bērziņš „Poētika pamatvilcienos" /Basics of Poetics/ (1933) is significant in the theory of literature, which as the author himself indicates has developed from "introducing pupils to the poetry" and by encouraging pupils to feel, to see and to use their mother tongue "in all its expanse in accordance with today's culture" (Bērziņš 1933). The main idea expresses by the author is: only getting deeper in the art of poetry we can understand the essence of poetry and its values, gain pleasure and joy that the piece of poetry brings.

L. Bērziņš has written several textbooks: „Vārds un teikums"/ Word and sentence/ Grades I – VI, 1935-36 (together with Mārtiņš Gaidis and Rūdolfs Grabis), the reader for basic schools (Grades 1-6) „Tēvu valoda" /The Mother tongue/ (1934-36, together with Arvīds Dravnieks), the systematic course of grammar and spelling for Grades III, IV, V and VI of the basic school „Vārds un teikums" /Word and sentence/ (1938) together with M. Gaidis and R. Grabis. L. Bērziņš and A. Dravnieks have published „Latviešu literatūras vēsturi pamatskolām" /History of Latvian literature for basic schools/ (1932) in which similarly to the works of such scientists as K. Kārkliņš, J. Grīns a.o., they have emphasized the power, excitement, feelings of the fiction or the world of poetry which cannot be learned only felt.

The purpose of the book is to enhance the joy which the reader gains from the fiction to enrich his/her mental world. The task of the history of literature, according to the authors, is, by opening the writer's personality and clarifying the conditions in which the work was created to deepen the understanding of the poetry and to "give a key with the help of which to open the wonderful buildings of the masters of poetry" (Bērziņš, Dravnieks 1932).

As the director of Riga teacher institute L. Bērziņš has written the already mentioned „Poētika pamatvilcienos" /Basics of Poetics/ (1933), arranged "Pasaku virtne"/The Garland of Fairy-tales/ (a wonderful collection of fairytales with illustrations) (1936) in which he has indicated that already in old myths, legends and fairytales the world perception, traditions, the accumulated life experience, the ancient wisdom of Latvians is revealed. Self-abnegation, courage, perseverance- these are the features that the Latvian fairy tales make every reader think about. Emphasizing the thought about reading as the art full of wonders and considering that a Latvian is the friend of books who understands the importance of reading

in developing the mind, L. Bērziņš has arranged the „Rīgas ābeci" /The ABC of Riga/ (1933). The author points out that in reading the ABC the first rule is the love to work and diligence. Te ABC arranged by "The ABC of Riga" encourages the child to develop his/her reading, telling, language, thinking, imagination because each letter is accompanied with some verse which starts with the letter the child is learning. In order to make the reading and comprehension easier an adequate drawing is attached which allows imagining the content of the verse read (Bērziņš 1933, 27).

The formal grammar approach is used in describing the content in the language text books- the grammar issues are acquired from the theoretical aspect. The authors have justified their approach in developing the book in the preface of the book, namely, the grammar formulation can be made out from the material and can be consolidated through exercises. The authors have included also language games in the acquisition of the content. The rules are explained in simple words that correspond to the learners' age peculiarities and the examples are provided. The book also contains tables for the repetition and consolidation of the grammar material.

Pupils are offered qualitative texts from the classical literature (A. Brigadere „Anneles stāsti"/ Stories of Annele/, ekscerpts from works by V. Plūdonis, Doku Atis, poems by the author of the book L. Bērziņš's („Mīkla"/Riddle/), Druva I, N. Kalniņš, J. Poruks, J. Jaunsudrabiņš, A. Grīns, R. and M. Kaudzītes, Rainis, R. Blaumanis, Valdis, Pumpurs, K, Skalbe) and folklore material (folksongs, fairy tales, anecdotes). The purposefully selected texts are patriotic and value-oriented; they promote the love to Motherland, school, nature, family, parents, harmony and compatibility among the family members as well as develop in pupils such features as discretion, fairness, diligence, prowess and honest performance of one' s tasks. The texts praise heroism, bravery, patriotism, the beauty of the Motherland and love. The authors have also thought about the visual design of the book: the illustrations are expressive, significant and peculiar. The texts are written in big letters and they are clear.

In methods L. Bērziņš has written about teaching German in commercial schools (1898), he has written different articles („Mācību līdzekļi laukskolās"/Teaching materiāls in the country schools/, 1899) and published in the newspaper „Latviešu Avīzes"/Latvian newspapers/.

Today thye studies by L. Bērziņš are topical not only as the source of history but also as the repository of important theoretical ideas.

The expressions of Ludis Bērziņš' individual style in teacher education at the University of Latvia

Teachers have been educated at the University since the founding of the University of Latvia in 1919 (until 1922 – the Higher education institution of Latvia) and here the contribution by Ludis Bērziņš is very significant.

Teachers were trained at the faculty of Philology and Philosophy and with short breaks it continued within this faculty all years of the Independent Latvia. Also during the Soviet period and after regaining the independence in 1990 teacher training has been integral part of the University studies. The names of the faculties, lecturers as well as the content of courses have changed but the name of Ludis Bērziņš has been written with respect and gratitude by his colleagues and former students in the history of teacher training at the University of Latvia.

Looking back at the 20 years long activities of the University of Latvia (1919- 1939) professor Pauls Jurevičs considered teacher training for secondary schools and vocational schools as an important task of the faculty of Philology and Philosophy: "This task is really important because, if it is generally accepted that schools mould the soul of the nation then taking into consideration that the faculty forms the majority of secondary school teachers (and through them also the basic school teachers) then it is one of the last instances and thus also one of the most important factors in moulding the soul of the whole nation." (LU divdesmit gados 1939, 244) He also indicates that for the faculty graduate to be a good teacher" he should, firstly, be erudite, he should know well and understand well his subject because only then he will be able to make his pupils interested and to be successful in their teaching", " the teacher should also know well the life of his nation and be a dedicated supporter and promoter of its national aspirations"; " whatever a good teacher is like he should also be pedagogically educated, he should know the child and should be able to teach him the respective material". (LU divdesmit gados 1939, 244-245)

The academic and scientific activity of L. Bērziņš as the teacher educator proves that he with his personal example, the content of the study courses and educational means has promoted the formation of a competent teacher of the Latvian language at the University. As later, being in exile, his former student Velta Rūķe – Draviņa says *"disciples inspired from the work of L. Bērziņš grow from those who have listened to him; they follow in his steps and do not leave the science of Latvian folksongs even in the harsh years of occupation and exile…"* (Zvaigžņu sega 1967, 187).

The documents of the Latvia State History archive give a possibility to define more exactly the scientific degrees and academic titles of the assistant professor of the University of Latvia, later professor. In 1921 the minister of education Juris Plāķis following the suggestions of the Organizational Board of the Higher education institution of Latvia confirms L. Bērziņš as the provat assistant professor at the faculty of Philology and Philosophy; in

1922 L. Bērziņš is elected the assistant professor in the same faculty; in 1933 he is unanimously elected Dr.h.c in Balts' philology; in 1935 he is elected University of Latvia free lance and later tenure professor in Latvian literature. He has worked as as a professor until 1940 and continued the work with breaks until September 1944. (LVAA, 7427.f., 13.apr., 178.l.)

The documents about the elections with the time distance best reveal how highly the colleagues had assessed the academic and scientific activities of L. Bērziņš.

In 1933 when L. Bērziņš receives the Honorary doctor's degree from the University of Latvia professors J.Endzelīns and P.Smits have given their references. Analyzing the scientific contribution of L. Bērziņš, professor Endzelīns stresses: "I think that Ludis Bērziņš absolutely deserves the doctor's degree in Baltic philology. As he is not a full member of the faculty of Philology and Philosophy it would not be obscene (impolite- A.K.) for him to pass examinations and to defend the thesis at the faculty but at the faculty there is no one who would be honorable enough to examine him and there is no such person in the foreign universities thus the only way out is to award him this doctor's degree honoris causa. The fact that Ludis Bērziņš has not graduated from the department of Baltic philology but faculty of Theology cannot be an obstacle here, to my mind, because during his studies there was no such department anywhere and theology also includes elements and methods of philology". (LVAA, 7427.f., 13.apr., 178.l., 101.lp.) He has also assessed the academic contribution: "We know about L. B. from his public lectures, that he speaks logically, clearly and in an interesting way therefore the room is always full." (LVAA, 7427.f., 13.apr., 178.l., 102.lp.)

Analyzing the official references written by the colleagues in connection with the elections in academic posts, the reviews written for advancing L. Bērziņš's scientific studies for different awards, the memories of the former students and the memoirs of the professor himself, one discovers the peculiar (individual) style of L. Bērziņš's personality which according to the thoughts of former university students has essentially influenced the development of his personality and the formation of his professionalism.

Kārlis Draviņš has described the outer image of L. Bērziņš in most detail: *"Very properly and respectably dressed but never acting like some smart dandy he stood in the front of the audience and I often thought that the one who at times stands as an honorable and respected priest in front of his parish could not be different and that he both in movements and gestures should be self-contained and correct to the utmost degree, certainly being also impeccable in the manner of speech and in the content. I think that we who also had at some time stand in front of the secondary school pupils at some school we could really learn from L. B. constant self-control"* (Zvaigžņu sega 1967, 150– 151). The memories also refer to his manners: *"The respectable, peaceful and balanced performance of L. B. in front of the audience. It was the mental maturity of a man who has seen the world, who was hardened.*

Even more- one could feel intuitively the mental power and amplitude of this man's independent personality"; "L. B. had his own very particular style, which can be easily recognized also in his articles..."; "What a peculiarity- he not only looked at the audience and students in front of him, sometimes he looked into his manuscripts and from time to time he used to raise his eyes in a rather high angle as if looking into far distance and through the lecture rooms" (Zvaigžņu sega 1967, 148); *"the expression of L. B. has some true directness; it is free of every deliberate manner and with time it fascinates with the ingenuous power of the content".* (Zvaigžņu sega 1967, 186)

As it is mentioned in the guidelines of the University of Latvia for 1920-1930s the most important for the teacher is the knowledge in the subject. Professor has promoted the acquisition of this knowledge ensuring the science-based studies. His colleagues have admitted that the studies by L. Bērziņš in Latvian literature are at a considerably high level, he has created his school of the branch, he has always been critical towards the judgments of others, and he has not refused from his scientific views. Professor has continuously improved his qualification: he participated in congresses in different European countries, he used his vacation for scientific studies, and he delivered lectures in foreign universities. (LVAA, 7427.f., 13.apr., 178.l.) Thus the experience of European universities entered the University of Latvia and Europe, in its turn, learned more about the University of Latvia and its experience in nurturing the mother tongue and in teacher education.

Professor's former students reveal many facets of his pedagogical mastery: how efficiently he had led the seminars always pointing out the positive; how he had taught to think independently and encouraged to examine issues further and deeper; how he had been very matter-of-fact at the examinations, sincere, without the desire to "fail" the student; in relations with the students he was tactful and considerate; he tried to introduce strategies that were tested in the school practice." (Zvaigžņu sega 1967)

Nowadays when we emphasize the child-centred approach in the pedagogical process and the holistic approach in education the summarized assessment given by Veltas Rūķes – Draviņa about her teacher sounds very topical: *"The pedagogue is the strongest in him: the living man also now is in the centre of centres of interests".* (Zvaigžņu sega 1967, 196)

Conclusion

The study reveals that the pedagogue, theologian, folklorist, scientist of literature and poet Ludis Bērziņš has left rich pedagogical heritage, that his ideas are useful also in today's teacher education. Being the director of RTI he has tried to install every learner in the world of education and culture, and he established several traditions. L. Bērziņš tried to educate his learners in the spirit of Latvian nation, simplicity, sincerity, discipline and he did it being the

model of all this himself. He paid much attention to practical training of the future teachers in the resource (pilot) primary school of the institute.

An important part of L. Bērziņš life was taken up by writing the text books and the solution of the issues connected with the methodology of the Latvian language. Being an outstanding pedagogue, who very qualitatively taught several school subjects, L. Bērziņš considered that the serious work carried out at school should be full of joy and pupils should be taught to think. The pedagogue's conviction about the acquisition of the subject is the following: better know less but know it profoundly.

L. Bērziņš is the author of several text books of the Latvian language and literature. He applies the formal grammar approach in presenting the content in the language text books. The folklore material and qualitative texts from Latvian classic literature which are patriotic and value oriented, that are offered to the pupils for working with the text, promote the love for one's country, school, nature, family and parents. Being director of RTI and the academic staff of University of Latvia, L. Bērziņš has written the text book in the theory of literature „Poētika pamatvilcienos"/The Outlines of Poetics/ which reflects the experience gained from work in the school and university. L. Bērziņš has arranged „Rīgas ābeci"/The ABC of Riga/ and „Pasaku vītni"/The Garland of Fairy-tales/, together with co-authors he has collected and edited „Garīgas dziesmas skolām un sētām. Ar meldiju pielikumu"/Ecclesiastic songs for schools and households. Melodies supplemented/, and worked out „Vācu valodas mācību"/The text book of German/.

„Latviešu literatūras vēsture" (1.-6., 1935 -1937) /History of the Latvian literature/ under the editorship of L. Bērziņš has served as a basis for further publications on history of literature; it has influenced the work of many authors of literature text books and several generations have mastered the historical development of Latvian literature from this publication.

University of Latvia (Latvia higher education institution from 1919 till 1922), Department of Pedagogy at the Faculty of Philology and Philosophy also educated teachers all through the years of independent Latvia and L. Bērziņš worked there as assistant professor and later professor who delivered the following courses to the future teachers: History of the Latvian literature, Poetics of Latvian folk songs, Metrics and Stylistics. He was a beloved teacher also in the Folk University and teacher education courses. To develop professionally, L. Bērziņš has visited higher education institutions and congresses in Kaunas, Prague, Berlin and other places.

The study reveals the skill of L. Bērziņš to ensure research based studies, active and independent participation of students in the seminars, efficient and enabling atmosphere at the examinations. He was the model to students both with his outer appearance and his personality features. L. Bērziņš considered that the requirements should be high and he tried to provide the future teachers with useful advice about the approaches and strategies that had been tested in the school practice.

References

Atmiņu gaismā. 1990. Rīgas – Cēsu skolotāju institūts. Kalamazū.

Baumanis, R. Rīgas Skolotāju institūta galvas segas un institūta karoga tapšana. Rīga, LU.

Berga, I. Par Institūta skolotājiem 1924./25.mācību gadā, LU Pedagoģijas muzeja materiāli.

Bērziņš, L. 1925. Literatūras vēsture monogrāfijās. Nr.4 *Nevācu Opics.* Rīgā: Vidusskolas Skolotāju kooperatīva izdevniecībā.

Bērziņš, L. 1927. *Latviešu tautas dzeja Stendera un Herdera laikmetā.* Rīga, Filologu biedrības raksti. VII sējums.

Bērziņš, L. 1933. *Poētika pamatvilcienos*. Rīgā: A/S Valters un Rapa krājumā, 66.

Bērziņš, L. 1935. Ernsts Gliks. Darba mūžs un mūža darbs. Rīga.

Bērziņš, L. 1935. Garīgās rakstniecības uzplaukšana. Latviešu literatūras vēsture, 2.sēj.: 52.

Bērziņš, L. 1935. *Jēkabs Lautenbachs un viņa centieni*. Latviešu literatūras vēsture. XI burtnīca, 21-39.

Bērziņš, L. 1936. Skola un disciplīna. Izglītības Ministrijas Mēnešraksts.

Bērziņš, L. 1948. Skola un skolas gars. Ceļš, no.10/11.

Bērziņš, L. 1979. *Neredzīgais Indriķis un viņa dziesmas*. Gauja, 3.

Bērziņš, L. *Rīgas ābece*. 1933. Rīgā: Rīgas skolotāju institūta bij.audzēkņu biedrība Krājumā pie Akc.Sab. Valters un Rapa, 80.

Bērziņš, L. un Dravnieks A. 1932. Latviešu literatūras vēsture pamatskolām. Rīgā: Izdevis A. Gulbis: 156.

Bērziņš, L., Gaide, M. un Grabis, R. 1935. Vārds un teikums. Valodas mācība pamatskolas I klasei. Valtera un Rapas akc.sab. izdevums, 60.

Bērziņš, L., Gaide, M. un Grabis, R. 1936. Vārds un teikums. Valodas mācība pamatskolas III klasei. Rīgā: Valtera un Rapas akc.sab. apgāds, 67.

Bērziņš, L., Gaide, M. un Grabis, R. 1936. Vārds un teikums. Valodas mācība pamatskolas IV klasei. Rīgā: Valtera un Rapas akc.sab. apgāds, 78.

Bērziņš, L., Gaide, M. un Grabis, R. 1936. Vārds un teikums. Valodas mācība pamatskolas VI klasei. Rīgā: Valtera un Rapas akc.sab. apgāds, 106.

Bērziņš, L., Gaide, M. un Grabis, R. 1937. Vārds un teikums. Valodas mācība pamatskolas V klasei. 2.iespiedums. Rīgā: Valtera un Rapas akc.sab. apgāds, 94.

Bērziņš, L., Gaide, M. un Grabis, R. 1938. Vārds un teikums. Valodas mācība pamatskolas II klasei. 4. iespiedums. Rīgā: Valtera un Rapas akc.sab. apgāds, 56.

Bērziņš, L., Gaide, M. un Grabis, R. *Vārds un teikums*. Sistematisks gramatikas un pareizrakstības kurss pamatskolas III, IV, V un VI klasei. Rīgā: Valtera un Rapas akc.sab. apgāds, 136.

Boboka, S. 2000. Luda Bērziņa daudzpusīgā dzīvesdarbība un bagātīgais mantojums. Rakstu krājums *Laikmets un personība*. 1. sējums. Rīga: RaKa, 158.- 193. lpp.

Dāvidsons, J. 1995. Tā bija... In *Skolotāja Luda Bērziņa personība un viņa pedagoģiskās idejas,* Edvīna Rāfelda maģistra darbs, LU Pedagoģijas muzeja materiāli.

Draviņš, K. 1967. Profesors Ludis Bērziņš Latvijas Universitātē. *Zvaigžņu sega.* Rakstu krājums L. Bērziņa piemiņai. A. Dravnieka red. – Bruklina: Grāmatu draugs, 135 – 184.

Ērmanis, P. *Ludis Bērziņš.* Latviešu literatūras vēsture. XIV/XV burtnīca, 292 - 303.

Jēgers, B. 1967. L. Bērziņa darbu bibliogrāfija. *Zvaigžņu sega.* Rakstu krājums L. Bērziņa piemiņai. A. Dravnieka red. – Bruklina: Grāmatu draugs, 261 – 323.

Kaļķe, B. 2001. Latviešu skolotāji rakstnieki (1900-1940). Rīga: RaKa.

Kalniņš, N. 1965. Laipu licēji. Grāmatu draugs.

Kasars B. Manas atmiņas par RSI direktoru Dr. phil.hon.causa profesoru Ludvigu Ernestu Bērziņu, LU Pedagoģijas muzeja materiāli

Latvijas universitāte divdesmit gados. 1919. – 1939. I daļa. 1939. Rīga: Latvijas universitāte.

LVVA, 7427.f., 13.apr., 178.l. 167 lp.

Pasaku vītne. Jaukāko pasaku izlase ar illūstrācijām. Kārtojis prof. L. Bērziņš. Rīgā: Literatūra, 157.

Rīgas Skolotāju institūts. 1928. Rīga: A. Krēsliņa grāmatu spiestuve.

Rūķe-Draviņa, V. 1967. Alma Mater klausītavās 1934.-1939. *Zvaigžņu sega.* Rakstu krājums L. Bērziņa piemiņai. A. Dravnieka red. – Bruklina: Grāmatu draugs, 185 – 197.

Zvaigžņu sega. 1967. Rakstu krājums. Mineapole: Grāmatu draugs.

An Example of Teacher Exchange: Johannes Käis, the Estonian-Latvian Case and His Experience from Russia in the First Decades of the 20th Century

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Abstract

This paper deals with the activity of Estonian education innovator Johannes Käis in Latvia and Russia and with joint contacts of the Baltic teachers after the First World War. There are several examples about Estonian future schoolteachers who studied in different Latvian and Russian institutions, which resulted in the unique exchange of experiences. Estonian educational innovator Johannes Käis taught and studied 1903 till 1920 in Latvia and Russia. Problems and new methodologies of New Education movement were widely discussed at the time. Latvian teacher and innovator Jānis Greste lived and worked in Riga at the same time – the brief comparison of ideas of Greste and Käis are presented in the article.

The Baltic educational relations continued in the 1920s, teachers' congresses were held in every Baltic state dealing with the problems of the comprehensive school. Käis actively attended these meetings. Discussing such topic is a good example of how history is constructed by teachers' exchange of ideas and practices between and beyond nations.

Keywords: teachers, contacts, the Baltic states, Latvia, Russia, Estonia, New Educational Movement.

Introduction

Everyone who is aware of university life knows the importance of students and scientists' international exchanges. María del Mar del Pozo Andrés distinguishes between national and transnational forms for the circulation of pedagogical ideas that cut across national boundaries (see Pozo Andrés 2009). If we broaden this concept to the period I'm going to describe below – the first decades of the 20th century in Estonia, Latvia and Lithuania (Baltics) - we can generally say that there have been good examples of the professional exchanges and collaboration between the Baltic teachers.

This paper is divided in two parts of thematically similar subjects: first, the Estonian *grand old man* of didactics Johannes Käis (1885-1950) and his activity in Latvia 1903 till 1917 and the second, contacts of the Baltic teachers after the First World War when the principles of

European New Education were implemented. The research question here will be: what were the factors which predisposed teacher's exchange between Latvia and Estonia at the beginning of the 20th century and what was exactly this development? What is its importance in terms of New Education Movement?

Here are some examples of Estonian future schoolteachers who studied in different Latvian institutions, which resulted in the unique exchange of experiences. Painter Jaan Vahtra studied (1882-1947) at Riga Art School. And much earlier – writer considered being the first Estonian writer Kristjan Jaak Peterson (1801-1822) studied at Riga Province Gymnasium. Still there are cases beyond these single examples. Baltic and Valmiera Teachers Seminar and based mostly in Latvian cities trained respectively 773 and 426 Latvians and 118 and 45 Estonians (also teachers from other regions) till their closing of the both institutions in 1919 (Krūze, etc 2009, 234, 235). Before that, teachers training seminar established by the Latvian educator Jānis Cimze (1814-1881) prepared a lot of future outstanding figures of the Estonian and Latvian nationalistic movements till its closing in Estonian border city Valga in 1887. In my opinion all this helped to form the development of Baltic educational science and schooling. University of Tartu (*Universtät Dorpat*) in Estonia, founded already 1632, appeared as an attractive site of studies for many Latvians and Lithuanians. And for the last – about 2000 Estonians, Latvians and Russians studied at the Riga Theological School and Seminary between 1846 till 1918 (Raudsepp 1998, 154).

Although there are quite excellent monographs describing Johannes Käis's (in Latvian *Johans Keiss*) life (see Eisen 1985) it wasn't possible to find any compact article regarding his period in Latvia[1], so author had to use some archival primary sources from the collections of Archival Museum of Estonian Educational Culture, which cover Johannes Käis' work at Riga Alexander's Gymnasium. The use of original archival material is particularly worthwhile to this overview by expanding the present knowledge of Käis's contribution and broadening the topic to deal with the transnational exchange of educational ideas. This overview will make an effort to answer two main questions. The first question to be answered is how prestigious Johannes Käis' activity in Latvia was and the nature of his role in arranging Baltic teachers' relations and how these relationships helped to implement European New Education? The second question relates to the importance and development of Baltic teachers' associations and professional unions. Answering these questions would lead us to better understanding of history of education of the Russian Empire at the beginning of the 20th century – the period that precedes independency of Baltic republics after the First World War. There are some sources, which describe European New Education Movement in the Baltic States, but mostly they cover period between the World Wars (See for instance Kopelovitscha; Žukovs 2003). That's why we will concentrate on the previous epoch.

[1] There is not also any contemporary monographs regarding the life of Johannes Käis.

Implementation of the ideas of New Education at the region

Johannes Käis was a teacher, head of the Teacher's Training Seminar in Võru, author of methodological and didactical books, participant of international teacher's meetings. Before his death for three years, from 1945 till 1948 he was a head of the department of methodology in the Ministry of Education of Soviet Estonia.

Before independence period started 1918 as Estonia and Latvia were united within Russian Empire into common territory called Livonia, the posting of Estonian teachers to Latvian or Russian territory or conversely was a normal practice. Being appointed by Russian authorities Johannes Käis' work in Latvia extended over ten years. He worked as a schoolteacher in Limbaži from 1903 till 1906 and in Valmiera 1906 till 1911 where his first innovations in pupils' personal initiative and pupils' own efforts were recognized (Laane 1985, 79). In Valmiera he also taught in the girl school, where he used nature observation methods in teaching (Horm 1985, 119). But his working period in Riga, first as a teacher at Peter-Paul's City School from 1911 till 1912 and as a teacher of natural history and geography at Riga Alexander's Gymnasium from 1912 till 1917 (studying at the same time as an auditor in Riga's Polytechnic School) (Käis 1936, 187) was the most remarkable during his Latvian years. Indeed, why he moved to Riga? Käis was appointed to the abovementioned positions because authorities recognized his pupils' practical works at the pedagogical exhibition in Riga's educational district in 1911 despite of the fact that he didn't have university diploma (Archival Museum of Estonian Educational Culture, manuscripts' holding (EPAM, K0001716-15. pp. 33-34, 28. Oct. 1917). He graduated at University of Petrograd in 1917 and continued to work in the one of the leading institutes of Russia, the Vologda Pedagogical Institute before he returned to Estonia after the Liberation War in 1920 (Trasberg 2011, 70).

As a new teaching method since 1912 Käis used the demonstration of the popular scientific film show in Riga. In his own opinion it was the first time in Russia to have a cinema in the natural science classroom (EPAM, K00004371, p. 26, 15. May 1917). Another archive document confirms that in 1915 the head of educational district in Riga budgeted money in the Gymnasium treasury for paying bonuses to Käis because of his remarkable work in Gymnasium which was expressed by educating pupils with the help of educational films and practical works in natural history (EPAM, K0001716-3, p. 3, 8, 11. Jan. 1915). The French journal "Revue Pédagogique" suggested scientific films to schools with the remark that such kind of school film works in Russia, in one of the gymnasiums in Riga (Horm 1985, 123). This is a good example of how Käis's creative pedagogic initiative to educate pupils with the help of documentaries in natural history and geography traveled into the entirely different national and cultural context. In addition Käis utilized in Riga the so-called illustrative method in the application of his "Arbeitsschule" (called also the "Work" school) principles. The German New Education pedagogue August Wilhelm Lay (1862-1926) in his research first introduced this

method. There were organized excursions during the lessons of natural history, illuminated pictures were shown, experiments were demonstrated, and pupils were stimulated to draw pictures, tables, compile schemes, collect herbariums etc (Elango 2010, 631).

Johannes Käis worked in many Riga's pedagogical institutions, for example as head of section of local history and later as a manager of Riga's Pedagogical Museum. He was also a member of the Elementary School Teachers' Qualification and Educational Tours' Commission (Martinson 1929, 341). For two years Alexander's Gymnasium was transferred from Riga to Estonian border city Võru because of the war situation in 1915. Käis organized in-service training there, for example courses for tour guides for Latvian, Russian and Estonian teachers (Horm 1985, 127). In the school year of 1916/17 323 Estonian secondary school pupils studied in Latvian schools temporarily transferred to Estonia (Elango 2010, 535).

At the same time when Käis worked in Riga there lived and worked another influential school reformer Jānis Greste (1876-1951). The topical coverage and intersections between these two innovators was remarkable: they were both interested in improving the teaching and classroom practices by experimentation. Käis preferred experimentation in Estonia and Latvia less on the organizational basis what was the case in Latvia where Greste was an active leader and organizer of the movement of teachers-experimenters (1923-1934) of Latvian Association of Teachers. "The legacy Greste left, particularly his theoretical ideas as well as representations of different situation from the pedagogical practice, reveal the introduction of the main ides of New education movement in Latvian schools and the essence of the teacher-experimenter movement" (Krūze, etc 2009, 264, 265).

Käis and Greste appeared as main figures in introducing some of the main ideas of the New Education Movement to the Baltic countries with the obvious decline of the Tsarist regime when the urge for the modernization and democratization of schools along the European lines seemed necessary in the Baltic region too (see for instance Marsone and Ķestere 2010).

Baltic teachers' contacts

The mediator of New Education and "Work" School in Estonia was the Võru Teacher Training Seminar led by Johannes Käis himself. There are no records of students of Latvian origin in the Seminar, but Latvian school managers visited Seminar in 1923 and 1925. Käis gave lectures on "Complex learning and local history" in Riga and on "Preparation of learning tools" in Jelgava in 1925. Two articles were published later in the Latvian pedagogical journal „Audzinātājs"(*Educator*), the first was called "Students' Mental and Intellectual Exploration" (1925) and the second "Hours in the Neighborhood Teaching" (1926) (Käis 1936, 268, 274). In the second work, Johannes Käis proposed that as pupils learned about their own local

environment and used that knowledge, their education was supported with active and complex learning.

In 1922 by the initiative of Riga's Teachers' Association the first conference of the teachers of the Baltic States and Finland was held as a good example of teachers' regional cooperation. In 1925 in Riga, 1928 in Tallinn and 1931 in Kaunas Baltic teachers' congresses were held in every Baltic state that were dealing with the problems of the comprehensive school. Käis actively attended to these meetings. In 1930s these kinds of international activities ended because Latvian Teachers' Association was prohibited due to authoritarian regime of president Karlis Ulmanis (Trasberg 2007, 162). Actually there were several teacher organizations and pedagogical journals and other publications that experienced the same fate (Krūze, etc. 2009, 149).

In 1930 the school innovation week was organized in Tallinn with the school exhibition. Among others known New Education Movement pedagogues Isaac Rabinovič from Riga gave a lecture there (Horm 1985, 140). His lecture about the "Decroly-system" was issued in the publication of Estonian Teachers' Association (see Rabinovič 1930); he was also a head of the section that dealt with the legacy of the famous educator Ovide Decroly in the Latvian Teachers' Association. Later he popularized Decroly's ideas later all over the Europe.

Conclusions

Transnational exchanges of educational ideas and practices have become increasingly significant in the present world marked by the processes of globalization. Johannes Käis' work in Latvia was extremely fruitful; it certainly influenced Latvian pedagogy. Käis himself remarked later that the school exhibition in 1913 at the Alexander's Gymnasium impressed greatly the pedagogical community of Riga because of the high and original quality of the students' works (EPAM, K00004371, p. 26, 15. May 1917). Thus, the legacy of Johannes Käis' work remains a landmark of successful transnational contribution in the field of education. Johannes Käis' first curriculum of natural history for elementary school and methodology of natural history was published in Riga in 1914. In the methodology he considered excursions to nature educationally essential and made efforts to develop them on the basis of systematic pedagogic ideas and principles. He also used group study extensively, especially among the pupils of elementary school (Horm 1985, 122, 123).

In the 1920s there was also an intensive cooperation between the teachers' associations of the Baltic States that enhanced the realization of the European New Education Movement, the traveling of educational ideas and the consolidation of networking. The relations first between Estonian and Latvian teachers and schools in the first decade of the 20th century and later between the Baltic teachers in the 1920s were so intimate due to the common history within the borders of the Russian Empire and due to the comprehensive proliferation

of the European New Education Movement. These factors predisposed conditions for international teachers' exchanges and educational relations beyond the boundaries.

Summarizing Johannes Käis' heritage it has to be remarked that his degree from University of Petrograd was valuable for him and this education and his work in Latvia, Russia (Vologda) and Estonia was an example and reflection of how pedagogical ideas circulate, or how they affected teachers he trained and pupils they educated. New Education ideas were modern at that time and we can always ask do we still have to learn from those ideas today?

In order to broaden the scope to larger institutional exchanges, the question what was the distinctive impact of German and French educational discourses on the Baltic teachers during this period and the pedagogies adopted here is left for future studies where the employment of Latvian, Estonian, Lithuanian and Russian archives to collect new data for novel interpretations will be essential.* **

* Modified and broadened version of all these topics will be observed by the author during the participation on the International Standing Conference for History of Education of 2012 in the University of Geneva.

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References

Elango, Aleksander, and Endel Laul and Allan Liim and Väino Sirk. 2010. *Eesti kooli ajalugu, 2. Köide. 1860. aastaist 1917. aastani* [School history of Estonia, 2. Volume. From 1860s till 1917]. Tallinn: Teaduste Akadeemia Kirjastus.

Eisen, Ferdinand (ed). 1985. *Koolile pühendatud elu: Johannes Käis 1885-1950* [Life dedicated to school: Johannes Käis 1885-1950]. Tallinn: Valgus.

Horm, Valter. 1985. Koolile pühendatud elu. Johannes Käisi elukäik [Life dedicated to school. The biography of Johannes Käis]. In *Koolile pühendatud elu: Johannes Käis 1885-1950* [Life dedicated to school: Johannes Käis 1885-1950], ed. F. Eisen, 114–154. Tallinn: Valgus.

Krūze, Aida, etc. 2009. *History of Education and Pedagogical Thought in the Baltic Countries up to 1940: an Overview*, eds. A. Krūze; I. Ķestere; V. Sirk; O. Tijūneliene. Riga: RaKa, 2009.

Kopelovitscha, A. and Žukovs, L. 2003. Veränderungen in der Iehrerbildung in Lettland. In *Reformpädagogik und Baltikum*, ed. L. Andresen, 5–11. Tallinn: TPÜ kirjastus.

Käis, Johannes. 1936. *Võru õpetajateseminar: tegevus ja uuenduspüüded* [Võru Teacher Training Seminar: activity and innovation efforts]. Tartu: Ilutrükk.

Laane, Karl. 1985. Johannes Käis ja õpilasomavalitsus Võru Õpetajate Seminaris [Johannes Käis and student self-government in Võru Teacher Training Seminar]. In *Koolile pühendatud elu: Johannes Käis 1885-1950* [Life dedicated to school: Johannes Käis 1885-1950], ed. F. Eisen, 78–91. Tallinn: Valgus.

Marsone, S. and Ķestere, I. 2010. Development of „Progressive Education" (*Reformpädagogik)* in Latvia in the European Context (the 20's-30's of the 20th century). In *Pedagoģijas vēsture: 15 jautājumi* [History of pedagogy: 15 questions], ed. I. Ķestere etc, 118-154. Riga: RaKa.

Martinson, E. 1929. Johannes Käis – 25 aastat pedagoogilist tööd [Johannes Käis – 25 Years of Pedagogical work]. *Kasvatus* [Education] no. 7: 341–342.

Pozo Andrés, M. 2009. The transnational and national dimensions of pedagogical ideas: the case of the project method, 1918–1939. *Paedagogica Historica* 45 no. 4-5: 561– 584.

Rabinovič, J. 1930. Decroly-süsteem [Decroly-system]. In *Kooliuuenduse päevaküsimusi* [The daily questions of school innovation], ed. E. Martinson, 159–192. Tallinn: Eesti Õpetajate Liidu kirjastus.

Raudsepp, A. 1998. Riia Vaimulik Seminar 1846-1918 [Riga Theological Seminary 1846-1918]. Tartu: Eesti Kirjandusmuuseum.

Trasberg, K. 2007. Väliskontaktid õpetajahariduses kahe maailmasõja vahel [Foreign Contacts in Estonian Teacher Education Between Two World Wars]. *Haridus* [Education] no. 11-12: 10–17.

Trasberg, K. 2011. *Keskkooli- ja gümnaasiumiõpetajate ettevalmistus Eesti Vabariigis (1918–1940) õpetajakoolituse ajaloolise kujunemise kontekstis* [Preparation of secondary school teachers in Estonian Republic (1918–1940) in the frame of historical development of teacher education]. Doctoral thesis: University of Tartu Press.

Zur Förderung des Autonomen Lerners von Studierenden an der Universität Lettlands

Facilitating of the Learners' Autonomy at the University of Latvia

Latvijas Universitātes studentu autonomās mācīšanās veicināšana

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Zusammenfassung

Der Artikel ist dem Thema "Autonomes Lernen und die Förderung des autonomen Lernens an der Universität Lettlands " gewidmet. Im Mittelpunkt stehen die Kriterien des autonomen Lernens und ihre Anwendung an der Fakultät für Geisteswissenschaften der Universität Lettlands. Die Metodik zur Förderung des autonomen Lernens wird angeboten. Nach einer Messskala werden die Fähigkeiten der Studierenden zum autonomen Lernen analysiert.

Schlüsselwörter: autonomes Lernen Didaktik DaF Lernerautonomie, Universität
Key words: didactics for German language independent learning learners' autonomy, University
Atslēgvārdi: autonomā mācīšanās didaktika vācu valodai kā svešvalodai, Universitāte

Einleitung

In der heutigen modernen Welt sind Fremdsprachenkenntnisse eine der Qualifikationen geworden, ohne die man im Studium und im Arbeitsleben schwer auskommen kann. Diese Notwendigkeit haben die heutigen Handelsbeziehungen, die Veränderungen auf dem Arbeitsmarkt, die wachsende, mit dem Wohlstand verbundene Menschenmobilität, die Entwicklung neuer Informationstechnologien und viele andere Faktoren verursacht, und lebenslanges Lernen ist für jeden Menschen notwendig geworden. Auch im "Gemeinsamen Europäischen Referenzrahmen" wird besonders stark die Bedeutung der Mehrsprachigkeit und die Notwendigkeit den Fremdsprachenerwerb den Lernenden transparent zu machen hervorgehoben, indem man die Fähigkeit entwickelt, die eigenen Leistungen zu analysieren

und die Selbstevaluation durchzuführen, um die Verantwortung über die Organisation des eigenen Lernprozesses zu übernehmen. Die Kompetenz lernen zu lernen ist eine von den 6 Schlüsselkompetenzen des Europarates und des Europäischen Parlaments. In dieser modernen Welt muss man immer bereit sein, etwas Neues zu lernen und deshalb sind die Kenntnisse „Lernen lernen" auch heutzutage von enormer Bedeutung, das ist kein veraltetes Thema der 90-er Jahre.

Das Ziel des Artikels- präzisieren und definieren was autonomes Lernen ist, die Studierenden und das Studium an der Universität charakterisieren, die Methodik für die Förderung des autonomen Lernens im Rahmen des Fremdsprachenunterrichts anbieten.

Autonomes Lernen. Begriffsdefinition

Was versteht man unter dem Begriff „Autonomes Lernen"? In ihrer Dissertation hat Stefanie Neuner erwähnt, dass die pädagogischen Komzepte zum autonomen Lernen schon an Schulen und Universitäten Ende der 60er Jahre des 20. Jahrhunderts in Europa und in den USA entstanden. Aber sie lassen sich auf humanistisches Gedankengut zurückführen, angefangen von Plato und Aristoteles, danach fortgesetzt von Rousseau, Pestalozzi, John Dewey bis hin zur heutigen humanistischen Pädagogik wurden die Ideen entwickelt, die sich in den Prinzipien des selbstgesteuerten oder autonomen Lernen wiederfinden lassen. Weiteren Einfluss übten auch alternative Lernformen wie z.B. die Freinet-Pädagogik aus (Neuner 2004,19). Stefanie Neuner hat auch die bestehenden Definitionen des autonomen Lernen in 3 Gruppen unterteilt (Neuner 2004, 25):

1. Lernerautonomie kann als Unabhängigkeit des Lerners von einer Lehrkraft verstanden werden, so dass der Lerner von vorgefertigtem Lernmaterial „konsumiert", d.h. wann und wo er lernen möchte, ohne die Anwesenheit eines Lehrers.
2. Andere interpretieren autonomes Lernen als das aktive Ausüben von Lernerverantwortlichkeit. Der Lerner wird hier als ein aktiver Agent verstanden, der Entscheidungen bezüglich seines Lernens trifft und der sich selbst einbringt, indem er seine Lerninhalte selbst auswählt, seine Lernschritte und das Material selbst vorbereitet und seinen Lernprozess plant, durchführt, überwacht und evaluiert.
3. Für dritte bedeutet Autonomie grundsätzlich die Fähigkeit zu lernen. Autonomie beschreibt hier nicht mehr die Charakteristika eines Lernprozesses, sondern die Eigenschaft des Lerners, ein Lerner, der in Lage ist, zu lernen, ist autonom".

Stefanie Neuner ist der Auffassung, dass nur die letzten 2 Ansätze zum Konzept des autonomen Lernens gehören. Die Vertreter des ersten Ansatzes können unabhängig vom Lehrer lernen, trotzdem seien sie abhängig vom Lehrmaterial et cetera. Auch die Autorin des vorliegenden Artikels teilt diese Meinung und in den Kriterien des autonomen Lernens hat sie nicht die Anwesenheit oder Abwesenheit des Lehrers eingearbeitet.
Chudak (2007, 15) betont, dass es sehr wichtig ist sowohl jüngere, als auch ältere Lernende zum selbstständigen Lernen und zur Lernerautonomie vorzubereiten. Menschen, die autonom lernen können, sind fähig, Lerninhalte auszuwählen, die Progression zu bestimmen, Lernwege, die zu spezifischen Lernzielen führen, zu identifizieren und die eigenen Lernfortschritte zu bewerten. Es ist auch wichtig über Strategien und Techniken Bescheid zu wissen, die den Lernprozess auf allen Ebenen begleiten. Dabei können Lehrwerke helfen, die ein bedeutender Bestandteil des Lernprozesses sind.
Der Begriff "Autonomes Lernen" ist aus dem Griechischen entstanden, *auto* -´selbst` und *nomos* - ´Gesetz`, also selbstständiges Lernen. Ein großer Teil der Lehrer und Lerner verstehen darunter "selbst gesteuertes Lernen", wenn der Lerner selbstständig ohne Hilfe und Kontrolle des Lehrers arbeitet (Chudak 2007, 46).
Rampillon betont, dass man über autonomes Lernen dann sprechen kann, wenn die Lerner selbst die wichtigsten Entscheidungen über ihren Lernprozess treffen (Bimmel, Rampillon 2000, 3). Als Grundprinzipien des autonomen Lernens erwähnt Rampillon die Fähigkeit das eigene Lernen zu planen und darüber zu reflektieren. Eine wichtige Voraussetzung des autonomen Lernens ist die Kenntnis und die Beherrschung von Lernstrategien. Deshalb ist die Lernerautonomie eng mit den Lernstrategien verbunden.
Steinig (1989, 32) kritisiert die gewöhnliche Praxis vom Fremdsprachenerwerb (besonders in der Schule), wo nur die Lehrer das bestimmende Wort haben. Das könne man sogar an der Einrichtung von Klassenräumen sehen, wo der Lehrer vorne wie auf der "Bühne" steht. Es ist bewiesen, dass 2/3 der Zeit in der Stunde nur der Lehrer spricht.
In solchen Umständen kann nicht der Lernende seine Bedürfnisse ausdrücken, seinen Lernprozess selbst steuern und die neuen Informationen mit der existierenden Erfahrung verbinden. Solche Lernenden werden nur zu Konsumenten der ihnen angebotenen Lehrveranstaltungen (Chudak 2007, 22).
Aufgrund des vorliegenden Forschungsmaterials hat die Autorin die Definition des autonomen Lernens ausgearbeitet:

> *Autonomes Lernen ist selbstständiges und kognitives Lernen, der Lerner kann eigenständig seinen Lernprozess organisieren und strukturieren, seinen Lernfortschritt einschätzen, verschiedene Lernstrategien und -techniken benutzen.*

Die Studierenden an den Hochschulen sind nicht immer fähig, autonom zu lernen, d.h. die Verantwortung für den Lernprozess zu übernehmen, die Materialien selbst zu suchen, ihren

Kenntnissstand richtig zu bewerten. Deshalb sind von großer Bedeutung nicht nur für Studierende an den Hochschulen, sondern auch für die künftigen Lehrer die Erziehung zum autonomen Lernen und die Förderung des autonomen Lernens.
Aufgrund der theoretischen Literatur (Bimmel, Rampillon 2000; Chudak 2007; Wolff 2003) wurden die Kriterien des autonomen Lernens zusammengefasst, dann wurden von der Autorin des vorliegenden Artikels die Indikatoren ausgearbeitet.

Tabelle 1. Kriterien und Indikatoren des autonomes Lernens

Kriterien	Indikatoren
1. Selbstorganisation des Lernprozesses	Der Lerner trägt Verantwortung für den Lernprozess, hat Freiheit zu entscheiden, wann, mit wem und womit er arbeitet.
2. Einführung und Benutzung von Lernstrategien und Lerntechniken	Der Lehrer macht die Lerner mit den Lernstrategien bekannt; genügendes Angebot von Strategien und Techniken im Lehrwerk.
3. Änderung der Lehrerrolle	Der Lehrer bestimmt nicht alles im Unterricht, er ist nur ein Helfer.
4. Evaluationsmöglichkeiten	Der Lerner kann mit Fragen und Tests seinen Lernfortschritt bewerten.
5. Anknüpfung an vorherige Erfahrung der Lernenden	Im Unterricht wird darüber diskutiert, wie man früher lernte, was vom Thema schon bekannt ist, was man im Unterricht gebrauchen kann.
6. Orientierung an den eigenen Lerntyp	Der eigene Lerntyp wird festgelegt. Man benutzt passende Methoden, Strategien und Techniken für den eigenen Lerntyp.

Lernstrategien- und Techniken

Bimmel und Rampillon (Bimmel&Rampillon 2000, 53-54) verstehen mit den Lernstrategien einen Plan, mit Hilfe dessen der Lernende viele mentale Operationen ausführen kann, um ein bestimmtes Lernziel zu erreichen. Mit Lerntechniken verstehen die Autoren die Verfahren, um etwas zu lernen. Silke Demme (Demme 1999, 91-92) thematisiert den Terminus Sprachlernbewusstheit (language awareness), den man durch die Formel „lernen lernen“ ausdrücken kann und dessen Ziel ist es, das Fremdsprachenlernen zu erleichtern

und zu optimisieren, indem man Lernstrategien und Lerntechniken bewusst einsetzt. Sie ist der Auffassung, dass nur dann der Mensch autonom lernen kann, wenn er über ein bestimmtes Arsenal von Lernstrategien und Lerntechniken verfügt.
D. Abendroth - Timmer (Abendroth-Timmer 2000, 115-121) bietet eine andere Methode zur Förderung des autonomen Lernens und das ist Lernen durch Lehren. Laut Timmer ist diese Methode 1895 in einem Gymnasium im Französischunterricht entstanden. Diese Methode habe laut Abendroth –Timmer die folgenden Vorteile: der Lernstoff, der mit eigenen Kräften erworben wird, verursacht in den Menschen kognitive Lernprozesse und Generierungsprozesse von Hypothesen. Selbstständige Strategien zur Problemlösungen werden entwickelt. Außerdem fördert die Möglichkeit, den Lernprozess im Auditorium zu beeinflussen, die Motivation der Lernenden(Abendroth-Timmer 2000, 115-116). Die Autorin des vorliegenden Artikels hat mehrmals diese Methode im Fremdsprachenunterricht eingesetzt und findet sie äußerst effektiv.
Bimmel und Rampillon sind der Meinung, dass es äußerst notwendig ist, den eigenen Lerntyp zu bestimmen (Bimmel, Rampillon, 2000:78). Sie unterscheiden zwischen den folgenden Lernstilen:
-der erfahrungsorientierte Stil
Empfehlung-forschendes Lernen.
-der analytische Lernstil
Empfehlung-den zu erlernenden Stoff strukturieren und abstrahieren
-der handlungsorientierte Stil
Empfehlung-Experimente und Projekte.
-der kognitiv-abstrakter Stil
Empfehlung-Beobachtung.
-der kommunikativ-kooperative Stil
Empfehlung-Gruppenarbeit.
-der visuell orientierte Stil
Empfehlung-Lernen durch Sehen.
-der auditiv orientierte Stil
Empfehlung-Lernen durch Hören.
-der haptische Stil
Empfehlung-Lernen durch Tasten und Selbtsanfertigung von Lernmaterialien und Schemata.

Auch in einer modernen Hochschule ist eine von den häufigsten Lernformen der Besuch von Vorlesungen. Rost betont aber, dass die traditionelle Vorlesung ungeachtet des Einsatzes von Medien in ihrem Wesen so wie im 12. und 13. Jahrhundert in einem Kloster oder einer mittelalterlichen Universität geblieben ist, diese Form ist sehr günstig für die Studierenden mit dem auditiven Lernstil, kann aber bei anderen Lerntypen einige Schwierigkeiten hervorrufen (Rost 2004, 42).

Mehrere Jahrhunderte lang wurde auch angenommen, dass das menschliche Gehirn linear oder listenartig funktioniert, die neuesten Forschungen haben aber bewiesen, dass das menschliche Gehirn multidimensional und in einer strukturenbildenden Form funktioniert. Das Gehirn arbeitet auch primär mit Schlüsselbegriffen, deshalb sollten auch die Mitschriften und Notizen so vorbereitet werden und nicht in der traditionellen linearen Schrift. Buzan empfiehlt als besonders wertvoll die sogenannten Mind-maps, Schemata, wo im Zentrum ein Schlüsselbegriff steht und dann Zweige und Äste entwickelt warden (Buzan 1974, 106-107).

Auch die Gründerin ihrer eigenen Fremdsprachenlernmethode Vera Birkenbihl findet die sogenannten Mind-maps, Schemata, wo im Zentrum ein Schlüsselbegriff steht und dann Zweige und Äste entwickelt werden, als besonders effektiv, die neue Information kann man sehr schnell an die schon bestehende Information anknüpfen, wenn aber die Information dem Gehirn fremd ist, dann geschieht diese Anknüpfung schwerer (Birkenbihl 2001, 39; Auflage, erste Auflage 1983, 117). Birkenbihl äußert auch die Meinung, dass es kein schlechtes Gedächtnis gibt, es gibt nur schlechte Konstruktionen und Rekonstruktionen (Birkenbihl 2001, 39; Auflage, erste Auflage 1983, 25).

Das Studium an der Universität und die Studierenden

Was ist typisch für die Studierenden und für das Studium in Lettland? Die lange Arbeitserfahrung der Autorin an der Universität Lettlands lässt schlussfolgern: Im Unterschied zu den Studenten anderer europäischen Staaten, verbinden sehr viele lettische Studierende das Studium mit der Arbeit. Das bringt eine frühe Reife, aber nicht immer ist das günstig für das Studium. Für Lettland sind auch ausgesprochen heterogene Studentengruppen charakteristisch, bei denen das Wissensniveau, die Zeit, als sie angeworben waren, der Familienzustand, die Berufstätigkeit und das Alter unterschiedlich sind.
Zanda Rubene spricht von der sogenannten dot.com Generation, die viel Zeit in der virtuellen Umgebung verbringt und die sehr schnell die Information haben will (Rubene 2008, 202). Sehr offt haben solche Jugendliche Probleme im Studium, weil sie nicht fähig sind, sich dauernd zu konzentrieren und selbstständig zu lernen.Das zweite Problem unserer Gesellschaft ist die Entstehung der Verbrauchergesellschaft (Rubene 2008, 203). Sehr oft wollen solche Studierenden in der Hochschule das Modell Kunde-Besteller einführen, wo der Student das Geld zahlt, die Serviceleistung bekommt und seine Anforderungen diktiert.
Laut Rubene steht jetzt das studentenzentrierte Studium im Vordergrund, die Studierenden konstruieren ihre Kenntnisse selbst, natürlich steht der Dozent ihnen immer zur Verfügung, wenn man Hilfe braucht (Rubene 2008, 105).

Seel und Hanke (Seel, Hanke 2010, 133) behaupten, dass das Studieren sich von anderen Lernaktivitäten durch folgende Merkmale auszeichnet:

1. Studieren ist überwiegen eine Einzelaktivität.
2. Es wird von außen ein allgemeines Ziel gesetzt, dieses Ziel kann der Studierende dann interpretiern und verfeinern.
3. Studierende suchen Informationen aus vielen verschiedenen Quellen: (Lehrbücher, Videofilme, Datenbanken).
4. Der Studierende kann seine Lernumgebung frei gestalten.

Förderung des autonomen Lernens

Um die Entwicklung der Fähigkeit zum autonomen Lernen der Studenten an der Universität Lettlands festzustellen, wurde ein Fragebogen ausgearbeitet, wo die Kriterien des autonomen Lernens eingearbeitet waren. Mehrere Gruppen von Studierenden sollten im Laufe eines Jahres dreimal die Fragebögen ausfüllen. Laut Ekkerhard Nuissl (2010, 61) soll man sich vor der Befragung vier Leitfragen stellen:

1. Was will ich wissen?
2. Wer weiß das?
3. Wer sagt es mir?
4. Wie erfahre ich es?

Da die Autorin des vorliegendes Artikels an der Universität Lettlands, an der Fakultät für Geisteswissenschaften arbeitet, dann wurde es angenommen, dass die Autorin wissen will, über welche Fähigkeiten und Fertigkeiten des autonomen Lernens die Studierenden verfügen, das am besten dann die Studierenden selbst wissen und parallel wurde auch die Meinung der Expertin geprüft, als Expertin hat hier die Lehrerin gewirkt.Die Studierenden können dann auch Ihre Meinung äußern und ich erfahre, welche Änderungen im Laufe eines Jahres vorkommen, wenn ich mit der entsprechen Methodik einen Einfluss auf die Gruppe ausübe.

Bei der Arbeit mit den Studenten wurden die folgenden methodischen Vorgehen verwirklicht:

1. Festlegung des eigenen Lerntyps.
2. Diskussion im Klassenraum über die Lernstragien und Lerntechniken anhand der benutzten Lehrwerke.
3. Selbstkorrektur von Kontrollarbeiten von Studierenden, sie bekommen von der Lehrerin die schriftlichen Arbeiten zurück, wo die Fehler nur unterstrichen sind, die Korrektur und Fehlererklärung müssen sie später einreichen.
4. Selbst vorbereitete Präsentationen zu einem bestimmten Thema mit dem Wortschatz zum neuen Thema.

5. Übernahme der Eigenenverantwortung durch Studiernende, auch in technisch organisatorischen Fragen, z.B. Bereitstellung der für die Stunde notwendigen technischen Medien.
6. Selbst gemachte Kontroll- und Wiederholungsübungen, um die Kenntnisse des erworbenen Stoffes zu überprüfen und zu verbessern.
7. Übernahme der Lehrerrolle. Die Studierenden bekommen ein Thema, z.B. ein Grammatikthema und sie sollen jeder eine Stunde vorbereiten, das neue Thema erklären, die Fragen der Gruppe beantworten und Übungen machen.
8. Außerdem wurde dafür gesorgt, dass im Klassenraum eine angstfreie, angenehme Atmosphäre herrscht und dass die Studierenden die Autonomie in Auswahl von Lernmaterialien bekommen, sie können, zum Beispiel, die Bücher, die sie in der Hauslektüre lesen werden, frei auswählen, auch die Seitenzahl wird in einem bestimmten Maßstab gegeben, nicht 100 Seiten, sondern von 30-100 Seiten. So können die Studierenden sich wohl fühlen, auch wenn sie nur das Minimum geleistet haben.

Die Studierenden haben dann dreimal Fragebögen bekommen mit den folgenden Behauptungen. Sie sollten die Behauptungen bezüglich ihres autonomen Lernens mit 1-5 Punkten bewerten.
1-trifft gar nicht zu 2-trifft fast nicht zu 3-trifft teilweise zu 4 –trifft meistens zu 5-trifft völlig zu.

Tabelle 2. Fragen aus dem Fragebogen zur Fähigkeit des autonomen Lernens.

Behauptung
1. Ich kann die Beantwortung über meinen Lernprozess übernehmen, ich habe die Freiheit, mich selbst zu entscheiden, wann, was und mit wem ich lerne.
2. Ich bin mit den Lernstrategien und –techniken vertraut, dank der Lehrerin und den Materialien für das Studium.
3. Der Lehrer bestimmt nicht alles im Lernprozess, er ist nur ein Helfer.
4. Ich kann selbst meinen Lernfortschritt einschätzen .
5. Ich kann selbst die neue Information mit meiner vorherigen Erfahrung verbinden.
6. Ich weiß meinen individuellen Lerntyp und kann diese Kenntnisse beim Erwerb der neuen Information nutzen.

Insgesamt wurden 70 Studierende und ein Lehrer-Expert dreimal im Laufe eines Jahres befragt. Sie studierten Deutsch an der Fakultät für Geisteswissenschaften. Die Ergebnisse wurden mit dem Programm SPSS 19 bearbeitet. Dabei wurden folgende Methoden eingesetzt: Cronbachs Alfa, der Kolmogorow-Smirnow-Test (KS-Test), die Mann-Whitney-U-Statistik und der Friedman-Test. Cronbachs Alfa wird vor allem angewendet, um die Reliabilität eines psychometrischen Instrumentes zu schätzen. Das Ergebnis – Cronbachs Alfa ist 0,88, das bedeutet, dass die ausgearbeiteten Kriterien als Messinstrument gut und valide sind, weil Cronbachs Alfa mehr als 0,8 ist. Ferner wurde der Kolmogorow – Smirnow - Test eingesetzt, um die Verteilung zu prüfen. Da die Signifikanz weniger als 0,05 ist, muss man ferner die nichtparametrischen Methoden anwenden. Mithilfe des Mann-Whitney - Testes kann man feststellen, dass die Meinung von Studierenden und des Lehrers-Experten über die angeworbenen Fähigkeiten und Fertigkeiten unterschiedlich sind. Zum Beispiel, die Studierenden behaupten, dass sie die Verantwortung für den Lernprozess vollständig übernehmen können - der Wert beträgt 66,70, der Lehrer meint, dass nur 56,30. Fast in allen Fällen bewerten die Studierenden ihre Fähigkeit, autonom zu lernen, höher als der Lehrer. Der letzte Test – der Friedman Test stellt die Entwicklung der Fähigkeit zum autonomen Lernen vom Anfang - von der ersten Befragung, über die zweite, bis zur dritten Befragung dar. Man kann an den Ergebnissen sehen, dass es eine bestimmte Entwicklung gibt, zum Beispiel, wenn am Anfang der Befragung bei der ersten Frage über die Beantwortung der Wert 1,67 beträgt, erreicht der Wert 2,09 in der Mitte und 2,24 am Ende, bei anderen Fragen sind die Ergebnisse ähnlich. Das beweist die Richtigkeit der im Unterrichtsprozess eingesetzten Methoden.

Zusammenfassend könnte man feststellen, dass das autonome Lernen im Fremdsprachenunterricht durch verschiedene Methoden gefördert wurde: durch Festlegung des eigenen Lerntypes, durch Übernahme der Verantwortung über den Lernprozess, über seine Vorbereitung und Durchführung, durch die Übernahme der Lehrerrolle und andere Maßnahmen. Das ausgearbeitete Messinstrument – die Kriterien - wurden auf Reliabilität überprüft und es wurde festgestellt, dass sie für diese Messung passen. Mithilfe des Whitney-Mann-Testes und des Friedman-Testes wurde überprüft und festgestellt, dass die Bewertung von Studierenden selbst und des Lehrers-Experten unterschiedlich ist und dass die im Unterricht eingesetzten Methoden die Fähigkeit der Studierenden zum autonomen Lernen gefördert haben.

Summary

The article “Facilitating of the Learners’ Autonomy at the University of Latvia” is dedicated the problem of the independent learning of the students and how to facilitate it. It is very important also for the future teachers. The author of this article will try to find out and to

characterize the criterions and the indicators of the learners autonomy facilitating content and offers the teaching methods for independent learning at the University by German language teaching.

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Literatur

Abendroth-Timmer, Dagmar. 2000. Lernen durch Lehren als ganzheitliches Unterrichtsprinzip. In *Pädagogische Konzepte für einen ganzheitlichen DaF-Unterricht,,* von Schlemminger Gerald, Brysch Thomas, Schewe Manfred Lukas(Hrsg.),Berlin:Cornelsen Verlag, 115-126.

Bimmel, Peter; Rampillon, Ute. 2000. *Lernerautonomie und Lernstrategien*. München: Goethe – Institut.

Birkenbihl, Vera F. 2001. *Das „neue" Stroh im Kopf. Vom Gehirn-Besitzer zum Gehirn-Benutzer*, Junger Verlagsgruppe, Offenbach, 1983 -1. Auflage, 2001-39. Auflage.

Buzan, Tony. 1993. *Kopf Training. Anleitungen zum kreativen Denken.* erste Auflage 1974, 1993 Wilhelm Goldmann Verlag, München.

Chudak, Sebastian. 2007. *Lernerautonomie fördernde Inhalte in ausgewählten Lehrwerken DaF für Erwachsene. Überlegungen zur Gestaltung und zur Evaluation von Lehr- und Lernmaterialien. Posener Beiträge zur Germanistik. Band 12*. Frankfurt am Main: Peter Lang Europäischer Verlag der Wissenschaften.

Demme Silke. 1999. Sprachlernbewusstheit und Spracherwerb - neue Lehrwerke und Anforderungen an (künftige) Lehrende im Fach Deutsch als Fremdsprache. In *Barkowski Hans, Wolff Armin Alternative Vermittlungsmethoden und Lernformen auf dem Prüfstand; Wissenschaftssprache-Fachsprache; Landeskunde aktuell-Interkulturelles Lernen* , 90-110. Regensburg, FaDaF.

Neuner, Stefanie. 2004. *Fremdsprachenlernen und Lernerautonomie. Sprachlernbewusstsein, Lernprozessorganisation und Lernstrategien zum Wortschatzlernen in Deutsch als Fremdsprache" Dissertation bei der philologischen Fakultät der Universität zu Leipzig,* Leipzig.

Nuissl, Ekkehard. 2010. *Empirisch forschen in der Weiterbildung.* W.Bertelsmann Verlag GmbH, Bielefeld, 133 Seiten.

Rost, Friedrich. 2004-2005. *Lern- und Arbeitstechniken für das Studium*. VS Verlag für Sozialwissenschaften, Wiesbaden.

Rubene, Zanda. 2008. *Kritiskā domāšana studiju procesā*, {*Kritisches Denken im Prozess des Studiums*} LU Akadēmiskais apgāds, Rīga.

Seel, Norbert M., Hanke, Ulrike. 2010. *Lernen und Behalten*. Beltz Verlag, Weinheim und Basel.

Steinig, Wolfgang. 1989. Kann man eine fremde Sprache autonom in der Schule lernen. Zur Quadratur des Kreises. In Müller, Martin u.a (Hrsg.) *Autonomes und partnerschaftliches Lernen. Modelle und Beispiele aus dem Fremdsprachenunterricht,* 31-49*.* Berlin, München: Langenscheidt.

Wolff, Dieter. 2003. Förderung selbst gesteuerten Fremdsprachenlernens. In *Handbuch Fremdsprachenunterricht*, hrsg. Bausch, Karl-Ricard; Christ, Herbert; Hans- Jürgen Krumm, 321-326. Tübingen und Basel: A. Francke UTB.

Evaluation of Sexual and Reproductive Educational Programmes for Adolescents in Ghana

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Abstract

In this paper educational programmes for sexual and reproductive health for adolescents in the Bolgatanga Municipality in Ghana will be evaluated by Dutch university students as their final thesis. Educational programmes have been evaluated and are compared with the conceptions and the practices of youth in the Bolgatanga Municipality. Suggestions to improve the effectiveness of sexual and reproductive educational programmes by making use of the conceptions and practices of the pupils have been made. This inventory is part of a long term project on youth, relationships and sexuality in the Bolgatanga Municipality to get insight in the conceptions and practices of adolescents regarding relationships and sexuality and to improve educational programmes on sexual and reproductive health. The inventories are carried out by student teachers from Inholland University of Applied Sciences in cooperation with the Youth Harvest Foundation Ghana. This paper is a contribution to the increasingly developing teacher education programmes in international context directed on the enhancement of the quality of life in local cultural settings. Herewith, we want to promote that practitional inquiries and communications developed in learning communities with local stakeholders in an international context becomes an important part of the professional education of (student) teachers in Europe.

Keywords: Sexuality, Ghana, educational programmes, adolescents, students

Introduction

Ghana is a West-African developing country with more than 23 million inhabitants. Four off the five inhabitants have to live on less than two dollars a day. The Upper East Region is situated in the north-eastern corner of Ghana and is bordered to the east by Togo Republic, to the north by Burkina Faso and to the west by Ghana's Northern Region. The population of the Upper East Region is about 920.000 inhabitants of whom about 70,000 are located in Bolgatanga. This region is also one of the poorest in the country.

The Ghanaian youth encounters several negative consequences among their sexual and reproductive health like unsafe and unwanted sexual actions, followed by sexual transmitted diseases, HIV/Aids, unwanted pregnancies and death and mutilations caused by abortion.

To cope with these problems, the Youth Harvest Foundation Ghana, established in Bolgatanga, promotes the sexual and reproductive health and rights of adolescents and wants to make a positive contribution to their healthy development into adulthood. Here fore, the foundation develops lesson materials for young people into a Sexual Reproductive Health and Rights (SRHR) program. Teachers and student teachers from a variety of countries give these lessons in schools that ask for help in this respect (Youth Harvest Foundation Ghana, n.d.).

A teaching strategy and pupils' conceptions

David Ausubel (1968; Ausubel, et al. 1978) indicated the importance of pupils' conceptions for teaching in his well know statement: "If I had to reduce all of educational psychology to just one principle, I would say this: the most important single factor influencing learning is what the learner already knows." He adds: "ascertain this and teach him accordingly."

We wanted to bridge this gap between 'what the learner already knows' and new subject matter, by investigating prior knowledge and emotions of students regarding sexuality. We also did an inventory on the structure of educational programmes that have proven to be effective in teaching SRHR programs. Based on the findings we do suggestions how SRHR teaching and their teachers can make use of the results.

This implies that the truly effective teacher not only knows the subject matter well enough to be able to present all of the rational and emotional pieces and the pattern that will enable the students to put those pieces together. He or she knows also the alternative ideas that the students may bring to the class and how to open their minds so that they become willing and able to accept successfully the subject matter that is sometimes contradicting to their original ideas. In this way the primary goal of instruction becomes not merely to teach concepts and conceptual systems but to teach students how to change everyday ideas and invent new ones when it is appropriate to do so (Lawson 1994).

Research on sexual education shows that this can be a successful teaching strategy. When the conceptions and the behaviour of young people in specific social and cultural contexts are examined and implemented, effective interventions can be developed and applied (Stephenson 2009; Awusabo-Asare, et al. 2004).

During the development of the SRHR program of the Youth Harvest Foundation Ghana (YHFG) the conceptions and behaviour of the youth in the Ghanaian cultural and social contexts were not taken into account. Since November 2009 the YHFG started in cooperation with Inholland University a research project on the conceptions and practices of the youth about sexuality and relationships in Bolgatanga. The aim of this four-year during project is to advice the YHFG on the development of effective sexual and reproductive education strategies that are connected with the conceptions and practices of the youth in Bolgatanga (Van Duyvenbode, et al. 2010)

In this paper the findings of three students from Inholland university, working on their bachelor thesis partly in host families in Bolgatanga, are presented. The first student evaluates existing SRHR programs and their documented experiences, the second assembles the questions youth in Bolgatanga has concerning their sexual and reproductive health and the third one does an inventory among youth about their conceptions and needs regarding sexual and reproductive health education during the SRHR program of the YHFG in Bolgatanga.

The aim of comparing and combining the findings of the three inventories is to advise how to enhance the effectiveness of the existing sexual and reproductive educational programme of the foundation.

Research questions

Three research questions are formulated in relation with the three inventories:

1. In which way can the YHFG organize its sexual education program in accordance with general education practices?
2. Which questions have the young people of Bolgatanga regarding their sexual and reproductive health?
3. In what way helps the existing program on sexuality and reproductive health of the YHFG to provide into the needs and wishes of young adolescents in Bolgatanga?

Resources and respondents

Each inventory has its own resources and respondents. These are:

1. SRHR programs of other countries, experts on SRHR and data in literature.
2. Youth, social workers, health workers and religious leaders from the Islamic en Christian community.
3. Students of Senior High Schools in the age between fifteen and twenty-one years old.

Methods

Inventory 1: structuring an educational program

Desktop research; a study and analysis of three SRHR programs in Africa: The World Starts With Me (WSWM), Adolescent Sexual and Reproductive Health (ASRH) Project Manual, and the YHFG Sexual Education Program. A semi-autobiographical graphic-novel, Aya from Youpogon, is studied also.

Field research; interviews with experts and developers of SRHR programs and experienced YHFG teachers.

Literature research; theoretical framework on SRHR and the organization of educational programs.

Inventory 2: questions of Ghanaian youth about sexuality and health

Youth of the age of fourteen up to eighteen is interviewed on the questions they have about sexuality and health. The nine respondents belong to Islamic, Christian and Traditional youth.

Professionals like a social worker, health workers and religious leaders from the Islamic en Christian community are interviewed on the questions of youth they are confronted with in this subject area. All interviews were recorded on an audio device and afterwards protocolled.

Respondents are found with the help of the Youth Harvest Foundation Ghana, an orphanage home and the host family.

Inventory 3: ideas of adolescents during SRHR-lessons of the Youth Harvest Foundation

The focus here is on the preferences en needs among young adults during the sexual reproductive health lessons of the YHFG. Methods consist of open- and classical interviews and participatory observation. Classroom interviews were held next to eight individual interviews. The respondents are students from the Senior High Schools, based in Bolgatanga, where the YHFG gives sexual reproductive health education. They vary in age from sixteen years to twenty one years. Both boys and girls participated and their religious backgrounds are Christian and Muslim. All interviews were recorded on an audio device and afterwards typed out literally.
The results of the three inventories are combined to give suggestions for the development of a teaching strategy on sexual health education that addresses the ideas and questions on sexuality found in young people in Bolgatanga.

Results

Structuring an educational program on SRHR

Based on the literature on Sexual Health Programs (IPPF 2006-2010; UNESCO 2009; Kirby, et al. 2005; Population Council 2009) we found five elements to make a SRHR program effective towards its goals, that is: making adolescents aware of their own sexuality and rights so they can make responsible and considered choices about their future.
These elements are:

1. Program Design: Logical sequence of issures: start with who you are and build up to your

future self. Create a safe and inspirable enviremont

2. Clear description of each lesson: Acknowledge that students allready know more about

sexuality then we think they do. And have many other unexpeted beliefs that play a role.
Every lesson includes objectives, that has to be learned at the end of each theme or lesson. Also the alternative ideas of the students that should be changed belong to the educational aims here. Start each lesson with a 5 minutes warming-up and build up to an interactive assignment that teaches the objectives in a playfull manner. End with a summary.

3. Active learning methods: We learn by experience, behaviour and act. Only listening to

information about sexuality won't change our behaviour. Active learning methods make the student think, discuss and learn to listen. It also helps student to develop skills as debating.

4. Approach – CSE: Comprehensive Sexual Education: This method adresses: learning about yourself, developing skills and learning about sexuality, health and rights.

5. Community: Experiences show that if the community knows what happens in the class they support not only the program, but also their children by learning about sexuality and health.

In this general program stucture, the most important single factor influencing learning is so far not made explicit missing, namely what the learners already know and think about the SRHR themes and its content (see Ausubel 1968). We will ascertain in the following inventories the ideas and questions young people in Bolgatanga have regarding sexuality and health and we will suggest how to place them in the program.

Questions of Ghanaian youth about sexuality and health

The outcomes on the interviews of the nine students show that they experience some difficulties to differentiate between what is true and what isn't true about what they hear from their peers in relation to sexuality and reproductive health. They indicate also that they don't know a place where they can go to with their questions about these topics. Moreover, they want to know how to get over the shyness that stops them from going to a professional. The professionals interviewed confirmed the questions of the students from their own experiences.

We included the questions we found youth have about their sexuality and reproductive health in the program structure we developed as shown in table 1.

Three aspects youth mentioned in the interviews that are not in the new program are homosexuality, how do you advise your friends about this subject and where can we go to with our questions about sexuality and reproductive health? Three quotes from interviews of student respondents are given here as an illustration:

"Why is it that eh, if a boy have feeling for a girl, for a long time, anytime, the boy sleep and dream about the girl trough that instance can, the boy can wet the bed?"

"Yes, let say relationship, if you have a relationship with a boy and the boy doesn't love you, they just want to take advantages of you, the boy wants to take advantages of you, what do you do?

"Yes, eh, like adolescent like this, how will you do to protect yourself from having sex with boys?

Ideas of adolescents during SRHR-lessons of the Youth Harvest Foundation

Interviews on the needs and wishes of the students show that the students from Bolgatanga are really pleased and satisfied about receiving the sexual reproductive health education. They are very enthusiastic about the sexual education program they follow. They are grateful to be educated on this subject because they see the importance of the education. This education prepares them for the future, they say.

Another important outcome is the appreciation the students have for the educators. This is related to the fact that the educators allow students to ask any question at any given time. The importance to have this freedom to the students is great since the education system in Ghana normally does not allow this and so the relation between teachers and students is more formal.

Further, interviews revealed that students want to learn about developing skills how to transfer knowledge to others. Also, there is a lack of educational means, according to the students. They find this disappointing. When they see examples during the lessons, they say they will remember the information better. We included the ideas and questions found here in the program structure we developed as seen in table 1. Three quotes from interviews with the respondents are given here as an illustration:

> *"I say girl, you should know various ways how to protect yourself against other diseases."*
>
> *"What my main aim is to learn about myself, the human being, how I can impact on the life of people around me. Like knowing yourself is very important in your life"*
>
> *"I think the menstruation is good, because it's a normal thing that every woman or every female have to menstruate"*

An advice has been developed for a new programme structure in seven themes for an SRHR course, including the questions, needs and wishes the Ghanaian students explained in the interviews (see table 1).

Table 1: Program structure, and the questions, needs and wishes of Ghanaian students

THEME	**Questions of Ghanaian students about sexuality and health**	**The needs and wishes of the Ghanaian students**
1) This is me Based on getting to know yourself. This theme includes an introduction of the program, changes in mind & body and personal hygiene. All these factors will have a positive influence on the selfesteem of the students.	Wet dreams: how do they work? Why are boys interested in girls who dress sexy? How does the menstruation work? When is the adolescence? What is changing in my mind during the adolescence?	What is menstruation? Personal hygiene. Circumcision: wrong of right? Becoming a women/men. The human body, how does it work?
2) Relationships and Love Relationships and Love explains the different kind of relationships with friends, parents en love. It includes gender role and equality. What we also added to this theme is, what we call Loving Rights, this lesson is about peer pressure, abuse, coercion and Female Genetal Cutting.	Relational skills for girls: when boys only want a relationship because of sex .	Knowledge and preparation for future marriage.
3) Myths and misconceptions Here we include myths and misconcepetions, because research shows if these are not mentioned, students won't know the truth about them.	Breaking the hymen	- Menstruating through the palms of the hands. - Using sperm to cure pimples.
4) Family Planning having save and responsible sex, protection and pregnancy	Using a condom (how to prevent pregnancy with condom). How to prevent teenage pregnancy? How do girls get pregnant? How does a woman give birth? Protection against STD's en HIV/Aids.	Adolescents think this subject is only for adults.
5) Irresponsible Sex These lessons learn the consequences of unprotected and unwanted sex, HIV/aids, STD's, Abortion and health clinics	Abortion What is Aids?	How to protect from HIV and STD's.
6) You have a choice You have a choice is about developing more skills, to debate, negotiate, to say No! and avoiding risky situations.	How girls can prevent their selves of having sex with boys.	Preventing unwanted pregnancies subsequent to forced marriages.
7) Saving the best for last With this theme the student can show what they want in life and what their future dreams and goals are.		

Conclusion & Discussion

Combining the three inventories we can conclude the following. The actual Sexual Health Education in Ghana can restructure its educational program via the nine elements to improve its effectiveness, such as introducing active learning methods, enhancing the competences of the teachers and stressing what is healthy for the students. Moreover the restructuring can apply the ideas and questions of the youth they have on sexuality and health: they can be linked to the content of the educational program, enhancing its possible effectiveness again.

We developed examples of teaching strategies for SRHR in this respect in the foregoing pages.

For teacher education there are a number of consequences connected to such an approach.

An important issue is that they should learn how the program works

Only a good implementation can make the program work. If the teachers are bound to religion, culture and family standards, can they talk openly about sexuality and sex in general? Discuss the essence of the program. Learn teachers its about making choices, not about education on how to have sex.

To support the teacher, write the program minute by minute. The program includes a time schedule of each lesson, a description of objectives and a paraphrase of each activity and the more you repeat comments and objectives, the more positive students will look at it. Each lesson should end with the most important comments and objectives. If enough material is available, a summary on paper would be the best option. Try to minimize text, rather show pictures and sketches. Students can take the summary to their homes and show their relatives what they learned. They will learn by teaching their relatives. Ithe program doesn't only give information, it teaches students to think for themselves and make responsible and considered choices for the future.

Because of religion, cultural and family beliefs, not everyone in the community will support the SRHR program. Therefore, it is best to involve the community by developing each program or, if that moment is over, explain them what the program does. Give them a vote in how the program should look and what it includes. Show them it's not about learning how to have sex. It's about making responsible considered choices.

Further research is needed. A thus reformed program can be tested on its effectiveness and evaluated among the youth. We suggest also a deeper analysis of the cultural context. There is no literature about this ethnic group. We found that the students were eager to transfer knowledge to others; peer education could be a promising teaching strategy to be introduced in the future.

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References

Ausubel, D.P. 1968. *Educational Psychology: a cognitive view.* New York: Holt, Rinehart and Winston.

Ausubel, D.P., Novak, J.D., Hanesian, H. 1978. *Educational Psychology: a cognitive view.* New York: Holt, Rinehart and Winston.

Awusabo-Asare, K.; Abane, A.M. & Kumi-Kyereme, A. 2004. *Adolescent Sexual and Reproductive Health in Ghana: A Synthesis of Research Evidence.* The Alan Guttmacher Institute.

Duyvenbode, van S., Wijk, van, M., Geugten, van der, J. & Brinkman, F. 2010. *The Conceptions and Practices of the Islamic and Christian Community in Bolgatanga in Ghana in relation to Sexual Health Education.* Paper presented at the ATEE conference August 26th – August 30th 2010, Budapest.

IPPF. 2006/2010. *IPPF Framework, for a Comprehensive Sexuality Education.* London, UK.

UNESCO. 2009. International Technical Guidance on Sexuality Education. In: *UNESCO, Topics and learning objectives* (Volume II). Paris, France: UNESCO.

Kirby, D., Laris, B., & Rolleri, L. 2005. *Impact of sex and HIV curriculum-based education programs on sexual behavior of youth in developing and developed countries.* Family Health international. Washington DC: Family Health International.

Lawson, A.E. 1994. Research on the acquisition of science knowledeg: epistomological foundations of cognition. In: *Handbook of research on science teaching and learning*, ed. D.L. Gabel, 131-177. New York: Machillian Publ. Comp.

Stephenson, R. 2009. Community Influences on young people's sexual behavior in three African countries. *American Journal of Public Health*, 99 (1).

Population Council. 2009. It's All One Curriculum: Guidelines and Activities for a Unified Approach to Sexuality, Gender, HIV and Human Rights Education. The International Sexuality and HIV Curriculum Working Group. http://www.popcouncil.org/publications/books/2010_ItsAllOne.asp

Youth Harvest Foundation Ghana. (n.d.). Background - Life in the Upper East Region. Youth Harvest Foundation Ghana. http://www.yhfg.org/background.html

TEACHERS OF THE VOCATIONAL EDUCATION

Combining Theory and Practice in Vocational Education

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Abstract

The basic task of vocational education is to prepare skilled professionals who after their education are able to develop the skills needed in work life. The education should also prepare learners to meet with the challenges of change in the future. Development in work life offers challenges also to professionals for renewal. Consequently, global perspective has to be taken into account, and the teaching should be designed to form holistic entities.

The task of education is to teach students to master the skills needed and the theories connected to them. In today´s education, both in vocational and academic, theory and practice are often apart from each other.

A new kind of learning environment was piloted in Rovaniemi and Kuusamo vocational institutes in northern Finland. It was started in 2009 and is going on still. The research group (N= 20) represents the fields of electricity and refrigeration technology. Methods of data collection were interviews, teacher´s observations and test results. The preliminary findings show that a new kind of approach increases theoretical understanding and practical skills as well as strengthens the mastery of the course entities.

Keywords: professional, proficiency, skill, theory, understanding, vocational education

Introduction

"A person´s knowing and skills are like a hidden treasure." (Kojonkoski-Rännäli 1996) It is a chance to be found and one has to become conscious of. It is hidden from other people, because it is an inner resource, but is hidden even from the person him-/herself. A person´s growth into a skillful and knowing professional who is aware of his capacities is not only a natural process, but it needs an educator and is based on choices.

There are different definitions of skills and developing the skills. A skill can be understood as a change from giftedness to skillful action in which a skill is the final outcome of learning and

practicing. A vocational task can be made up of various sub-tasks and the daily routines connected with them. They can be called skills.

Vocational knowing is concerned when open problems are the targets of solving. In this process the aims must be defined and alternative ways of solving the problems must be found. A skillful performance is based on the system of inner patterns which directs the action. Attaining a vocational skill requires: a) cognitive processes, b) motoric skills, c) visual outlining, d) social competence and e) strategic ability.
Vocational skills can be simple or complex unities of learning. Simple skills are short-term and they are learnt fast, for instance the lift or move which is based on the movement of a hand. Complex skills are learnt through three phases which consist of: cognitive, associative and autonomous phases. Learning a complex skill takes place as the result of learning the routines and sub-routines. Complex skills are made up of simple skills. A complex skill develops slowly, after thousands of times of repetition there is still left something to be learned.

Research questions, context and data collection

Teaching skills is a demanding entity in vocational education. Its contents must be planned carefully from the points of view of the aims to be learnt and the expectations of working life. In every trade knowing the practical skills is a central aim, and the readiness to it should be attained during the education. In vocational education teaching the manual skills should be made into a meaningful and challenging unity for the learner. Teaching manual skills does not pertain only to the mechanical learning of some working method. It must contain reflection and the development of perceptive ingenuity of thinking. In addition, it must develop the individual´s vocational realization and inner knowledge.

Consequently, a central question is:

1) How can vocational studies be constructed to create a motivating experience to learners and inspire them for lifelong and life-wide learning as well as to make them success stories in their work?

A continued question in education is:

2) How to help the learner to the top of his own proficiency as the professional who has built a strong professional identity during his education?

The idea of integrating theory and practice in the teaching of professional skills is being piloted in a new kind of learning environment in Rovaniemi and Kuusamo Vocational Institutes in northern Finland. The pilot project was started in 2009 and is going on still. The teachers (N= 12) adopted a new kind of approach to their classes and teaching according to the design to be explained in the next chapters. The present research data were collected from the group of 35 students aged 17 – 20 years. They represent the fields of electricity and refrigeration technology. The methods of data collection were interviews, teacher´s observations and test results in this research. In general, their learning is analyzed and evaluated by different methods connected to evaluating the mastery of skills, for instance by written tasks, workshop work, self-assessment, peer assessment and the evaluation by the teacher and the representatives of on-the-job learning. In addition, portfolios and learning protocols/ diaries are recommended.

The principles of the present project

The starting points of teaching

The importance of the following basic tasks of vocational education should be made understood by every vocational teacher. They form the red thread through the whole program and make a continuum in teaching.

1. Teaching the basic skills and the theories and attitudes connected with them (they are learnt gradually moving from small items towards greater unities through constructing schemes).
2. Confirming the knowing and getting prepared for the working life (internalized models, speed and routines).
3. Confirming vocational identity and the top quality of knowing (automation of the learnt items, mental image exercises, connections with working life, encountering professionals).

The sectors of learning

Learning proceeds as reflective action towards vocational skills and needs enough time to attain the targets. Vocational growth begins from a novice and moves towards an expert. Expertise is attained as a learning outcome of knowing and skills constructed in a person´s schemes. It develops slowly and takes about ten years in average to be attained (Eteläpelto, et al. 1997).

Kolb (1984) describes learning as a cyclic process which begins from a concrete experience and proceeds via reflective observation and abstract conceptualization to active action. Experiential learning describes learning-on-the-job and includes the following four phases (according to Ruohotie 2000, 139):

1. Experiential learning which is direct, intuitive, open, emotional and creative action
2. Reflective observation which stresses the different viewpoints of the phenomenon and the reflection of the person´s own learning
3. Conceptualization which tends to disciplined, systematic reasoning, problem based solutions and forming theories suitable to them.
4. Active functioning for learning which tends to find functional practical solutions, exert influence on people, find application and change things.

Routine learning

Learning skills often begins with simple routine items which releases learning the principles and habits of functions. It is the basis of developing vocational skills and expertise. The sub-areas of learning are simple routines, *what will be done, in what order, when and why.* Routines are learnt through modeling and repetition.

Confirming and deepening learning

A single event of learning and practicing does not confirm the permanent mastery of the skill. It requires repetition which aims at involvement, integration and automation. The objective is to increase a learner´s understanding which will be available in new situations. Analyzing and constructing a new scheme contains the question: *why will this indeed be done in this way?*

Emancipatory learning

When a learner has attained the skill to act according to the model, he has to take a critical view of the sequence of acts in his work. He has to learn to change his viewpoints as well as to assess them. This presupposes, however, a longer period of practice/ exercise which will result in professional knowledge and skills.

Learning the work means understanding and increasing understanding. Learning is continued through training in real situations (on-the-job learning), through simulated situations and development projects. At work the learner has to test the practicability and adaptability of theory, as well as the changeable character of work and suitability to further development. The richer connections are created between theory and practice, the more flexible will the competence be.

In other words, in this phase there is created, under the supervision of the teacher, a synthesis of theoretical knowledge and practical skill. Answering the question *why does this happen, what phenomenon is behind this observation* leads to deeper understanding.

Instructions for teachers in teaching skills, motivating for the task and giving directions

The objectives of the lesson are first presented, and the importance of mastering that certain skill is justified. The outline of the lesson contents is explained; the methods and various phases are shown. The instructions for carrying out the work must be given in 20 minutes. If the topic is wide and difficult to outline, it must be divided into parts and taught step by step. Involvement and motivation are important aims and must be paid attention to in the instruction.

Learning environment, workshops and training contexts

The event of teaching a skill must be planned beforehand so that every student has a training point of his own or possibility to work. The necessary equipment and materials must be ready in the learning environment. Safety at work must be taken care of by following the regulations concerning it. Right tools must be chosen and the usage of them has to be taught before the actual training as well as the usage of protective equipment. The workshop must be kept clean, and everybody has to pay attention to it during the lesson. Tools and apparatuses have to be cleaned according to the given advice.

Principles and schemes

Learning is an individual process, and in the learning of skills various guiding methods are often needed due to the individual ways of learning. It must be based on the strategies of learning, and it shall have to include the skills of problem solving and decision making. Teaching the skill has to proceed starting from the learner´s situation. Often the mastery will be attained after a number of repetitions.
On no occasion, a teacher is allowed to underrate a slow learner; he has to be given time like the others, but more of it if needed. The obstacles of learning will often be smaller, when after the training there will be a sufficiently well-established scheme or the principle of learning. The better the schemes learnt previously can be availed of, the faster will learning become automatic. In teaching skills the direction should be towards deep learning and attaining a high level of knowing, as superficial knowledge does not develop proficiencies.

Levels of learning, reflection and socio-cognitive aspects

Vuorinen (1991) defines the comprehensive mastery of vocational skills as the mastery of thinking action and the ability of controlling action in the way which is optimal for the task at present. He quotes Mickler et al. (1977) and introduces their idea of developing the mastery of the skills on the mental level. They are grouped as follows:

1. On the lowest, *senso-motoric level* non-autonomous sub-movements are automatized and directed subconsciously "on the spinal level".
2. On the following level the entirety of the process is controlled *half-consciously* with the help of various observed signals and brief concrete thinking processes.
3. On the *level of adaptive thinking* the process can be adapted to new acute situational changes. This level presupposes, consequently, the ability to generalize.
4. The *level of systematic thinking* is present in the situations which demand the decision of action to be based on various learnt functions. The *level of adjustment* makes it possible to apply the learnt material to new situations.
5. If the adjustment takes place on the *level of strategic thinking*, it is possible to develop new models of problem solutions and plan beforehand comprehensive events of action.

Controlling the situational elements of on-the-job learning

An important thing in teaching skills is to train the learner to be able to work as a member of working community in the future. It has to be as realistic as possible and imitate the circumstances of working life. The event of learning should be intensive and effective. It need not be fastidious, but the learners will not be allowed breaches either. Learners have to learn the rules of behavior in job. Social interaction has a central role in learning. Thus the readiness to team work must be practiced within skills lessons. The teacher has to observe the lesson, and he/she has to interfere, if he notices disadvantages or indifference.
Motivation plays a significant part in learner´s efforts. Faulty methods will not be accepted. Instead, they have to be corrected. Especially, the treatment and control of material must be carefully observed.

Reflection of theory and practice

It is important to make the student realize that theory and practical skills are not separate in mastering a trade. Revision fosters motivation for studying the matter in theory, and the close interrelationship must continually be stressed. Theoretical knowledge merely and receptive learning will not be processed into understanding, unless the received knowledge and experiences are tested, practiced and reflected.

Confirming vocational identity

The event of teaching the work must also develop the learner´s vocational identity. It is the education towards the right attitudes and the ability to appreciate his/her own competence. Sound pride of competence and vocation as well as everyday skills of life must be supported even in the events of teaching. It is important to remember that the more often the learner can have positive experiences and challenges the more strongly does it develop vocational identity. The teacher must support and strengthen it.

Closing the teaching event

The teaching event has to be ended with an analysis of the event. It must be given enough space and time, at least approximately 20 minutes. The starting point is to remind of the aims and evaluate how well they were reached. The targets which were possibly not reached are defined. The teaching event must include analyses which demand logical reasoning. The teacher must plan the questions beforehand. The event of teaching the work must develop the images and visions connected with the skill. They are items which can´t be learnt from a book. They require the ability to discern from the learning events that which is knowing and which is experience and opinion.

The research and preliminary outcomes

The teachers participating in the project were committed to follow the principles and aims of teaching
of the present project described in the above chapters.. They actually followed a kind of agreed seven-step model designed for this project for testing the pattern. The model thus included:

1) the outline of the lesson contents, methods and phases explained and shown,
2) organization of the learning environment and the equipment as well as making the safety measures understood,
3) instructions and guidance of the group including individual care taking,
4) control of situational factors in on-the-job learning and elsewhere, too,
5) reflections of theory and practice,
6) raising the growth of vocational identity, and
7) summarizing the action by analyzing what had happened.

At some points the process resembles the PBL (Kolmos & Fink 2004) process (cf Boud, et al. 1999; Nummenmaa, et al. 2001), but is more loosely applicable.
According to the teachers engaged in the project a few aspects were paid special attention to in examining the results hitherto. Points 1-3 above are self-evident in principle to trained teachers, but even they seemed to need to pay more attention to them. The following observations about teaching according to a new model were also made by the teachers engaged.

On-the-job learning was either a hinder or blessing depending on what kind of work place the student went to. The work places were chosen and controlled whenever possible. The best thing was when the school and the work place acted according to similar principles at work and had the same kind of aims and evaluation principles. Cooperation of the teachers and work place staff was necessary.
The students were to assess the outcomes of their on-the-job learning themselves and together with their supervisors. The following aspects were to guide their self-evaluation processes:

1. Specific vocational knowledge and skills, consisting of:
    - knowledge of work processes;
    - expertise in routines;
    - the qualifications of vocational technology or production techniques;
    - facilities for planning and developing;
    - specific skills of problem solving.
2. General competences and skills:
    - adaptive expertise or ability to act in new situations;
    - progressive problem solving;
    - interpersonal skills;
    - communicative skills;
    - ability to use ICT and information services;
    - critical thinking skills, innovative thinking.

3. Autonomy and self-direction:
    - planning one´s work and career;
    - developing vocational/professional identity;
    - autonomy and self-directedness;
    - reflexivity and self-assessment;
    - internal entrepreneurship.

(National board of education 2006; Räkköläinen& Stenvall 2008)

The students were not very far advanced in their skills after the first and not even after the second year of the education. Still, they were better than the students of the earlier years. It was apparently due to the new kind of approach to learning the skills. During the first on-the-job learning period the progress of the skills was greatest in group 1 above and less developed in group 3. In group 2 the progress showed the greatest variety, obviously depending on the personality of the student. The last year´s results are not here to be used. But it is supposed that the development has proceeded in the same way as in the previous years.

The demands concerning the know-how of vocational teachers will grow greater than before in the future. On-the-job learning will become a normal part of education. How and where can the teachers fulfilling the requirements of skills, both theoretical knowledge and practical skills, be recruited? These future changes must be taken into account in time. Also the awareness and evaluation of the learning conceptions guiding the events of work-based learning must be emphasized. (Vertanen 2002)

Developing vocational identity was connected to the attitudes of the teachers and work place colleagues and leaders. It is something that cannot be taught in the classroom with elaborate expressions, but it is learnt nonverbally by observing the persons around at work. Colleagues´ and teachers´ attitudes towards work and mastery of the skills in general seemed to have a great influence on developing self-image and the conception of oneself as a representative of the trade.

Reflection was emphasized throughout the learning process. In the beginning the students found it difficult to verbalize their experiences. They were made accustomed to it by dividing the reflection process into different phases according to Kolb´s model of experiential learning (1984). After the feeling phase reflective observation was approached by simple questions: 1) How did you manage with the task? 2) What kind of result did you get? 3) What should be improved? 4) Could you do something in another way? 5) What did you learn from the experience? and 7) What should you know more about the task or train more in?

After answering the questions above, first a few questions and gradually being able to answer more and more questions, the students were able to understand the work process both from the practical and theoretical points of view. Then they were ready to enter the

phase of abstract conceptualization in their mastery of the skill. This encouraged them to active experimentation of the skill, i.e. to a renewed doing phase.
The cycle of experiential learning closed the learning process, and every time something was being learned. It fulfilled the requirements of analyzing the process as well. To conclude, teaching must tend to the change in which understanding and skills become strengthened.
The preliminary findings show that a new kind of approach increased theoretical understanding and practical skills as well as strengthened the mastery of the course entities. The best observable single feature was the increased motivation of all the students to study the course entities. It also means that it is a teacher ´s duty to develop his/ her practices.
The research questions were:

How can vocational studies be constructed to be a motivating experience to learners and inspire them for lifelong and life-wide learning as well as to make them success stories in their work?

One of the possible ways to construct motivating and meaningful learning experiences is to use the above described 7-step method. It means that a teacher has to plan, prepare, organize and start the learning event carefully and pay attention to the diversity of learners as well as react to it. The teacher has also to control the situational factors of learning at school and on-the-job learning. He/ she has also to familiarize the students to reflective practices concerning their work and results and make students accustomed to self-assessment. All the steps aim at the learner´s ability to learn the theory while learning the practice. "*Nothing is as theoretical as a good practice. Nothing is as practical as a good theory."* (Hunt 1976)

How to help the learner to the top of his own proficiency as the professional who has built a strong professional identity during his education?

A strong facilitator in vocational growth was observing an expert in his work. The attitude seemed to move nonverbally from an expert to a novice as a kind of apprenticeship action. The first year students were, however, more concentrated on doing practical works following the example of the more experienced workers, and their attitudes were observed unconsciously. The more the students had gained skills, the more open they were to learn nonverbal and attitudinal things consciously. It is, however, the beginning of the path to the top their own proficiency, when they enter the work life as formally qualified. They need practice and repetition, successes and failures, reflection and self-assessment as well as peer evaluation and guidance of experts to grow into real professionals.

Discussion

Nothing speaks for the divinity of the teachers´ pedagogical ignorance, not within any branch of education. On the contrary, since the birth of educational thought, teaching has been seen as the most complex and demanding task. Clarifying the elements of successful teaching has been one of the most challenging tasks for the educational experts. (Fox 1983) Competence to teach is neither an inborn talent nor a result of expertise in a vocational skill.

An untrained teacher seems to think that teaching leads inevitably to learning. He/ she thinks that it is enough that a teacher explains, describes and shows the subject matter to the students. If the teaching measures do not cause any change in the student´s learning activities, teaching does not cause learning, either. (Lloyd Yero 2002) A competent teacher is able to help the student to study efficiently. For that reason it is of utmost importance to train vocational teachers pedagogically both in pre-service and in-service programs.

Conditions created in the environment which combines theory and practice are linked to subsequent retrieval and appropriate use of new information in the following way: 1) activation of prior knowledge, 2) encoding of knowledge in a specific context and 3) opportunity to elaborate on that information. Activating prior knowledge is a kind of cognitive structure that determines what is understood from a new experience and what is learned. New knowledge is encoded in a context modeled on practice. Knowledge is best remembered in the context it was originally learned. The possibility to elaborate on learned information provides redundancy in memory. It, again, reduces forgetting and abets retrieval. (Bridges 1992) Consequently, teaching theory and practice together, integrated with each other as well as controlling and guiding the work experiences seems to be a motivating and meaningful way to acquiring the mastery of vocational skills.

References

Boud, D. & Feletti G 1999. *PBL – Ongelmalähtöinen oppiminen. Uusi tapa oppia. [PBL – Problem-based Learning. A new way to learn.]* Helsinki: Hakapaino.

Bridges, E. M. 1992. *PBL for administrators.* Eugene, OR: ERIC(CEME023722.

Eteläpelto, A. 1997. Asiantuntijuuden muuttuvat määritykset [Changing definitions of expertise]. In *Muuttuva asiantuntijuus [Changing expertise],* eds. J. Kirjonen, P. Remes & A. Eteläpelto, 86-102. Jyväskylä: Koulutuksen tutkimuslaitos.

Fox, D. 1983. Personal Theories of Teaching. *Studies in Higher Educaion,* 8:2.

Hunt, D. E. 1976. Teachers are psychologists, too. On the application of psychology to education. *Canadian Psychological Review,* Vol 17 (3), Jul 1976: 210-218.

Kojonkoski- Rännäli, S. 1996. Craft as means of developing the modern individual. In *Sloyd competence in Nordic culture. Part III. Approaches to the nature of educational sloyd*

and craft, eds. L. Lindfors, J. Peltonen & M. Porko, 7-14. Technr <series B: 2/ 1996. Vaasa: NordFo.

Kolb, D. 1984*. Experiential Learning: experience as the source of learning and development.* Englewood Cliffs: Prentice Hall.

Kolmos, A. & Fink, F.K. 2004. *The Aalborg PBL model.* Aalborg: Aalborg University Press.

Lloyd, Yero J. 2002. *Teaching in mind. How teacher thinking shapes education.* Hamilton, MT: MindLight Publishing.

Nummenmaa A-R. & Virtanen, J. 2001. Opetussuunnitelma muutosstrategiana. [A curriculum as a change strategy.] *Peda-Forum* 2 (8): 41-43.

National Board of Education in Finland, 2006. *National evaluation data based on vocational skills demonstrations. Koppi-project 2002-2007. Project for developing national system of evaluating educational outcomes based on skills demonstrations.* Report 14, Helsinki: Opetushallitus.

Ruohotie, P. 2000. Conative Constructs on Learning. In *Conative Constructs and Self-Regulated Learning,* eds. P. Pintrich & P. Ruohotie, 1-30. Researchg Centre for Vocational Education Finland. Hämeenlinna.

Räkköläinen, M. & Stenvall, K. 2008. *Arvioi, opi ja kehity. Näyttötoiminnan laadunvarmennusta vertaisarvioinnilla. [Evaluate, learn and develop. Quality assurance by peer evaluation.*] Helsinki: Opetushallitus.

Vertanen, I. 2002. *Ammatillinen opettajuus vuonna 2010. Toisen asteen ammatillisen opettajan työn muutokset vuoteen 2010 mennessä. [Vocational teachers in 2010. The changes in the work of a vocational teacher by 2010.]* Tampere: Tampereen yliopisto.

Vuorinen, I. 1991. *Tuhat tapaa opettaa. Menetelmäopas opettajille, kouluttajille ja ryhmän ohjaajille. A thousand wasy to teach. A methodological guide to teachers, educators and group leaders.]* Tampere: Resurssi.

Policies Affecting Teacher Education in Vocational Education in Norway Under the National Qualifications Framework

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Abstract

Lately, greater attention is being given to technical and vocational education (TVE) across Europe, particularly in light of the economic crises that several countries are facing. This, in turn, raises many issues regarding lifelong learning and required key competences in the workplace, and places new challenges for teacher education in the TVE sector. This paper examines some of these key issues in Norway. This country has a well established system for technical and vocational education (TVE) with accompanying provision for teacher education. Norway has recently established its National Qualifications Framework (NQF), which is aligned to the European Qualifications Framework.

One important issue in Norway is the challenge faced by TVE in responding to the new and ever-evolving needs of the knowledge society. TVE provision must be versatile and flexible so that learners have the key competences needed to play new roles in a changing work environment. This has a knock-on effect on the type of teacher education that is most appropriate for preparing teachers for such roles. A second issue is the growing emphasis on learning outcomes as opposed to learning inputs. This has also driven the promotion of policies for the recognition of prior learning (RPL). The validation of non-formal and informal learning by TVE providers is not without challenge but there have been significant progresses in making greater use of RPL in technical and vocational education in Norway. The validation and accreditation of non-formal and informal learning have been part of the Competence Reform (Realkompetanse Reform) which was launched in 1999. A third issue is the need to support lifelong learning for teachers throughout the professional lifespan. The purpose of this paper is to examine policies that support lifelong learning for teachers within vocational education in Norway.

Keywords: technical and vocational education (TVE), recognition of prior learning (RPL), teacher education

Introduction

The aim of this paper is to discuss issues related to challenges faced by teacher education in technical and vocational education (TVE) in response to the new and evolving needs of the knowledge society and the policies that support lifelong learning for teachers within vocational education. This paper has a special focus on the developments taking place in Norway, vis-à-vis changes happening in the European context. Therefore, the discussion will focus on the policies that support lifelong learning for teachers within vocational education and its relation to teacher education in Norway.

To start with, I wish to state the view that teacher education is very important, no matter the knowledge area in which people wish to become teachers. I shall not elaborate around this affirmation because I believe that in the context of ATEE conference we agree on this statement. Therefore, I will just state that TE for TVE is very important.

This is the belief held by the educational authorities in Norway, as well in other countries in Scandinavia and also beyond them, such as in Germany and in Ireland, which have quite well established vocational education programmes, and consequently, have teacher education aimed at teachers within vocational education. Prior to dealing with the theme of teacher education, some elaboration about TVE in Norway seems necessary. Firstly, it will be presented how TVE and its teacher education are inserted in the educational system in Norway. Along with this presentation, references will be made to recognition of prior learning (RPL) and validation of non-formal/informal learning because they are part of TE for TVE in Norway. Secondly, the challenges faced by TE in TVE will be presented and discussed having in view the Norwegian National Qualifications Framework (NQF) which is aligned with the European Qualifications Framework (EQF-LLL).

A brief review of TVE in Norway and its teacher education

Norway has a long time and well established system for technical and vocational education (TVE) with accompanying provision for teacher education. Today"s technical and vocational teaching profession is a reflection of the development that took place in the post-war social democratic society, which strongly marked the policies of education and preparation of professionals and, concurrently, the development of Technical and Vocational Education (TVE) in Norway. The Norwegian trade and industry composition comprising a high number of small companies, and less of average size, often located far away from each other has, quite likely, contributed for creating a climate favourable to implement TVE policies at local level and, later, TVE within the school structure.

TVE has been part of upper secondary school since 1974, when the traditional Gymnasium and the vocational schools were unified by a comprehensive law (Upper Secondary School Act of 1974). It has also provided equal educational opportunities to young people,

regardless of class background, geographical location and gender. The assumption was that equality through education would contribute to overcoming social differences and give working class children the opportunity to be part of the middle class by means of their performances in the comprehensive school. Upper secondary school moved then away from the earlier traditional school pattern, which was essentially marked by the written culture of general education, and made it possible for skilled workers to have an upper secondary school degree in their areas of expertise. This was the first step toward connecting TVE to lifelong learning and to higher education. Several other steps taken later are presented next.

Another reform of upper secondary education in 1994 (Reform 1994) adjusted the curriculum

of upper secondary education by merging all branches - general, mercantile and vocational studies. According to this reform, everybody had a legal right to a three-year upper secondary education until the age of 20 years and, also, should have a certain amount of „general studies" in order to make the pupils eligible for higher education. This meant more theory in vocational studies. Today it is possible for all groups of pupils to continue their education by attending higher education (HE) institutions, if they have completed at least 35 hours a week of general education distributed on the following subjects: Norwegian, English, Social orientation, Sciences and Ecology (Tarrou & Holmesland 2007). Lately, the "Knowledge Promotion Reform" has introduced changes in the structure and organization of lower and upper secondary education and training with the purpose of linking curricula across different levels, and, particularly … in terms of bridging vocational and general education, as pointed out in a report by (Sultana 2008)[1]. All these changes have enlarged the space for TVE which is no longer restricted to the workshops. Figure 1 illustrates how TVE is inserted in the upper secondary school system in Norway and the pathway to a trade certificate, which prepares the ground for lifelong learning in the future.

[1] For brief overviews of the historical background of Norway"s education system and lifelong learning, see the report by (Sultana, 2008), pp 11-19 and (Tarrou & Holmesland, 2007).

VOCATIONAL EDUCATION IN NORWAY

Normal pathway to a trade/journeyman's certificate

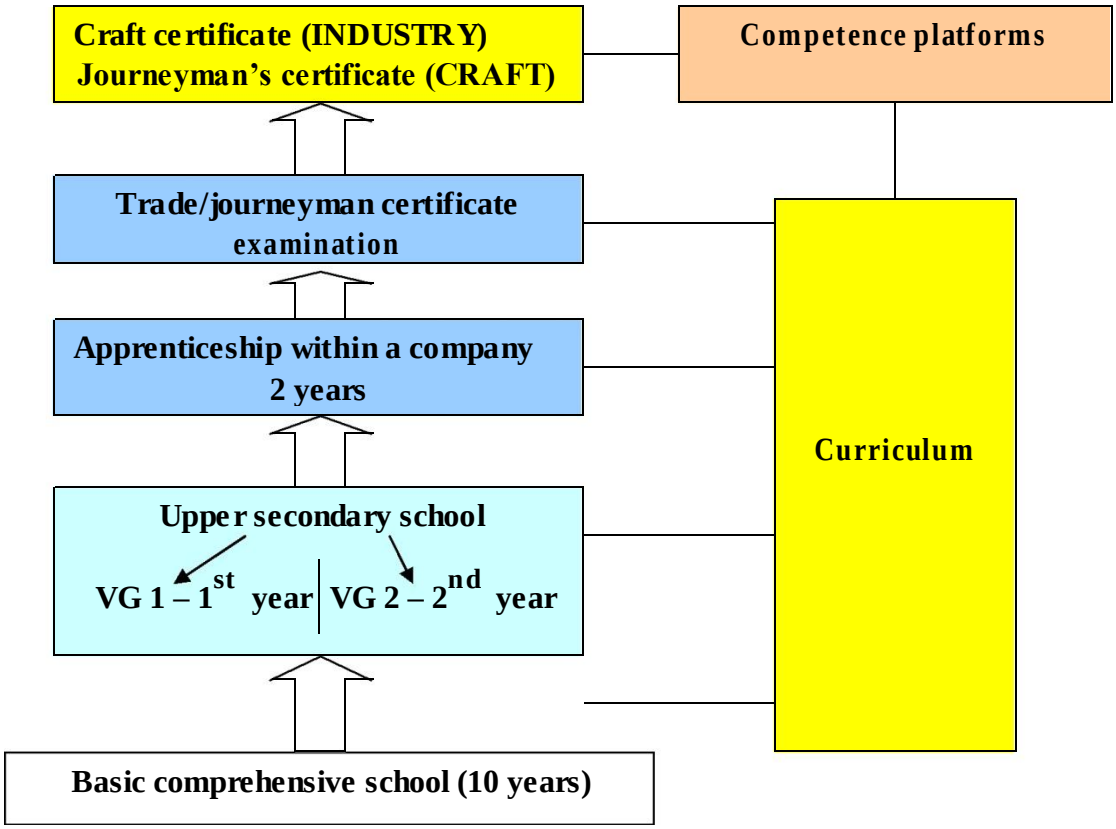

Figure 1. The path to vocational education in Norway

The inclusion of vocational education in the upper secondary schools has meant that TVE teachers work side by side with teachers of general education. There has also been an increase in the number of pupils attending upper secondary education. Table 1 presents the figures for year 2010, which shows that about 42 % of the students enrolled in upper secondary education were attending vocational programmes.

Table 1. Pupils[1], apprentices and trainees in upper secondary education, by education programmes[2] and grade

Categories	*Total*			*Programmes for general studies*	*Vocational education programmes*	
	Pupils	*Apprentices*	*Trainees*	*Pupils*	*Pupils*	*Apprentices (3)*
Total	192883	34 248	1 311	111074	81809	34248
Upper secondary school, level 1	76075	-	-	35490	40585	-
Upper secondary school, level 2	65005	83	11	29972	35033	83
Upper secondary school, level 3	51803	34165	1300	45612	6191	34165

SSB (Statistisk sentralbyrå, 2011)

1) 574 pupils in skill training at school are included.
2) New structure in upper secondary education, The Knowledge Promotion Reform from 2006/2007.[2]
3) 18 apprentices in general areas of study/Programmes for general studies are included.

The figures from Table 1 indicate the need of teacher education for TVE teachers, who teach the pupils in a wide variety of professions that lead to a trade certificate in several areas such as in building and construction, health, hair dressing, food and restaurant, to name some of them. Thus, TE for TVE is, in Norway, another important step taken for the sedimentation of lifelong learning within many different areas of the work life, such as for example, industry and enterprises.

[2] After the reform, vocational education consists of the following areas of study: Building and construction, Design/arts and crafts, Electricity and electronics, Health and social care, Media and communication, Agriculture/fishing and forestry, Restaurant and food, Service and transport, Technical and industrial production

Teacher education in general and for vocational education

The larger numbers of students finishing upper secondary schools and the greater variety in their backgrounds have created pressures for changes in HE institutions. A Law for Universities and University Colleges, approved by the Parliament in 1995 and implemented in January 1, 1996 (UFD, 1995) increased the flexibility for choosing learning arenas.
Greater flexibility in the access to higher education was attained through the national Lifelong Learning reform, the Competence Reform[3], which was launched in 1999 and opened up HE admissions to applicants with non-formal learning[4], as well as to those who wish to acquire new knowledge by means of continuing education. These measures also concern teacher education in general, and include many of the requirements for admission to higher education, which for a long time were the main entrance route for trade and industry workers into the teaching profession.

Teacher education for TVE

Teacher education for TVE is a special field. Teacher education for TVE has existed for a long time in Norway. The first school established for TVE teachers was organized by the Council of technical training in 1921, named Christiania Trade and Elementary Workshop School for Craft and Industry. Teaching consisted mainly of lectures combined with demonstrations and exercises in workshops and laboratories. The courses were offered during the day and in the evenings, for up to six weeks, and were aimed at supervisors in different occupations. Its development was accentuated when the public authorities of the technical and vocational education, prepared a Green Paper in 1943 which stated that the aspiring teacher should be proficient in the use of instruments and machines in which their pupils would receive instruction. The same document suggested the establishment of a school for TVE with a minimum duration of 10 to 11 months, perhaps up two years. The admission requirements were suggested to be a trade certificate as a qualified worker in a manual occupation or a corresponding education from a technical school. After the new law for TVE and the approval of the curriculum guidelines in 1946, the establishment of education for teachers in TVE was proposed in 1947, as an additional education in pedagogy, psychology, Norwegian language and arithmetic in addition to technical training. The course required 1760 hours of teaching during a period 40 weeks. TE for technical and

[3] The basis for the reform is the need for competence in the workplace, in society and by the individual. The reform includes all adults in and outside the labor market and it has a broad, long-term perspective. The reform is to be implemented as a process in which employers, employees and the government have to make an active contribution. An abridged version of the Competence Reform can be accessed in the following address: http://odin.dep.no/ufd/norsk/publ/stmeld/014005-040016/index-dok000-b-f-a.html

[4] As stated by the Ministry of Education, "Non-formal learning" is used to refer to all the competencies, which a person has built up through paid or unpaid work, continuing education, leisure activities and through other outside formal education, and which supplements the competencies this person has documented through basic education.

vocational training has been included in the higher education (HE) system since the Law for Teacher education of 1975.

As stated in the White Paper of 1996-1997 (Kirke, 1997), TE for TVE *is a double practice field, anchored in the teaching occupation and the profession for which the training qualifies.* This means that the education of teachers for TVE is grounded in and obtains its content from the tasks, functions and the work culture that characterises the teaching job as well as the different occupations. Thus, TVE teachers must have two very specific types of skills, which consist of the pedagogical and the practical skills. The combination of such skills has established a theoretical field of studies which is often referred to as "pedagogy of vocational education".

TVE teachers in Norway are recruited among professional workers that have a trade certificate earned after 12 years of education in the school system and two years of practice as an apprentice[5] in a company (see Figure 1). As they must also have two years of practice in the work life, TE students are adults with some years of work experience in industry, in crafts, or another professional area. Such a decision is part of their lifelong development. It happens often that these teachers have not completed 3 years of upper secondary education, as other students enrolled in teacher education programmes in higher education. However, through the Competence Reform and recognition of their prior learning (RPL), acquired through formal as well as non-formal/informal learning, they are entitled to be admitted to TE within higher education.

Lifelong learning within TE for TVE

Many changes occurring in information and communication technology are bringing new challenges to teachers in all areas, and not least to TE in vocational education. The Knowledge Promotion reform in Norway from 2006/07 has its roots in the new educational demands on the post-modern society. According to CEDEFOP"s report (Cort, Härkönen, & Volmari), teachers are being confronted with a new situation and "...it is essential that teachers should continuously update their pedagogical and vocational skills" (p. 10). Educational theory suggests innovative teaching methods, which often require teachers" update in the technological developments. Likewise, the fast pace of technological changes affect the workplace and require that those concluding vocational training have skills that are useful and immediately applicable. If teachers fail to keep up to date with new technologies

[5] Apprenticeship schemes are part of the upper secondary school system. It is the final part of the education given at a workplace in the form of on-the-job training. The enterprises are obligated to submit the apprentice to tests relevant to the trade in which they are examined at the end of the training period, and the apprentice has the right to wages during the tests. Since the Law for Teacher Education of 1975, teacher education for TVE has been included in the higher education system. The law legitimated education and training for teachers in basic education (primary and lower secondary level), for pre-schools (kindergarten), for upper secondary schools as far as it regards teacher education for trade or industry.

and new working practices, vocational schools will produce candidates who do not have the skills required at the work place One of the key challenges facing TVE is how to guarantee that teachers" „vocational skills" keep up to date with developments that are taking place.
Next, I will focus on the challenges faced by teacher education for TVE in Norway having in view the need to adapt to European demands regarding qualifications that ought to be visible in the European market.

Some comments about growing importance of TVE in Europe and lifelong learning

Vocational education and lifelong learning have been lately receiving much attention in Europe as well as in the rest of the world. One of the reasons, perhaps, is that general education with a main focus in intellectual abilities alone, i.e., not combined with practical skills, is not creating opportunities for young people to enter the job market. There are plenty of unemployed young people today in Europe and elsewhere who are not only very visible, but are also causing a lot of political unrest. Educational authorities are aware of the dangers of unemployment, and especially about the future of today"s young work force. Therefore, many measures are being taken aimed at offering education, so much academic as well for professions that will facilitate entrance in the job market and mobility across countries. Investing in adult education by supporting lifelong learning, has been one of the important strategies of the European Commission. Next, I shall refer to the challenges faced by teacher education for vocational education in Norway, having in view the need to adapt to European demands regarding the visibility of qualification in the European market.

The concept of Lifelong Learning in Norway: How is it understood in Norway?

The concept of lifelong learning was introduced in Norway already in 1997 in a White Paper (KUF, 1997-1998) which was aimed at the work life and at further and continuing adult education. The result was the Competence Reform which was launched in 1999 as part of a comprehensive reform of the Norwegian educational system.[6] This reform is part of several changes that have taken place in the educational system and has had the purpose of opening new paths for the recognition and acquisition of learning. Being an educational reform and a workplace reform, it was aimed at adults needing education at all levels and includes those who are employed as well as the unemployed. The Competence Reform has a long time perspective and it has been implemented through the active contribution from employers, employees and the Government. It is also based on a quite broad concept of knowledge acquisition, i.e., that it takes place by means of formal, non-formal and informal

[6] The process to implement the Competence Reform (Realkompetansereform) started in 1999. The reform is based on a report from a government committee in 1997 and the White Paper No. 42 to the Norwegian government (KUF, 1997-1998).

learning. Thus LLL is understood in Norway as all learning that takes place throughout life, and includes formal as well as non-formal/informal learning. Preparation for LLL happens through the education system, especially through the equalisation of general and vocational education, and by means of linking curricula at the primary, secondary and tertiary levels. As stated in the Report No. 44 (UFD, 2008-2009) to the Norwegian government there is a decreasing need for a labour force with only primary and lower secondary education. Therefore, it is important that young people and adults who have dropped out of the educational system due to lack of basic skills, receive as much education and training as possible. Full vocational training is one of the pathways in which pupils and young adults might have a large part of their training in enterprises from the first day. The main aim is that they will continue their training for two additional years until they receive the craft or journeyman"s certificate, as shown in Figure 1. Although TVE is not the main component, it is quite integrated in the activities linked to adult education and LLL in Norway. The importance of LLL reinforces the unique role of teacher education for the work life, and not least for TVE.

Being a double-practice field, TE for TVE is an evolving field of knowledge and it is constantly challenged by changes in the knowledge society. A new challenge, to which I will refer, is related to qualifications frameworks – European Qualifications Framework[7] and National Qualifications Frameworks – and their growing emphasis on learning outcomes as opposed to learning inputs. These policy instruments, developed under the Bologna and Copenhagen processes, have as main objectives to promote 1) international transparency, 2) international recognition and 3) international mobility.

Will the emphasis on learning outcomes impact on TE and, if so, ought they to be considered by teacher educators in TVE?

The implementation of Norwegian NQF[8] along the European recommendation for EQF-LLL is just starting, thus it is not possible to evaluate its consequences yet. However, if one examines the developments that have been taking place in Norway since the 1990s, especially after the implementation of the Bologna process, one can see that the Norwegian educational policies match objectives of EQF-LLL referred to above. Among EQF-LLL's propositions, one finds several aims that coincide with changes that have already been implemented in Norway, such as:

[7] The European Recommendation on the European Qualifications Framework for Lifelong learning (EQF-LLL) from 23 April 2008 is an important policy instrument to be adopted by the political leadership of the countries concerned. Among other aims, it is intended to reform national systems of higher education and TVE, as well, by introducing National Qualifications Frameworks (NQF) (. Although NQFs vary from country to country, they usually have a regulatory force.

[8] Norway is among 33 countries in Europe that adopted the EQF-LLL in April 2008. In March 2009, it was approved to establish a NQF for LLL in Norway, which shall be fully implemented in all programmes of higher education institutions by 2012. A description of "Kvalifikasjons rammeverk for høyere utdanning " can be found at: http://www.regjeringen.no/nb/dep/kd/tema/hoyere_utdanning/nasjonalt-kvalifikasjonsrammeverk.html?id=564809)

- Recognition of citizens' knowledge acquired through non-formal/informal learning (RPL): This aim was attained through the implementation of the Competence Reform. Access to and participation in lifelong learning for all, including disadvantaged people: The goal of an inclusive education and participation in the work life have been important aims of Norwegian policies for several years
- Increased transparency of qualifications as one of the main components necessary to adapt education and training systems in the Community to the demands of the knowledge society: Norway totally restructured its Higher Education system through the Quality Reform that came into effect in the autumn of 2003. The Quality reform has implemented changes in accordance with the Bologna process by, for example: 1) adopting the 3+2+3 structure and the common system of academic credit (ECTS), 2) introducing greater mobility of students and staff, 3) increasing cooperation on educational quality assurance, 5) strengthening of the European dimension in education, through the development of study plans, joint programmes and institutional collaboration; 6) Lifelong learning (educational institutions together with enterprises have been taking many initiatives to enhance the possibilities for leaning. The recognition of prior learning has been an important part of this process).

As stated in the Recommendation, its intention is to …"contribute to modernizing education and training systems, the interrelationship of education, training and employment and building bridges between formal, non-formal and informal learning, leading also to the validation of learning outcomes acquired through experience." To agree on the validation of learning outcomes might be one of challenges for teacher educators across Europe in general and for TE in VTE. Norway is in the process of developing a national qualifications framework and supports the idea of a framework system oriented towards "learning outcomes".

Three categories are used to define the learning outcomes: knowledge, skills and competence. There are seven levels of education: 1) Basic school competence; 2) Basic competence; 3a) Completed vocational education at the upper secondary school level;

3b) Completed upper secondary school level in general academic education; 4) Professional school – levels 1 and 2, 5; 5) Bachelor degree of short duration (2 years) and 3-year bachelor degree; 6) Master degree; and 7) Doctoral degree.

There is a definition of knowledge, abilities and general competence for each level, as indicated in Table 2.

Several learning outcomes are defined for each level of education in the 3 categories. The definitions are qualitative and place a lot of the responsibility for learning on the learner, who has to be able to perform the expected "learning outcome" as indicated in the example for the education level **3a**.

Table 2: Example of how learning outcomes are defined for each level.

Level of education	**Knowledge:**	**Skills:**	**General Competence:**
	Understanding of theories, facts, principles, procedures within the discipline and or work	Capacity to apply knowledge to solve problems or tasks that require cognitive, practical, creative and communicative abilities.	Capacity to apply knowledge and abilities independently in various situations
Level 3a: Completed vocational education in the school (2 yrs) and 2 yrs of apprenticeship	The learner has knowledge on key facts, concepts, theories, principles and methods in different subjects	Can express him/herself verbally and in writing in a variety of academic contexts and can read, count and use digital tools and media.	Can apply own expertise in new and complex contexts.
	Has experience-based knowledge, plus other types of knowledge…	Plus other types of skills…	Plus other types of competences…

The qualitative definition of learning outcomes gives a wide space for interpretations by teachers. While it can be seen as positive not to be restricted to very a specific quantitative evaluation of outcomes, they do not restrict learning to a very narrow measurable scope. The question here is whether qualitative definitions will create difficulties for transnational mobilities. In a study carried out by …., one can see that learning outcomes have a very specific, quantitative and narrow definition. One can wonder about how teachers/teacher educators involved in lifelong learning programmes across boundaries will agree on evaluation criteria when they come from countries with diverse beliefs about learning.

A study about the use of Vocational Qualification Transfer System for mobility and permeability, (Luomi-Messerer, 2009) proposes the development of a competence matrix (like the example) prior to establishing competence profiles certificate, which will indicated the credit points (ECVET) which the learning outcome in terms of points. Thus, the VQTS

model proposed in this study uses credit points as quantitative measurements of specific parts of a training program or qualification.

The question to be asked refers to which approach teacher educators and teachers of TVE, across European country boundaries, will choose for evaluating learning outcomes. Will they be qualitative or quantitative?

References

Cort, P., Härkönen, A., & Volmari, K. PROFF – Professionalisation of VET teachers for the future. *CEDEFOP Panorama series* (104).

Kirke, u.-o. f. 1997. *Om lærarutdanning* (Vol. nr 48(1996-97)). [Oslo]: [Regjeringen].

KUF. 1997-1998. *St.meld. nr. 42 - Kompetansereformen*. Oslo: Retrieved from http://www.regjeringen.no/nb/dep/kd/dok/regpubl/stmeld/19971998/Stmeld-nr-42- 1997-98-.html?id=191798.

Luomi-Messerer, K. 2009. Using the VQTS model for mobility and permeability: Tesults of the Lifelong Learning project VQTS II (pp. 95). Vienna: 3s Unternehmensberatung GmbH.

Sultana, R. G. 2008. From Policy to Practice. A Systemic Change to Lifelong Guidance in Europe. *Cedefop Panorama series*(149).

Tarrou, A.-L. H., & Holmesland, I. d. S. 2007. Technical and vocational education and its teacher training in Norway *International perspectives on teachers and lecturers in technical and vocational education* (pp. S. 185-204). Dordrecht: Springer.

UFD. 1995. *LOV 1995-05-12 nr 22: Lov om universiteter og høgskoler.*: Retrieved from http://www.oekonomi.uio.no/eksamen/Par_50-52.pdf.

UFD. 2008-2009. Education Strategy *Report No. 44 (2008-2009) to the Storting*. Oslo: Norwegian Ministry of Education and Research.

The Relationship of Empathy and Psycho-Social Dimensions. Findings from Students of Education, Student Teachers, Experienced Secondary School Teachers, and Adolescents in Vocational Education

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Abstract

"Empathy", encompassing cognitive, affective, and behavioural capabilities which contribute to meaningful, supportive communication and interpersonal functioning, is considered as one of the most important interpersonal competencies. The purpose of the project is to contribute to a clearer understanding of empathy and the characterization of empathic persons by sets of coordinated studies which can then be used to generalize and expand upon earlier research. For the present three replicated correlational studies (N=167 education-students, 40 experienced teachers, and 62 adolescents in vocational education) the focus is on the investigation of relationships between a multidimensional measure of empathy and personality, psycho-social dimensions and communicative abilities. Results revealed consistently positive associations of Personal-Distress with negatively-toned personality-dimensions and negative associations with positively-toned-dimensions. However, only few of promising US-findings regarding relationships of empathy and psycho-social dimensions and communicative abilities could be replicated. Consequences for the education curriculum are discussed in the paper.

Keywords: empathy - personality dimensions, empathy - psycho-social dimensions, empathy - communicative abilities, teacher education curriculum

Introduction

Empathy, the capacity of an observer to react to the experiences of others by stepping out of one's own egocentric perspective into sympathetic understanding and/or commiserate appreciation of their thoughts, affects, volitions, and actions, is generally considered as one important competency in the wide range of qualities related to communication (Hume 1739), morality (Smith 1790) and modern Christian theology (Klinzing 1999), interpersonal functioning, and social-emotional competence (Rindermann 2009). Despite the fact that

empathy has been extensively discussed and researched in a variety of disciplines, the literature has unfortunately been confounded by definitional controversy. The essence of this disagreement lies in the extent to which either affective or cognitive elements define empathy. Some authors restrict empathy to the non-affective realm (e.g., Hogan 1969), others emphasize the affective experience (e.g., Mehrabian 2007; Loyola & Eisenberg 2001). The majority of authors, however, agree that both elements contribute to its definition.
Personnel involved in intensive communication (e.g., psychotherapists, Rogers 1975; Aragno 2008) maintain that empathy encompasses also *supportive communication* for the improvement of *mutual* understanding and professional help.

Purpose of Study

The purpose of our project is to contribute to a clearer understanding of empathy and the characterization of empathic persons by sets of coordinated studies which can then be used to generalize and expand upon earlier research. For the *present* three correlational studies the focus is on the investigation of relationships between empathy and
1. Personality Dimensions;
2. Psycho-Social Dimensions;
3. Interpersonal Communicative Abilities and Behaviours.

Research Review

The following research outline is aided by the comprehensive review of Davis (1996) with emphasis on the variables investigated in the present study.

Inherited Predispositions and Environmental Influences

The capacity to experience affective reactions of others is probably influenced by hereditary factors. The identification of *"mirror neurons"* in the late 1990s (Gallese, Eagle & Migone 2007; Bauer 2005) and studies on mimicking (see Davis 1996) also support the assumption of biological roots of an automatic affect "contagion".
But there are also large individual differences as twin studies have demonstrated (Matthews, Batson, Horn, & Rosenman 1981; Rushton, Fulker, Neale, Nias & Eysenk 1986; Zahn-Waxler, Robinson & Emde 1992). Certain elements of personality, representing relatively stable characteristics, are linked to the likelihood of empathy. Among these are:

- *Affect Intensity* (Empathetic-Concern: r=0.42, p<0.001; Personal-Distress: r=0.37, p<0.001, Eisenberg, Fabes, Schaller, Miller, Carlo, Poulin, Shea & Shell 1991);
- *Emotionality* (Empathic-Concern: r=0.13, p<0.05; Personal-Distress: r=0.56, p<0.001, Davis 1983);
- *Neuroticism* (Affective Empathy: r=0.33, p<0.01, Mehrabian & O'Reilly 1980; Empathic-Concern: r=0.12, p<0.05; Personal-Distress: r=0.42, p<0.001, Davis 1996);
- *Arousability* (Affective Empathy, r=0.65, p<0.001, Mehrabian 1977).
- *Aggression, Hostility, Anti-Social Characteristics and Behaviour* were *negatively* and significantly related to Perspective-Taking (especially among males) and Empathic-Concern (significantly for women) but *positively* and significantly related to Personal-Distress, again among males (Richardson, Hammock, Smith, Gardner & Signo 1992; Davis 1992). Perspective-Taking also correlated weakly negatively with self-reported number of angry arguments and physical fights (r=-0.25 – -0.17). The inhibition effect of Perspective-Taking, however, was found to be weakened at high levels of provocation (Davis 1996).

Relationships between Gender, Age, Semester Completed, Subjects Studied and Empathy.

In self-reports, such as the *Questionnaire Measure of Emotional Empathy,* QMEE (Mehrabian 2007) or the *Interpersonal Reactivity Index,* IRI (Davis 1980; 1983), adult women surpassed adult men consistently and significantly in empathy. The differences were higher for *Affective Empathy.* Self-reported gender-differences for empathy are, however, susceptible to gender-based self-representational concerns (see Davis 1996).

Cotton (2001) reviewed six studies on the relationship of empathy and age and concluded: *"Research clearly demonstrates that adults exhibit greater degrees of empathetic feeling, understanding and responsiveness than children, and that older children are more empathetic and pro-social than very young ones."* Studies on relationships between empathy and age among adults, semester completed at university, and subjects studied could not be found.

In the present study, associations between some of these variables and a wider range of personality dimensions were investigated with previously unused measures for this purpose.

Socialisation Factors.

A portion of variance of affective empathy may be accounted for by inherited predispositions. However, socialisation factors play also an important role in the development of empathy indicating that designing of environmental factors and efforts aiming at the improvement of these abilities may be successful. There is fairly strong evidence that affective responsivity is influenced by environments such as close and secure family relationships, or inductive

discipline style (with the exclusion of parents' empathy levels; Davis 1996). Training also can influence empathic abilities as well Cotton 2001).

Associations of Affective Empathy

Success in Social-Interpersonal Relationships.

Interpersonal relations seem to be often related to Affective Empathy. In fact, Empathic-Concern was positively associated with *global* satisfaction of interpersonal/social relationships, for example, with holding more tolerant, less punitive attitudes toward stigmatized groups (Underwood & Briggs, 1980; Sheehan, Lennon & McDevitt 1989) and less feeling of loneliness (Davis 1983). Moreover, advanced empathy aspects were associated with altruistic behaviour and even Personal Distress was found to produce more likely helping behaviours, though perhaps largely due to a reduction in own unpleasantness (Davis 1996).

Empathic-Concern was also positively and significantly related to a set of other-oriented dimensions, depicted as "Femininity" (awareness of feelings, understanding of others: females: r=0.55; males: r=0.58), but weakly and negatively to Personal-Distress among college students (Davis 1983). Accordingly positive and significant relationships were found between Empathic-Concern and "Warmth" (affectionate, supportive, generous) as well as "Positive Outlook" (friendly, positive, dependable) within romantic relationships in a college context (Davis & Oathout 1987; 1992). Personal-Distress was, however, inconsistently related to the same dimensions.

Accordingly, a set of negative interpersonal qualities, depicted as "Negative Masculinity" ("arrogant", "boastful", "dictatorial") produced significantly *negative* correlations with Empathic-Concern (males: r=-0.30; females: r=-0.35, Davis 1983). Findings show similar negative relationships between insensitivity (being rude, critical, and selfish) and Empathic-Concern (significant for women only; Davis & Oathout 1987; 1992) but no significant and/or weak correlations with Personal-Distress.

Franzoi, Davis & Young (1985), Davis & Franzoi (1986), Davis, Franzoi, & Wellinger (1985) investigated the associations of affective empathy (Personal-Distress, Empathic-Concern) with aspects of interpersonal communication among high-school and college students, namely the self-disclosure to peers and romantic partners. Empathic-Concern was at least significantly related to self-disclosure of men to female peers, and among female students to both their partners and female peers; in another study it also positively correlated with the combined variable opening up/readily listening. Personal-Distress, however, was negatively associated with this variable (Davis & Oathout 1987; 1992).

Associations of Cognitive Empathy

Success in Interpersonal Relations.

Cognitive Perspective-Taking was generally positively associated with measures of *global* opposite-sex romantic relationship satisfaction (Franzoi, et al. 1985; Long & Andrews 1990; Fincham & Bradbury 1989, Rusbult, Verette, Whitney, Slovik & Lipkus 1991). Furthermore, Russel, Peplau & Cutrona (1980) found significant *negative* correlations to the feeling of loneliness; however, Bruch, Kaflowitz & Perl (1988) did not. Also in specific aspects of close relationships, such as the amount of responsibility for positive relationship events assigned to one's spouse, significant associations were found with Perspective-Taking (Fincham & Bradbury 1989).

The plausible assumption that cognitive empathy is related to having fewer conflicts and to resolving conflicts more democratically, constructively, quickly and effectively was confirmed by Rahim (1983) and Franzoi et al. (1985).

Other positive and significant findings were found in studies conducted by Davis & colleagues. Perspective-Taking was related to "Warmth" (for females), "Even Temper", namely patient, understanding, and "Positive Outlook" (for females only, Davis & Oathout 1987; 1992). Another study by Davis (1983) revealed significant positive associations with "Femininity" (males: r=0.37; females: r=0.33). Accordingly, "Insensitivity" and "Negative Masculinity" (males: r= -0.30; females: r= -0.28) were significantly and negatively related to the same scale of Empathy.

It can be concluded *that "Empathic-Concern is more strongly associated with demonstrative, other-oriented generosity and warmth, while Perspective-Taking is more associated with a less demonstrative avoidance of rude and egoistical acts."* (Davis 1996, 192)

As already mentioned, Franzoi et al. (1985), Franzoi & Davis (1985), Davis & Franzoi (1986) and Davis et al. (1985) investigated the relationships between Perspective-Taking and self-disclosure with mixed results. While mostly no significant associations were obtained, Davis & Oathout (1987; 1992) found positive significant relationships for the combined variable *opening up/readily listening* but only for females.

Last but not least Perspective-Taking was correlated with effectiveness in communication (Feffer & Suchotliff 1966) and effectiveness in negotiation (Neal & Bazerman 1983).

Accuracy of Perception and Judgements.

Different approaches have been taken to investigate the relationship between cognitive empathy and interpersonal sensitivity. Studies on the nature of attributional judgement about others revealed that instructional sets to engage observers in affective role taking consistently produced attributions similar to those of the observed persons, emphasizing attributions which are more situational than dispositional for the observed targets (Davis 1996).

Another approach was to study the relation between empathy and Nonverbal Sensitivity. The findings were not encouraging. Hall (1998), using the PONS-test (Rosenthal, Hall, DiMatteo, Rogers & Archer 1979), found very weak, non-significant relationships between "Nonverbal Sensitivity" and empathy (10 samples: Mr=0.01). Four additional studies, however, showed some promise with positive weak to moderate relationships: r=0.18 (non-significant, Barnes & Sternberg 1989), r=0.21 (non-significant, Funder & Harris 1986), r=0.36 (significant, Hart & Rosenthal 1988). Riggio, Tucker & Coffaro (1989), using a decoding task based on still pictures of faces, found an r=0.29 ($p<0.05$). Other approaches to investigate associations between empathy and accuracy in person perception were also inconsistent (see Davis 1996).

Taken as a whole, these findings demonstrate that, while empathy is associated with personality dimensions like affect intensity and arousability, of which some *are negatively-toned* such as emotionality or neuroticism, it is an important, pro-social ability especially valuable in professions involving intensive social interaction. This vital competence in the wide range of qualities related to effective and meaningful communication, leadership, interpersonal functioning, motivation for caring and helping, belongs to the abilities teachers should develop.

In the framework of this research mostly conducted in the USA, a project was started to address the question whether such findings lead to considerations of the design of a learning environment in teacher education that support the development of personality, psycho-social abilities, and even the integration of empathy-modules into teacher education programs. The present study is a beginning.

The Study

Research Questions

The following research questions were formulated:

Are there significant associations between the four scales of empathy: Perspective-Taking, Fantasy-Scale, Empathic-Concern, Personal-Distress and:

1. Personality Dimensions:

- *1.1 Personality Dimensions*;
- *1.2 Competence and Control Orientations*;
- *1.3 Extraversion*;
- *1.4 Self-Efficacy-Expectation*;

1.5 Age; *Semester-Completed at University*; *Teaching-Experience, Gender*; *Majors.*

2. Psycho-Social Dimensions:

2.1 Success in Current Interpersonal Relationships;

2.2 Directiveness.

3. Interpersonal Communicative Abilities and Behaviours:

3.1 Nonverbal Sensitivity (PONS-test);

3.2 Nonverbal Expressiveness ("Charisma"/ACT).

Subjects

For *Study 1* altogether 167 German University students signed up to participate in the correlational study. The sample was made up of participants from four seminars, consisted of student teachers for secondary schools majoring in subject matter (N=121) but with few pedagogical studies *and* students of education reading for a MA or Diploma (N=46) and majoring in pedagogy (males: 46; females: 121; Age: M=25.84; Semester Completed: M=7.09). Because the findings of four single studies were successfully replicated they have been pooled for this report. Varying Ns stem from the fact that not all tests were administered in all samples and data for some participants were not available due to class absences. *Figure 1* gives a profile of the participants made up of the samples based on majors studied at the university.

Majors:					
Diploma / MA		*Student Teachers*			
	Pedagogy + Sociology, Philology, History, Philosophy, Linguistics, Arts, Political Science etc.	Philology	Mathm./ Sciences	Mathm./ Sciences/ +Philology	Sport +Philology or Sciences
19	25	85	8	18	10
No information: 2					

Figure 1. The Participants of Study 1

For **Study 2**, **40** experienced German Secondary School Teachers of a secondary night school (f: 22; m: 18; Age M=51.33, s=8.32 years; school experience: M=19.38 s=10.75 years) participating in an in-service course on Classroom Management and Nonverbal Aspects of Communication signed up to participate in the study. *Figure 2* gives a profile of the participants based on majors taught at the secondary night school.

Subjects taught:

Philology	**Mathm. +Sciences**	**Mathm./ Sciences/ +Philology**
25	**6**	**3**

No information: 6

Figure 2. The Participants of Study 2

For *Study 3,* 62 adolescents (f: 33; m: 29; Age: M=18.02 years) participating in a preparatory training course in order to get a place for vocational education/apprenticeship were tested. Three of them did not finish any School, 28 graduated from the 9-year Elementary School, and 25 from Middle School., one graduated from a special school.

Data Collection

For the assessment of *Empathy,* a multidimensional individual difference measure, the *Interpersonal Reactivity Index (IRI,* Davis 1980; four sub-scales, seven items each, five-point scales) was used:

1. *Perspective-Taking-Scale* (*PT:* spontaneous attempts to adopt the perspective of other people);
2. *Fantasy-Scale* (*FS:* Tendency to identify with characters in fictional situations, e.g., movies, novels, plays);
3. *Empathic-Concern-Scale* (*EC:* feelings of warmth, compassion and concern for others);
4. *Personal-Distress-Scale* (*PD:* personal feelings of anxiety and discomfort that result from observing another's negative experience).

Factor analyses confirm that the test measures these four aspects of empathy. Internal reliability ranged from 0.70 – 0.78, test–retest reliabilities from 0.61–0.81 (Davis 1980). In the present project test-retest correlations in three samples ranged from 0.45 to 0.92.

1. The Assessment of Personality Dimensions

To examine the relationships of empathy to personality and psycho-social dimensions, the following paper and pencil tests were administered.

1.1 Freiburger Persoenlichkeits-Inventar (Freiburger Personality-Inventory, FPI, Fahrenberg, Selg & Hampel 1978; 114 items, 12 subscales.

FPI 1: Nervousness;
FPI 2: Angry Aggression;
FPI 3: Depression;
FPI 4: Excitability/Arousability;
FPI 5: Sociability;
FPI 6: Calmness;
FPI 7: Reactive/instrumental Aggression/Dominance;
FPI 8: Inhibition;
FPI 9: Openness;
FPI E: Extraversion;

FPI N: Emotional Instability;
FPI M: "Masculinity": typical male/female self-description: self-confident, enterprising etc. vs. inhibited, shy, low in self-confidence etc.

This test has reported acceptable psychometric properties by Fahrenberg et al. (1978).

1.2 Competence and Control Orientations ("Fragebogen zu Kompetenz- und Kontrollueberzeugungen", FKK, 32 items, six-point-scales, Krampen 1991). This test consists of *four primary scales* with eight items each: Self-Concept-of-Own-Abilities (SK), Internality (I), Social-Externality (P), Fatalistic-Externality (C); *two secondary scales* (Self-Efficacy, SKI, Externality, PC), and *a tertiary scale*, providing a total score (Self-Efficacy minus Externality, SKI-PC*).*
Internal consistency and test-retest reliability in different samples ranged from 0.70 to 0.90. The FKK fared well in content, discriminant and convergent validity (Krampen 1991), and treatment validity (Klinzing & Gerada Aloisio 2010).

1.3 Extraversion was assessed by the *Questionnaire of Directiveness* ("Fragebogen zur direktiven Einstellung", F-D-E, Bastine 1971; 32 items, six-point scales); 16 items determine *Extraversion* (FDE-E). Internal consistency in different samples ranged from 0.80 to 0.89, test-retest reliability from 0.80 to 0.95. The FDE fared well in construct validity (Bastine 1971) and for treatment validity (Klinzing & Gerada Aloisio 2010).

1.4 The *Self-Efficacy Expectation Scale* (SEW, Schwarzer, Mueller & Greenglass 1999; 10 items, four-point scales). Internal consistency was 0.75-0.90. Investigations on convergent and discriminant validity turned out to be successful. Indications for treatment validity can be derived from studies reported by Klinzing & Gerada Aloisio (2010).

2. Psycho-Social Dimensions

2.1 Self-Ratings of Success in Current Relationships (Rosenthal, et al. 1979; 16 items, nine-point scales). Factor analyses revealed five factors: "Quality-of-Opposite-Sex-Relationships"; "Quality-of-Same-Sex-Relationships"; "Number-of-Friends"; "Speed-in-Making Friends"; "Understanding-in-Relationships". For reliabilities and indications for the validity of this instrument, see Rosenthal et al. (1979).

2.2 Directiveness (rigid, imposing attitude) was assessed by the *Questionnaire-of-Directiveness* (FDE-DE Bastine 1971; 16 items, see 1.3.)

3. Interpersonal Communicative Abilities and Behaviours

3.1 Accuracy of Interpersonal Perception. To assess the degree of decoding accuracy, the *Profile-of-Nonverbal-Sensitivity* (PONS-test, Rosenthal et al. 1979) was administered. This test utilizes a 47-minute black and white film and sound track composed of 220 two-second auditory and/or visual segments 2009). Test-retest-reliability was r=0.69; internal-consistency: 0.86. Test-retest-reliability assessed in this project was r= 0.66, $p<0.01$, with an interval between test and retest of five to six months. The PONS-test fared well in terms of convergent, discriminant (Rosenthal et al. 1979), and treatment validity (Klinzing & Gerada Aloisio 2009, based on experimental training-studies).
There were students who took the PONS a second time as they participated in seminars and lectures in which this test was also included. Because the effects of pre-testing with the PONS on subsequent PONS-performance are strong (Klinzing 2004), the data from participants who took the PONS the first time have therefore been calculated separately.

3.2 Nonverbal Encoding Ability. To assess encoding ability, the *Affective Communication Test* (ACT) was administered. This paper-and-pencil self-report, consisting

of 13 items (nine-point scales), was developed by Friedman, Prince, Riggio & DiMatteo (1980) as a measure of individual differences in nonverbal expressiveness/"Charisma". Internal consistency of the ACT was 0.77, test-retest reliabilities ranged from 0.90 to 0.91. Test-retest reliability assessed in the project was r= 0.64, p<0.01, with an interval between test and retest of five to six months.

That "Charisma" can largely be understood as nonverbal expressiveness is indicated in five validity studies with promising results by Friedman et. al. (1980), Kring, Smith & Neale (1994), and Klinzing & Gerada Aloisio (2010). Studies investigating *convergent* and *discriminant validity* turned out to be successful (Friedman et al. 1980). Treatment validity was established in experimental studies by Klinzing & Gerada Aloisio (2010).

Results are interpreted according Cohen's (1988) recommendation as:

r < 0.10: very small/weak relationship; r = 0.10 - 0.30: small/weak relationship;
r = 0.30 - 0.50: medium/moderate relationship; r = 0.50 - 0.80:large/strong relationship.

The tables of correlations are displayed with significance levels based on *adjusted chance probabilities* (Bonferroni corrections): *p<0.10; **p<0.05, ***p<0.01; two tailed tests.

Results

1. Associations between Empathy and Personality-Dimensions

Table 1.1. Relationships of Personality-Dimensions Assessed with the Freiburger-Personality-Inventory (FPI) and the Four *Empathy*-Scales. Product-Moment Correlations for Study 1: *92 Students of Education, first row;*
Study 2: 40 Secondary School Teachers; second row;
Study 3: 62 Adolescents, Vocational Education; third row.

Empathy – <u>Negatively</u>-Toned Personality-Dimensions

	Perspective Taking	***Fantasy Scale***	***Empathic Concern***	***Personal Distress***
	r (p)**	**r (p**)**	**r (p**)**	**r (p**)**
FPI 1	<u>-0.18</u>	**<u>0.21</u>**	<u>0.05</u>	**<u>0.26</u>**
Nervousness	*0.13*	*0.15*	***-0.20***	***0.29***
	-0.13	-0.03	0.06	**0.37****

FPI 3	-0.16	**0.20**	0.01	**0.29***
Depression	*-0.03*	*0.16*	*0.07*	***0.43****
	-0.02	0.16	0.20	**0.50*****
FPI 4	**-0.22**	0.14	-0.04	**0.19**
Excitability	*-0.08*	***0.20***	*-0.11*	***0.30***
	-0.19	0.01	0.04	**0.29**
FPI 8	0.10	**0.20**	0.17	**0.34****
Inhibition	*-0.03*	***0.25***	*0.10*	*0.13*
	0.09	**0.27**	**0.46*****	**0.46*****
FPI N	-0.16	**0.28***	0.13	**0.38*****
Emotional-	*-0.01*	*0.15*	*-0.07*	***0.40***
Instability	0.03	0.16	0.17	**0.47*****
Empathy – Positively-Toned Personality-Dimensions				
FPI 5	-0.05	-0.04	0.05	**-0.24**
Sociability	*0.06*	***0.22***	*0.15*	***-0.27***
	-0.12	-0.02	-0.03	-0.09
FPI 6	**0.20**	-0.12	0.03	**-0.31***
Calmness	***0.28***	***-0.19***	*0.007*	***-0.49****
	0.12	-0.06	**-0.24**	**-0.19**
FPI 9	**-0.25**	0.18	0.01	0.03
Openness	*0.12*	*0.05*	*-0.03*	*0.09*
	-0.28	0.18	0.15	**0.25**
FPI E	0.03	-0.13	-0.03	-0.17
Extraversion	*0.06*	*0.10*	*0.11*	***-0.27***
	-0.19	-0.08	0.02	0.12
FPI M	0.15	**-0.25**	-0.07	**-0.44*****
"Mascu-	***-0.21***	***-0.44****	***-0.22***	***-0.42****
linity"	**-0.19**	**-0.34***	**-0.35***	**-0.48*****

Tabel 1.1 cont.

Replicated Findings of US Research

	Perspective Taking	***Fantasy Scale***	***Empathic Concern***	***Personal Distress***
	r (p)**	**r (p**)**	**r (p**)**	**r (p**)**
FPI 2	**-0.22**	-0.09	**-0.17**	0.07
Spontanous	*0.03*	*0.07*	*0.14*	***0.26***
Aggressiveness	**-0.35***	-0.08	**-0.23**	0.18
FPI 7	**-0.22**	-0.09	**-0.22**	0.06
Reactive	*-0.11*	*0.11*	*-0.12*	***0.25***
Aggression/ Dominance	**-0.29**	**-0.28**	**-0.24**	-0.02

Table 1.2-4. Relationships of Competence and Control Orientations, Extraversion (1.3), Self-Efficacy-Expectation (1.4) and the Four Scales of Empathy. Product Moment Correlations for Study 1: 160 Students of Education.

	Empathy			
	Perspective Taking **r**	***Fantasy Scale*** **r**	***Empathic Concern*** **r**	***Personal Distress*** **r**
Competence-and-Control Orientations (FKK)				
Primary Scales				
Self-Concept-of-Own-Competencies (SK*)*	0.08	0.02	0.05	**-0.42**
Internality (I)	0.03	0.03	-0.11	**-0.29**
Social-Externality (P)	0.001	0.06	0.11	**0.20**
Fatalistic-Externality (C*)*	-0.05	-0.02	0.02	**0.23**

Secondary* and *Tertiary Scales				
***Self–Efficacy* (SK+I)**	0.07	0.02	-0.03	**-0.42*** **
Externalism (PC*)*	-0.02	0.04	0.10	**0.27** **
Internality - Externality (SKI-PC)	0.06	-0.03	-0.09	**-0.35*** **
1.3 Extraversion				
FDE-E (N=159)	0.13	-0.009	-0.007	**-0.36*** **
1.4 Self-Efficacy-Expectation				
(SWE) (N=160)	0.17	-0.16	-0.10	**-0.33** **

For the FKK primary scales SK, I, P, and C only descriptive statistics were used.

Results as summarized in *Table 1.1–1.4* reveal across the three studies that personality measures possessing a markedly negative tone display relatively consistently (partly significantly) *positive* associations with the negatively toned Personal-Distress-Scale: weakly-moderately with *Nervousness, Excitability*, moderately-strongly with *Depression*, *Inhibition (except Study 2)*, *Emotional-Instability*, and *Externalism* (FKK). These results achieved statistical significance in *Study 1* for *Depression*, *Inhibition, Externalism and Emotional-Instability*, in *Study 2* for *Depression*, in *Study 3* for *Nervousness*, *Depression*, *Inhibition,* and *Emotional-Instability*.

Accordingly, associations run counter to personality measures which possess a positive tone. In fact in *Study 1*, Personal-Distress is weakly-moderately *negatively* correlated to *Sociability,* moderately to *Calmness*, *Self-Concept-of-Own-Competencies*, *Internality*, *"Masculinity"*, *Extraversion* (FDE-E), *Self-Efficacy-Expectation* (SWE), *and "Quality-of-Opposite Sex-Relationship"* (IS, see below). These findings achieve significance for *"Masculinity"; Extraversion (FDE-E); Self-Efficacy*; *Total-Competence-and-Control-Orientation, and Self-Efficacy-Expectation* as well as for *"Quality-of-Opposite-Sex-Relationship"* (IS). In *Studies 2* and *3* these findings are partly be replicated by weakly-moderately positive correlations of Personal-Distress with *Nervousness, Depression, Excitability, Emotional-Instability, and Inhibition* (*Study 3* only) and weakly and moderately

negative relations of Personal-Distress with *Sociability* and *Extraversion* (*Study 2*), moderately-strongly with *Calmness* (*Study 2,* significant), and *"Masculinity" (Study 2, 3,* significant*).* An exception is the positive correlation with *Openness* (*Study 3*).

The findings for the Personal-Distress-Scale are partly repeated for the Fantasy- and Empathic-Concern Scales. The Fantasy-Scale is weakly to moderately positively related to *Inhibition* (*Studies 1, 2, 3*), *Emotional-Instability*, *Depression*, and *Nervousness* (*Study 1*), weakly to *Excitability* (but also to Sociability), and weakly-moderately *negatively* to "Masculinity" (*Study 1; for Study 2*, *3* significantly). *Empathic-Concern* correlates significantly and positively to *Inhibition*, weakly negatively to *Calmness* (*Study 3*) and also weakly or moderately negatively to *"Masculinity"* (*Study 2*, *3,* significantly). However, Empathic-Concern is weakly negatively related to *Nervousness* (*Study 2*). For Perspective-Taking the findings are inconsistent across the three studies: the correlations are weakly negatively related to *Excitability* (*Study 1*) *Openness* (*Studies 1, 3*) and weakly positively to *Calmness* (*Studies 1; 2*).

Results in *Study 1* and *3* revealed that subjects scoring higher on Empathic-Concern and Perspective-Taking were at least weakly or moderately *less* aggressive and dominant (FPI 2, 7) and had significantly less rigid, imposing attitudes (FDE-DE, *Study 1*). Very weak/weak positive relationships between FPI 2, 7 and Personal-Distress are found in *Study 2.*

In *Table 1.5* the results for the relationships between the four IRI's-Scales of empathy and Age, Gender, Subjects Studied, and Semesters-Completed are summarized.

Table 1.5. Relationships between Age, Gender, Majors, Semesters-Completed and the Four Scales of Empathy. Product-Moment Correlations for Study 1: N=165 University Students, row 1, Study 2: N=40 experienced teachers, row 2, and Study 3: 51 Adolescents, Vocational Education, row 3[+].

	Empathy			
	Perspective Taking	***Fantasy Scale***	***Empathic Concern***	***Personal Distress***
	r	**r**	**r**	**r**
Age	0.17 *0.004* **0.22**	0.02 *0.03* 0.08	0.10 ***0.21*** 0.04	-0.05 ***0.23*** 0.08
Gender	-0.02 *-0.08* **0.19**	**0.25** ***0.26*** **0.20**	**0.29** *-0.18* **0.44**	0.10 *0.17* **0.52**
Majors (Student-Teachers **vs.** Students of Education; Study 1, N=166)	**-0.27**	-0.06	**-0.19**	-0.12
Semesters Completed (Study 1, N=163)	-0.01	-0.08	**-0.20**	-0.12
Teaching Ex-Perience (Study 2, N=40)	*-0.11*	*-0.05*	*0.02*	*0.12*

+ For the demographic variables only descriptive statistics were used.

As the results in *Table 1.5* show, there are very weak relationships between the four Empathy-Scales and *Age* in *Study 1.* Results for *Study 2* revealed also very weak associations between Age and the Perspective-Taking and Fantasy-Scales but weak relationships to Empathic-Concern and Personal-Distress. Except for a weak relationship for Perspective-Taking very weak/weak relationships between the Empathy-Scales and Age are obtained in *Study 3.*

In *Study 1,* weak *Gender Differences* occur in the Fantasy-Scale and in the Empathic-Concern-Scale in favour of women – very weakly, however, for Perspective-Taking and Personal-Distress. In *Study 2* very weak gender differences are obtained, except for the Fantasy-Scale. In *Study 3*, however, weak, moderate or strong Gender relationships to the four Empathy-Scales are found.

Student-Teachers (*Study 1; Majors*) score weakly lower on Perspective-Taking and Empathic-Concern Scale than Students of Education.

Semesters-Completed (*Study 1*) or Years-of-Teaching-Experience (*Study 2)* are found to be very weakly or even weakly negatively related (*Study 1*) to empathy.

2. Associations between Empathy and Psycho-Social Dimensions

Data for Psycho-Social Dimensions (Success-in-Interpersonal-Relationships, IS) and Directiveness could collected only for *Study 1.*

Table 2.1-2. Relationships between: Success in Current Interpersonal Relations (IS, 2.1), and Directiveness (FDE-DE, 2.2), and the Four Scales of Empathy. Product Moment Correlations and p-Values for Study 1.

	Empathy			
	Perspective Taking	***Fantasy Scale***	***Empathic Concern***	***Personal Distress***
2.1 Success in Interpersonal Relations (N=153)				
	r	**r**	**r**	**r**
Factor 1: "Quality-of-Opposite-Sex-Relationship"	-0.19	-0.19	-0.02	**-0.28****
Factor 2: "Quality-of-Same-Sex-Relationship"	**0.21**	0.09	0.19	-0.03
Factor 3: "Number-of-Friends"	0.04	-0.14	-0.07	-0.02
Factor 4: "Speed-of-Making-Friends"	0.18	0.14	**0.23***	-0.14
Factor 5: "Understanding-in-Relationship"	0.10	0.02	0.11	-0.10
2.2. Directiveness				
FDE-DE (N=159)	**-0.29*****	0.12	-0.14	0.04

Results as summarized in *Table 2.1-2* reveal moderate and significant negative associations between Personal-Distress and "*Quality-of-Opposite-Sex-Relationship"* and between Perspective-Taking and *Directiveness* (2.2). Furthermore, Perspective-Taking, Empathic-Concern, are both weakly associated with "Quality-of-Same-Sex-Relationship" and-Speed-of-Making-Friends".

3. Associations between Empathy and Interpersonal Communicative Abilities and Behaviours

Data for *Nonverbal-Sensitivity* and *Nonverbal Expressiveness*(*"Charisma"*) could be collected only for *Study 1.*

Table 3.1/.2: Relationships between Nonverbal-Sensitivity (3.1, PONS), Nonverbal-Expressiveness (3.2, ACT) and the Four Empathy-Scales. Product-Moment Correlations for Study 1.[+]

	Empathy			
	Perspective Taking	**Fantasy Scale**	**Empathic Concern**	**Personal Distress**
	r	**r**	**r**	**r**
3.1 Nonverbal-Sensitivity				
PONS (Total Group) (N=142)	0.13	0.17	-0.03	0.02
PONS (without test repeaters) *(N=118)*	*0.12*	*0.03*	*-0.02*	*-0.13*
3.2 Nonverbal-Expressiveness				
ACT (N=146)	0.11	**-**0.04	-0.11	-0.09

As summarized in *Table 3.1/2,* results reveal very weak to weak and non-significant relationships between the four empathy scales and Nonverbal-Sensitivity (PONS-test) and Nonverbal-Expressiveness/"Charisma".

Summary and Conclusions

Findings from the present studies on the relationship between the *Personal-Distress-Scale* and personality measures support the likelihood of a disposition for "automatic" affect sharing, possibly reflecting an underlying overall affective sensibility ("Empfindsamkeit") which is a concept by Smith (1790) but derived from Hume's moral philosophy (1739). It can also be related to "Betroffensein" (affected) from modern Christian theology (Klinzing 1999). In line with some findings in the USA the negatively-toned *Personal-Distress-Scale* relative consistently, partly significantly, across the three studies displayed *positive* associations with negatively toned Personality Dimensions like *Depression* or *Emotional-Instability*. Accordingly, associations ran counter to personality measures which possess a positive tone, like *Calmness* or *Self-Efficacy*.

The findings for the Personal Distress Scale were partly repeated for the, Perspective-Taking, Fantasy and Empathic-Concern-Scales.

As the findings in *Study 1* revealed, the "automatic" affect sharing, or "affect contagion", does not seem to be the direct result of a greater or an over-"nonverbal sensitivity" that may cause people to experience Personal-Distress (Riggio 2006) because Personal-Distress was very weakly correlated with "Nonverbal Sensitivity" (PONS). Thus, empathy should not be mistakenly confused with "Nonverbal-Sensitivity" which is to be regarded as the cognitive skill of accurately decoding and interpreting nonverbal cues that assist but are not in themselves a sufficient precondition for empathy.

More importantly, some personality dimensions (e.g., Depression, Emotional-Instability, Inhibition, Introversion), need to be considered from different perspectives and re-evaluated, especially when taking into consideration the positive "side effects" of negative-toned personality dimensions. They also need to be improved upon to provide a base for advanced empathy, and a *supportive communication* in social situations.

Similar to findings in the USA, gender differences in favour of women occurred in the Fantasy-Scale and Empathic-Concern (*Study 1*). In *Study 2* they occurred in the Fantasy-Scale only, *and in Study 3* for all Empathy-Scales; however, Gender-effects are highly susceptible to gender-based self-representational concerns (Davis 1996).

Age, Semesters-Completed or years of Teaching-Experience (*Study 2)* were found to be very weakly, weakly or even weakly *negatively* related (*Study 1*) to empathy showing that the pre-service, in-service teacher education, practice or life experience might not give enough opportunity to develop important aspects of communication. Interestingly, student teachers (majoring in subject matters with few and narrowly prescribed pedagogical studies) were at least weakly less empathic on two scales of "advanced empathy", namely Perspective-Taking and Empathic-Concern, than students majoring in education (*Study 1*). From these findings it can be optimistically speculated that the study of education, in

interaction with other influences, might have at least weakly valuable influence regarding interpersonal qualities.

In support of the positive findings in the USA, two of the present studies (*Studies 1*, *3*) revealed that subjects scoring higher on the Perspective-Taking, Fantasy- or Empathic-Concern-Scales were at least weakly *less* aggressive and dominant and had significant less rigid and imposing attitudes (*Study 1*, FDE-DE).

Psycho-social dimensions (*Study 1* only), turned out as supporting very few of the findings in the USA: at least “Quality-of-Same-Sex-Relationship” and “Speed-of-Making-Friends” were weakly related to Perspective-Taking and Empathic-Concern. Only very weak relationships between advanced empathy and interpersonal communicative abilities and behaviours like Nonverbal-Expressiveness and Nonverbal-Sensitivity were obtained. Overall, although the findings are not as promising as expected, they point in the same positive direction as those reported in the USA.

The insufficiency or the absence of positive findings for the associations of semester-completed with Empathic-Concern and Perspective-Taking (and with many other competences) point to the insufficient learning environment in which empathy in the context of higher goals than mere egotism, namely that a morally virtuous life in a more selfless fashion, rendering service that is mutually free of domination can be achieved. Some training methods possess these qualities, often used in teacher education and elsewhere. For example, laboratory training-methods are shown to be effective and appropriate to develop not only professional knowledge, but also the desired aspects of personality, attitudes, professional and valuable practice-relevant competencies and behaviours in relationships, rendering service that is mutually free of domination (Zifreund 1966; Klinzing 2002; Klinzing & Tisher 1986; 1993; Klinzing & Gerada Aloisio 2009), including empathy (Cotton 2001).

References

Aragno, A. 2008. The language of empathy: An analysis of its constitution, development, and role in psychoanalytic listening. *Journal of the American Psychoanalytic Association* 56: 713-740.

Barnes, M.L. & Sternberg, R.J. 1989. Social intelligence and decoding of nonverbal cues. *Intelligence* 13: 263-287.

Bastine, R. 1971. *Fragebogen zur direktiven Einstellung F-D-E. Handanweisung.* (Questionnaire of rigid, imposing attitudes. Test manual). Goettingen, FRG: Hogrefe.

Bauer, J. 2005. *Warum ich fühle, was du fühlst. Intuitive Kommunikation und das Geheimnis der Spiegelneuronen.* (Why I feel what you feel. Intuitive communication and the secret of mirror neurons). Hamburg, FRG: Hoffmann & Campe.

Bruch, M.A., Kaflowitz, N.G. & Pearl, L. 1988. Mediated and nonmediated relationships of personality components to loneliness. *Journal of Social and Clinical Psychology 6*: 346-355.

Cohen, J. 1988. *Statistical power analysis for the behavioural sciences*. 2nd ed. Hillsdale, NJ: Lawrence Erlbaum Ass.

Cotton, K**.** 2001. Developing empathy in children and youth. *Northwest Regional Laboratory School Improvement Research Series, 13.*

Davis, M.H. 1980. A multidimensional approach to individual differences in empathy. *ISAS Catalog of Selected Documents in Psychology 10.*

Davis, M.H. 1983. Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology,* 44: 113-126.

Davis, M.H. 1992*. Dispositional empathy, dispositional hostility, and the Big Five personality dimensions.* Unpublished raw data. (Cited in Davis 1996).

Davis, M.H. 1996. *Empathy: A social psychological approach*. Boulder, CO: Westview Press.

Davis, M.H. & Franzoi, S.L. 1986. Adolescent loneliness, self-disclosure, and private self-consciousness: A longitudinal investigation. *Journal of Personality and Social Psychology* 51*:* 595-608.

Davis, M.H. & Oathout, H.A. 1987. Maintenance of satisfaction on romantic relationships: Empathy and relational competence. *Journal of Personality and Social Psychology* 53: 397-410.

Davis, M.H. & Oathout, H.A. 1992. The effect of dispositional empathy on romantic relationship behaviors: Heteroosocial anxiety as a moderating influence. *Personality and Social Psychology Bulletin* 18*:* 76-83.

Davis, M.H., Franzoi, S.L. & Wellinger, P. 1985*. Personality, social behavior, and loneliness.* Paper presented at the 93rd annual convention of the American Psychological Associaton, Los Angeles (cited in Davis, 1996).

Eisenberg, N., Fabes, R.A., Schaller, M., Miller, P., Carlo, G., Poulin, R., Shea C. & Shell, R. 1991. Personality and socialization correlates of vicarious emotional responding. *Journal of Personality and Social Psychology* 61: 459-470.

Fahrenberg, J., Selg, H. & Hampel, R. 1978. *Das Freiburger Persoenlichkeitsinventar FPI. Handanweisung*. 3. ergaenzte Auflage (The Freiburger personality inventory: Test manual. 3rd ed.). Goettingen, FRG: Hogrefe.

Fincham, F.D. & Bradbury, T.N. 1989. The impact of attribution in marriage: An individual difference analysis. *Journal of Social and Personal Relationships* 6: 69-85.

Franzoi, S.L. & Davis, M.H. 1985. Adolescent self-disclosure and loneliness: Private consciousness and parental influences. *Journal of Personality and Social Psychology* 8: 768-780.

Franzoi, S.L., Davis, M.H. & Young, R.D. 1985. The effect of private self-consciousness and perspective-taking on satisfaction in close relationships. *Journal of Personality and Social Psychology* 48: 1584-1594.

Friedman, H.S., Prince, L.M., Riggio, R.E. & DiMatteo, M.R. 1980. Understanding and assessing nonverbal expressiveness: The Affective Communication Test. *Journal of Personality and Social Psychology* 39: 333-351.

Funder, D.C. & Harris, M.J. 1986. On the several facets of personality assessment. The case of social acuity. *Journal of Personality* 54: 528-550.

Gallese, V., Eagle, M.E. & Migone, P. 2007. Intentional attunement: Mirror neurons and the neural underpinnings of interpersonal relations. *Journal of the American Psychoanalytic Association* 55*:* 131-176.

Hall, J.A. 1998. How big are nonverbal sex differences? The case of smiling and sensitivity to non-verbal cues. In *Sex differences and similarities in communication: Critical essays and empirical investigations of sex and gender in interaction,* ed. D.J. Canary & K. Dindia, 155–177. Mahwah, NJ: Erlbaum.

Hart, A.J. & Rosenthal, R. 1988. *Improving sensitivity to nonverbal communication*. Unpublished manuscript (cited in Davis, 1996).

Hogan, R. 1969. Development of an empathy scale. *Journal of Consulting and Clinical Psychology* 33*:* 307-316.

Hume, D. 1739. *A treatise of human nature: Being an attempt to introduce the experimental method of reasoning into moral subjects, ed.* D. F. Norton & M. J. Norton 2000. Oxford, UK: Oxford University Press.

Klinzing, G. 1999. *Leitbegriffe diakonischen Handelns. Ihre Entwicklung und das Beispiel „Betroffensein“* (Leading terms of deacon conduct. Their development and the example of “Affective Concern”). Paper for an unpublished Festschrift for Harald Ihmig for his 60th birthday. Hamburg, FRG: Das Raue Haus. Evangelische Hochschule für Soziale Arbeit & Diakonie.

Klinzing, H.G. 2002. Wie effektiv ist Microteaching? Ein Überblick über fünfunddreißig Jahre Forschung. (How effective is microteaching? A review of 35 years of research). *Zeitschrift für Pädagogik* 48*,* 2: 194 – 214.

Klinzing, H. G. 2004. Optimierung der Wahrnehmungs- und Interpretationsfähigkeit von nichtverbaler Zeichen und Signale. Ein Forschungsbericht und zwei experimentelle Untersuchungen. (Improvement of the accuracy of nonverbal perception and ability to interpret nonverbal signs and signals. A research review and two experimental investigations). In *Nonverbale Prozesse in der Psychotherapie,* eds. M. Hermer & H. G. Klinzing, 321-363*.* Tuebingen, FRG: DGVT-Verlag.

Klinzing, H.G. & Gerada Aloisio, B. 2009. Training of nonverbal decoding and encoding ability, ed. A. .Kodakos, & F. Kalavasis. 120-162. *Topics on educational planning,* Vol 2. Athens, GR: Atrapos Editions.

Klinzing, H.G. & Gerada Aloisio, B. 2010. „Charisma“, nonverbale Kompetenzen und Persoenlichkeitsdimensionen: Untersuchungen zu den wissenschaftlichen Grundlagen eines Trainings zur Optimierung nonverbaler Wahrnehmungs- und Ausdrucksfaehigkeit (“Charisma”, nonverbal competencies and personality dimensions: Investigations into the scientific basis of a training program for the improvement of nonverbal perceptiveness and expressiveness), In *Moderne Konzepte in der betrieblichen und universitaeren Aus- und Weiterbildung. Festschrift fuer Hans Gerhard Klinzing.* 3. erweiterte Auflage (Modern concepts in business and university pre- and inservice education. Festschrift for Hans Gerhard Klinzing), ed. A. Rupp 313-357, Tuebingen, FRG: DGVT-Verlag.

Klinzing, H.G. & Tisher, R.P. 1986. Expressive non-verbal behaviors: A review of research on training with consequent recommendations for teacher education. In *Advances in Teacher Education, Vol. 2, ed.* J. Raths & L. Katz, 89 – 133. Norwood, NY: Ablex.

Klinzing, H.G. & Tisher, R.P. 1993. The development of classroom teaching skills. In *Teacher professional development, ed.* H.Vonk, L. Kremer-Hayon & R. Fessler, 167-195. Lisse, NL: Swets & Zeitlinger,.

Krampen, G. 1991. *Fragebogen zu Kompetenz- und Kontrollueberzeugungen (FKK).* (Questionnaire of Competence and Control Orientations). Goettingen, FRG: Hogrefe.

Kring, A.M., Smith, D.A., & Neale, J.M. 1994. Individual differences in dispositional expressiveness: Development and validation of the emotional expressivity scale. *Journal of Personality and Social Psychology* 66*:* 934-949.

Long, E.C.J., & Andrews, D.W. 1990. Perspective taking as a predictor of marital adjustment. *Journal of Personality and Social Psychology* 59*:* 126-131.

Losoya, S.H. & Eisenberg, N. 2001. Affective empathy. In., *Interpersonal sensitivity. Theory and measurement*, ed. J.A. Hall & F.J. Bernieri, 21-43. Mahwah, NJ: Erlbaum.

Mehrabian, A. 1977. Individual differences in stimulus screening and arousability. *Journal of Personality* 45: 237-250.

Mehrabian, A. 2007. *Nonverbal communication.* (2nd paperback ed.). New Brunswick, U.S.A: Aldine Transaction.

Mehrabian, A., & O’Reilly, E. 1980. Analysis of personality measures in term of basic dimensions of temperament. *Journal of Personality and Social Psychology 38:* 492-303.

Matthews, K.A., Batson C.D., Horn J. & Rosenman R.H. 1981. ”Principles in his nature which interest him in the fortune of others…”. The heritability of empathic concern for others. *Journal of Personality* 49*:* 237-247.

Neal, M.A. & Bazerman, M.H. 1983. The role of perspective-taking ability to negotiation under different forms of arbitration. *Industrial and Labor Relations Review* 36: 378-388.

Rahim, M.A. 1983. A measure of styles of handling interpersonal conflict. *Academy of Management Journal* 26*:* 368-376.

Richardson, D.R., Hammock G.S., Smith S.M., Gardner W. & Signo M. 1992. *Empathy as a cognitive inhibitor of impulsive aggression.* Unpublished manuscript. (cited in Davis, 1996).

Riggio, R.E. 2006. Nonverbal skills and abilities. In *Handbook of nonverbal communication,* ed. V. Manusov & M.L. Patterson, 79-95. Thousand Oaks, CA.: Sage.

Riggio, R.E., Tucker, J. & Coffaro, D. 1989. Social skills and empathy. *Personality and Individual Differences* 10*:* 93-99.

Rindermann, H. 2009. *Emotionale-Kompetenz-Fragebogen Manual* (Emotional Competence Questionnaire. Manual). Goettingen, FRG: Hogrefe.

Rogers, C.R. 1975. A theory of therapy, personality and interpersonal relationships, as developed in the client-centered framework. In *Psychology: A study of science,* ed. S. Koch, 184-256*.* New York, N.Y: McGraw Hill.

Rosenthal, R., Hall, J.A., DiMatteo, M.R., Rogers, P.L. & Archer, D. 1979. *Sensitivity to nonverbal communication. The PONS-test.* Baltimore, MD: The John Hopkins University Press.

Rusbult, C.E., Verette, J., Whitney, G.A., Slovik, S.F. & Lipkus, I. 1991. Accommodation processes in close relationships: Theory and preliminary empirical evidence. *Journal of Personality and Social Psychology* 60: 53-78.

Rushton, J.P., Fulker, D.W., Neale, M.C., Nias, D.K.B. & Eysenk, H.J. 1986. Altrusim and aggression: The heritability of individual differences. *Journal of Personality and Social Psychology* 50: 1192-1198.

Russel, D., Peplau, L.A. & Cutrona, C. 1980. The revised UCLA Loneliness Scale: Concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology* 39: 472-480.

Schwarzer, R., Mueller, J. & Greenglass, E. 1999. Assessment of perceived general self-efficacy on the internet: data collection in cyberspace. *Anxiety, Stress, and Coping* 12*:* 145-161.

Sheehan, E.P., Lennon, R. & McDevitt, T. 1989. Reactions to AIDS and other illnesses: Reported interactions in the workplace. *Journal of Psychology* 123*:* 525-536.

Smith, A. 1790. *The theory of human sentiments.* An abridged republication of the 6th ed. Dover Philosphical Classics 2006. Dover: Dover Pubn. Inc.

Underwood, B. & Briggs, S.R. 1980. *The influence of perspective taking and aggressiveness on attitudes toward Iran.* Unpublished manuscript. (Cited in Davis, 1996).

Zahn-Waxler, C., Robinson, J.L & Emde, R.N. 1992. The development of empathy in twins. *Developmental Psychology* 28: 1038-104.

Zifreund, W. 1966. *Konzept für ein Training des Lehrverhaltens mit Fernseh-Aufzeichnungen in Kleingruppen-Seminaren* (A concept for a training of teaching behaviour with video recordings in small group settings). Berlin: Cornelsen.

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Vocational Education, Vocational Teacher Education and Master Degree Programme in Vocational Pedagogy/Didactics, Based on the World of Works Need of Competence

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Abstract

The need for professionalization of teaching in secondary vocational education was pointed out by the implementers of a project funded by the Norwegian Agency for Development and Cooperation (Norwegian Agency for Development and Cooperation (NORAD) for Kosovo.) aimed at the establishment of two School Centres of Competence in Kosovo, being one in Malishevo and the other in Skenderaj. This paper describes a Vocational Teacher Education project aimed at developing the necessary teachers' competencies for practice-based teaching (Wenger 1998). Experiences gained during the implementation of the project and the methods used in the preparation of teachers for vocational education are here presented. There are several examples that might be applicable in the teaching practice.

Keywords: vocational education, master degree programme, teachers' competencies

Background information and problem analysis

Kosovo's society has been going through a very important phase during its post-war transition period. There has been a series of developments that are changing essentially the overall social, political and economic context of the education sector in Kosovo. The transformation process toward a market driven economy, which began with a delay of some years relative to some of the European countries, has left the recently established self-governing institutions in Kosovo with an enormous challenge, i.e., to reform the education system, in general, and vocational education, in particular. In the proposals for reform, one finds, simultaneously, standards set in the Program of Reforms in European Education until 2010, including the recommendations for vocational education and training from the declaration in Copenhagen (2002) and the policy agenda for the higher education community in the years to come, expressed in the Declaration of Lisbon (2005). This means that the proposed reform includes also benchmarks set in European communiqués (Prague in 2001 and Berlin in 2003) and ministerial conference in Bergen (2005) which aim at a harmonised development of Education in European countries. Altogether, these documents and

processes have brought about essential changes of the broad regional European context which is influencing the Kosovar educational system. Such next context requires new strategies, policies and approaches for meeting the educational needs of Kosovar's community.

Kosovo is a very "young" society with 50% of its total population being under 20 years old (MEST 2003). The country has a great need to create mechanisms that will provide opportunities for the youth of Kosovo to join its labour market which has an extremely high unemployment rate, estimated as about 45%. Education, a good information system and counseling are important means that can prepare the youth for work life and reduce their risk of joining the group of unemployed adults. Vocational education and training is regarded in Kosovo as a type of education that supports the development of skills among young people and enhance their opportunities to join the labour market.

According to EMIS's[1] data, there are 50 vocational and technical secondary schools with approximately 37000 students in Kosovo. About 58% of the schools are clustered around the larger urban centres. There are 16 types of education spread in different areas. The educational programmes offered most often are in the technical, economical and medical areas. There are also programmes within trade and industry, art, music and others. Altogether, there are 107 profiles within these types of education.

There are no established links between vocational schools and the local economic environment, and this lack of a formal structure undermines the entire notion of vocational education. At school level, no staff member has a specific responsibility for liaison with employers or social partner organisations. Links with local labour market support are also poor or non-existent. One of the main reasons for this poor coordination can be the lack of an adequate preparation of teachers for vocational education in Kosovo. For those who choose to become teachers, it is enough to complete studies in any of the professional colleges, such as technical, economics, law, and others. This means that none of the teachers working in these colleges have any didactical preparation for being a competent teacher.

The Norwegian Agency for Development and Cooperation (NORAD) has supported the development of vocational education through the construction of two centres for vocational education, called "Centres of Competencies", in Skenderaj and Malisheva. These centres are equipped with workshop equipment for practical work, which provide the basis for a vocational education system organised toward Europe. The professional curricula within certain profiles are organized according to modules. At the moment, the first-year modules have already been developed.

[1] Education Management Information System (EMIS) Project (2001): School Education Statistics 2000/2001, December 2001.

Teachers from the Institute of Technical and Vocational Teacher Education (ITVTE) at Oslo and Akershus University College of Applied Sciences (HIOA) have been the providers of pedagogical advices for the development of curricula and implementation of concepts for virtual enterprises. They have also been involved in the development of policies and strategic plans for the field of technical and vocational education (TVE) and the training of teachers and staff in the use of new technologies at Skenderay and Malisheva. Two main purposes of the implementation of the programme in Kosovo are, first, to support TVE teachers in their efforts to become proficient in the use of didactical methods and approaches, and, second, to facilitate the active participation of the community in activities of the vocational schools.

Teaching in Vocational schools

One of the important aims of lifelong learning is to provide adults with access to formal courses at educational institutions. This approach to lifelong learning covers all purposeful learning activities "*from cradle to grave*" and makes it possible for all individuals that wish to improve their knowledge and competence in their professions. Perhaps the single most important idea behind the concept of lifelong learning is that it gives opportunity for vocational teachers to continually update and, if necessary, upgrade their knowledge, skills and competencies. This can be referred to as continuing education and training. The idea of continuing professional development is based on the existing evidences that "*once-and-for-all*" initial education and training has become less adequate as a basis for continued employability.

The vision of education in Kosovo can be expressed as: "*A knowledge society, integrated in European trends with equal opportunities for personal development of all its members, who in return contribute to the sustainable economic and social development*". Its mission is to "*Build an all-inclusive system of education that provides conditions for quality education and training of all individuals by actively involving in and promoting practices of lifelong learning and values of democratic citizenship*"[2]. The present situation makes it difficult to accomplish the vision and mission previously mentioned because the programmes of Kosovo's educational institutions do not prepare individuals for the work life and, therefore, do not support economic development and social cohesion. To attain such aims, the education must give the individuals the possibility to acquire skills and competencies needed in the work life. It must also ensure a system for lifelong learning that facilitates the updating of knowledge to fast changes in technology and needs of the labour market. At present, it is difficult to determine and implement a system of qualifications due to the discrepancy between needs of the market and the profiles offered by the educational system. One can state that there is little or no interaction between education and the economic needs of society. In addition,

[2]MEST of Kosovo (2003) Strategy for the Development of vocational Education in Kosovo, Prishtina.

there is no taxonomy of professions and this lack creates difficulties for offering good career counseling.

However, this situation can change if educational authorities manage to establish programmes for preparing competent teachers for TVE. It is believed that TVE can play important role, but it is necessary that TVE receive pre-service and/or in-service teacher education of high quality and standards, as prescribed by successful European educational programmes. The teachers' accomplishments and their performance should be evaluated and accredited in teaching certificates for vocational schools.

The objective now is to plan and organise Vocational Teacher Education at the Faculty of Education of Prishtina University in cooperation with HIOA's Institute of Technical and Vocational Education. There are several important tasks to be carried out. The first ones will focus on the implementation of curricula (subject and frame curricula) alongside vocational education and training. It will be important to determine the standards for assessment, the certification of the education, the social partners and the international networking.

For the period 2011-2014, the advices will be provided by the professional academic staff of the university Master Degree programme for vocational teacher education.

From vocational teacher education to Master Degree in vocational pedagogy

Vocational education must be considered as part of a social and economic context that evolves constantly in response to the major changes that have affected Kosovar society in recent decades. The school system, in general, and the vocational education sector in particular, have had to adapt to these changes, which are influencing and transforming the teaching and learning approach. Until 2009 there was no programme for vocational education teacher training in Kosovo, and we assume that the content and process of this programme must be established and adapted to the changes that have occurred in Kosvar society as a whole. Related to these challenges, a pilot project concerning developing a practical and profession based vocational teacher education, started in 2009, initialized by Norad[3] . Experiences from this pilot project are now used in developing a Master Degree programme in vocational pedagogy/didactics.

Training of vocational teachers

The need of defining a new training profile for vocational education teachers in Kosovo is critical. In keeping with the focus on professionalization, the university-level teacher training programme will be based on 1) a framework of professional competencies that will be the

[3]Norad: The Norwegian agency for development cooperation

same for all sectors, fields and levels of education and 2) the work life and trades needs for competence.

The training plan is based on the vocational teacher profession and designed to take into account the fact that the Education Programme will be attended both by candidates who are currently teaching, and candidates with work experience who wish to become competent vocational education teachers (pre-diploma studies and post-diploma professional development). (Dahlbackm.fl. 2011; Sannerudm.fl. 2009; Sund 2005)

Before presenting the teacher training programme, we will give some references to the new curricula of Vocational Education and Training for Centres of Competence in Skenderajand Malishevo[4]. We find that:

> *"...the curricula for the Centres of Competence focus on the learning outcomes in terms of knowledge, skills and competencies, in accordance with the general trend in the EU and other parts of the world. … The main purpose of the training is to qualify the students for employment as skilled workers. ….The teaching will be blended and contain theory as well as practice, the theory for a large part delivered alongside with and explaining the practice. ….Gradually, the students will be ready for ordinary practical exercises under supervision in the school workshop. With some practical experience the students will soon be ready for short placements in the world of work. ... The teacher is a professional and knows the vocational theory and practice. He or she knows the individual students and is in a better position than any official to choose the optimal teaching methods for the different parts of the curriculum. The school management and vocational teachers must take joint responsibility for the development or identification and gathering of relevant teaching aids, and for the choice of teaching methods."*

Pilot teacher training programme

The education programme that was planned and conducted for the first cohort of vocational teacher share inspired by the Vocational teacher education programme assists offered at Akershus University College, but adapted to Kosovo's context, in cooperation with the Faculty of Education of University of Prishtina.

The teacher education programme is grounded on vocational didactic issues and the new curricula that were developed for the schools in Skenderajand Malishevo. In addition the teacher training programme also focuses on what it is to become a teacher and have it as a profession (Thaqi, Haaland, Sannerud 2011).

[4]Centre of Competence in Skenderaj: Building and Construction.
Centre of Competence in Malishevo: Commerce, Administration and Trade

The emphasis is on developing didactic skills at a level that makes the participants / students to undertake teaching on a conscious and effective manner in the classroom and workshops. Major contents of the training comprise: Planning, implementation, assessment and documentation of learning activities and quality criteria for teaching / learning processes that includes training in workshop teaching / instructing and training in classroom teaching, under supervision by teacher trainers. Preparation of annual teaching plans and development of practical learning tasks area considerable part of the training content.

The students

The students are part time teachers and part time students, which makes the vocational teaching and learning arena available for the practical based study.
Learning outcome: The work with the learning objectives takes place in interplay between practical teaching and vocational experience, theoretical knowledge and vocational teaching didactical reflection (figure 1). The learning targets specify the competences that are necessary for carrying out the vocational pedagogical work. The students/teachers need to base their teaching on both the profession as trade workers, for which they are educating their students, and the teaching profession for vocational education. A vocational didactical approach to the vocational education and the vocational teacher education is essential (Sund 2005).
The vocational teacher profession gives content and methods to the subjects as pedagogy, didactics or vocational products and processes, of the vocational teacher education. In the same way, the different trades within the different programmes, the students are educating for, in the vocational education trade gives content and working methods to the subjects of the vocational education. Subjects within the vocational education programme for builders may be language, carpentry, electric installing, economy and communication. The different ways of understanding the curriculums for developing education, based on students' individual need of competence, is probably the main challenge, together with making choices concerning learning processes and suitable educational content together with the students. The vocational didactic approach integrates many subjects, which is needed for learning, understanding and doing vocational work.

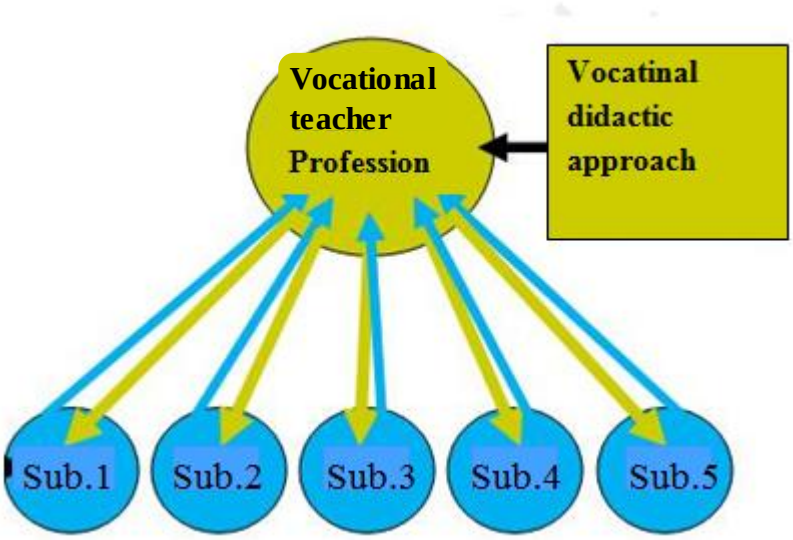

Figure 1. Vocational didactic approach to vocational, vocational teacher education and vocational Master Degree programme

To define the vocational didactic approach in these vocational education programmes, it may be suitable to compare it with the traditional subject didactical approach to teaching and learning. In the subject didactical approach the subjects' tradition decides both the content and the learning methods within the specific subject as, native language, math, science etc. This approach is focused on one specific subject, is not connected with other school subjects and does not necessarily concern the work life need of competence within or from the defined subject.

Developing a vocational pedagogy/didactic Master Degree programme

The vocational didactic Master Degree programme will be based on experiences from the new vocational teacher education (Thaqi, Haaland, Sannerud 2011), and developed in cooperation between Oslo and Akershus University College - Institute of Vocational Teacher Training and University of Prishtina– Faculty of Education. This Master Degree programme will be in accordance with EQF standard for classifying of competence. The vocational didactic Master Degree programme will be based on analysis of the vocational teacher profession and principles of research based education. These master degree students will be persons with bachelors of different kinds, such as engineering, architecture, economics, design etc or similar competence developed from a combination of professional work life experiences and education.

Partners

For Oslo and Akershus University College the main partners will be the University of Pristina, the competence centres in Skenderajand Malishevo, and the Ministry of Education in Kosovo. The project will have multiple anchor points, among them, the world of work. The Norwegian partners will be upper secondary schools, education authorities and social partners. The partners' role in the project will vary from having decision-making competence (the authorities in Kosovo), up to social partners who will have an advisory function.

About the project

Kosovo needs to strengthen vocational education in the country, by building new schools with programmes that are in line with current and future demands for skilled workers (Kvil, Sannerud, Farstad 2009).

The Master Degree programme in Vocational Pedagogy aims at giving the students the opportunity to qualify for developing relevant research-based competence in vocational pedagogy and vocational didactics of importance to vocational education and teaching in working life. The study programme is intended to help developing competence for development-oriented research, and for organizing and managing vocationally oriented learning.

Preliminary objectives for the Master Degree programme

The competence obtained in this study programme should be relevant for:

- Managing, teaching, facilitating and evaluating learning processes in vocational schools. Trade based differentiation and adapted education based on vocational students education towards different trades,
- Managing, teaching, facilitating and evaluating learning processes in businesses,
- Systematic work with professional learning,
- Research and systematic development projects in the educational system and working life in general, with a focus on improving learning environment, strategies and methods.

After completing the study programme, the students will have acquired competence in vocational pedagogy, vocational didactics, research methodology and theories of science to be able to reflect and analyse, and be critical and innovative to vocational pedagogical R&D work. After completing the study programme, the students will be able to:

- Identify vocational pedagogical and vocational didactical challenges, problems and measures,
- To work research-based, systematically and with investigation and development as a leading perspective.
- Develop and lead democratic, trade-based differentiated vocational education and learning processes, which is characterized by student participation and relevance for students with different interests and educational goals.
- Have a leading role in vocational pedagogical R&D work
- Promote learning and understanding of technological, social, human, ideological and political forces and interests that contribute to structural changes in education and working life, locally, nationally and globally.
- Join further research education.

The objectives/aims presented above are preliminary and just a first round for giving direction to the development work. Those objectives will be discussed in depth during the implementation process.

Recommended process for developing the Master Degree programme

Next, the process and the activities recommended during the implementation period of the Master Degree programme in vocational pedagogy at the University of Prishtina are described. This recommended process will be discussed, changed and completed in cooperation with the stakeholders and participants.

Autumn 2011

1. *Anchoring the project*

   This task follows the project throughout the whole project period. It is crucial to involve "all" stakeholders: the management of the faculty (dean, vice dean) the Faculty Board, staff at the faculty, MEST, vocational schools and actors from work life (Chamber of Commerce, unions, etc.). A strategy for this anchoring will be developed in cooperation with our main partners.

2. *Elaborate the very first draft*

This draft of the Master Degree programme will be a on a non-detailed level. This document will provide a focus regarding the purpose of the Master Degree programme in vocational education, and will specify its contribution to the vocational education programme in Kosovo. Here, the learning outcomes and the content of the Master Degree programme will be discussed, and put it into a Kosovo context.

3. *Mini seminar regarding learning outcomes /content*

Presentation of the very first draft of the Master Degree programme will provide the basis for the discussions and content during the mini seminar. Here it is relevant to discuss learning outcomes and the content of the Master Degree programme in detail. Actual participants are representatives from world of work, Ministry of education, science and technology, MEST and others.

4. *Presentation of the project – international conference in Prishtina – Organized by Faculty of Education*

Participation in this conference will provide an opportunity for a broader anchoring in Kosovo's context and feedback to the project regarding the planned Master Degree programme .For this purpose, a paper that highlights several aspects of the project and the Master Degree programme will be prepared.The project's layout will include long-term objectives, short-term objectives, and possible contributions of the master degree level education to the educational context in Kosovo. The learning outcomes, content, and a plan for implementation will be specified.

5. *Preparing a project plan / description and budget (In cooperation/dialog with Norwegian government)*

In order to establish a Master Degree in vocational education, it is crucial to find an external financing source. Therefore it is necessary to prepare a plan and budget for the whole project. These works have to be done in close collaboration between the University of Prishtina and the Faculty of Educationat Oslo and Akershus University College of Applied Sciences. Realistic plans and budgets will be elaborated. Division of labour/obligations between the two main partners will also be specified. A plan for staffing is necessary. Descriptions of stakeholders and their possible roles and contributions into the project are very important. There must also be exit strategy and sustainability.

Winter – spring 2012

6. Application for funding

The application for funding will be done in close cooperation/dialog with the Norwegian government.

7. Prepare the Master Degree programme

Upon approval of financial support to the project, it will be possible to start developing a specific master degree tailored to the needs and the context in Kosovo. This task will have to be carried out through a close collaboration between the University of Prishtina and the Faculty of Educationat Oslo and Akershus University College. It will be crucial to involve "all" stakeholders: the management of the faculty (dean, vice dean, plus others) the Faculty Board, staff at the faculty, MEST, vocational schools, the world of work(Chamber of Commerce, trade unions, etc.). Here we are talking about establishing ownership as well. The different stake holders will occupy various positions and have an important role in the development of the Master Degree programme. It will be needed to discuss in which phases the different stakeholders should be involved and the types of contributions they will make during the development of the programme.

8. Master Degree programme approved

The Master Degree programme must be approved by the appropriate authorities according to laws and regulations applicable in Kosovo.

Autumn 2012

9. Master Degree programme running

Twenty students will be taken up in Master Degree programme, which be run by the University of Prishtina-Faculty of Education

10. Following evaluation and research

A research-based evaluation plan with a focus on both process and outcome of the entire project will be prepared. The evaluation results will be presented when the first cohort concludes the study. The evaluation will use a qualitative methodology, which will consist of observations and group interviews. The observations will be carried out in the schools where the students will conduct their vocational pedagogical work (Dahlbackm.fl. 2011, Sannerudm.fl. 2009).

References

Akershus University College. 2006. *Study plan for Vocational Teacher Education.* ACU.

Dahlback, J. m.fl. 2011. *Veien Til relevant yrkesopplæring fra første dag i Vg1.* Lillestrøm: Høgskoleni Aketrshus.

Haaland G., Sannerud, R., Thaqi, X. 2011. *An approach to vocational education teacher training based on professional competencies.* Kumtesa - Scientific Week 2011, MEST, Prishtinë.

Farstad, H., Kvil, T., Sannerud R. 2009.*Centre of Competence in Skenderaj: Building and Construction.* Report from a Norwegian team visiting Kosovo in May 2009. Oslo: Norad.

Farstad, H., Kvil, T., Tvedt J. 2009. Centre of Competence in Malishevo: Commerce, Administration and Trade Report from a Norwegian team visiting Kosovo in May 2009. Oslo: Norad

Haaland, G., Sannerud, R. 2010. Suggested program – Vocational Teacher Training for CoCs in Skenderaj and Malishevo in Kosovo. Lillestrøm: Akershus University College.

Sannerud, R. (red) 2009. Skatteløftet – slutt rapport ie valuerings arbeidet. Lillestrøm: Høgskoleni Akershus.

Sund, G.H. 2005. Forskjellighet og mangfold - muligheter eller begrensninger for individ og arbeidsplass? Et aksjonsforskningsprosjekt med studier av læring i dagligarbeid, gjennommedvirkning, demokratiske prosesser og interesse differensiering. Roskilde: Roskilde Universitetscenter.

Thaqi, X., Haaland, G., Sannerud, R. 2011. An approach to vocational education teacher training based on professional competencies. In Kumtesa. Nga konferenca vjetorekombetare e shkences, ed. Osdautaj, Java e Shkences 2011. University of Prishtina.

Wenger, E. 1998 *Communities of Practice: Learning, Meaning and Identity*. Cambridge Mass. Cambridge University Press.

Suggested Tools for Teaching and Learning through Reflection on Practice

Propuesta de Herramientas para la Docencia y el Aprendizaje desde la Reflexión de la Práctica

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Abstract

The Bolonia Process has brought on a period for reflection in the education process. At the beginning, the administrative and structural guidelines were designed for university level. Once the results of the investigations on the Process were analysed, the data obtained demonstrate that the Bolonia Process should include:

- Reflection on the relevance and appropriateness of the contents taught.
- Review of current teaching period/evaluation/practical sessions.
- Measures to enforce upon teachers who do not comply with set regulations.
- Adaptation of space to new forms of learning.
- Elaboration of schedules suited to pedagogical principles.

While it is necessary to have a list of basic professional skills as a reference, personal skills must guide us in our teaching work regardless of whom we are teaching. These skills include:

- *Reflection.* This includes and involves a process of analysing the situation, evaluating how the learning process affects individuals at a personal level, analysis of personal attributes and individual tools people need to overcome obstacles and make decisions.
- *Decision-making.* A result of the reflection process, this affects us at both a professional and personal level.
- *Responsibility.* We must be responsible for the decisions that we make and the consequences that they create as well as the repercussion in our lives and that of others.
- *Knowing oneself.* To be well-trained in professional and personal skills, one must learn to discover his or her training needs. Therefore, the design and planning of proper teaching methods must help a professional to:
  - Know oneself better.
  - Discover the skills needed to fulfil objectives.
  - Discover one's professional and personal projects.

- Suitable methods do not only involve obtaining results. They must lead the subject to discover those aspects described above.

We understand the people know their own possibilities with regards to identifying what they need during a given situation and applying that knowledge in order to solve it. A person thus feels skilled and, above all, self-assured.

Keywords: learning and teaching, long life teaching training, methods, Bolonia Process

Resumen

Nuestro objetivo no es hacer una recopilación de autores, sino, más bien, servir de reflexión sobre cómo el pensamiento del docente universitario en particular y cualquier docente en general, determina el uso de las metodologías de aprendizaje. Hablamos desde la experiencia, no solo como docentes universitarios, sino como formadores de futuros docentes y futuros médicos. Profesiones que están unidas por una misma idea: vocación y pasión.

Partimos de la necesidad de una revisión del propio concepto de educación y la finalidad de la acción docente, para seguir con una propuesta metodológica que lleve a la investigación acción en el aula, como elementos que facilitan a docentes y discentes al desarrollo de una carrera profesional satisfactoria y productiva.

Nuestro objetivo es presentar los resultados de una experiencia metodológica centrada en el aprendizaje reflexivo y el diseño de herramientas que ayuden al estudiante a tomar conciencia de sus necesidades de formación y al docente a diseñar su asignatura bajo una idea de práctica laboral.

Terminaremos con unas propuestas que se concretan en herramientas para la recogida de datos, análisis y reflexión de los aprendizajes y elaboración del conocimiento. Todo ello desde un paradigma crítico de reflexión acción en el aula y con un carácter universal, que lo hace aplicable a cualquier disciplina de conocimiento.

Posicionamiento y punto de partida

El Proceso de Bolonia ha provocado un periodo de reflexión sobre todo lo concerniente a la educación. En un principio, los cambios se reflejaron más en las cuestiones administrativas y estructurales para diseñar el nivel universitario, sin embargo, la experiencia académica, en un intento de puesta en práctica, nos lleva a identificar los siguientes aspectos:

- Reflexión sobre la pertinencia y adecuación de los contenidos impartidos.
- Revisión del periodo lectivo en curso, evaluación y sesiones prácticas.
- Medidas para hacer cumplir a los profesores que no acatan las normas establecidas.
- Adecuación del espacio de formación a las nuevas formas de aprendizaje.

Partimos de la necesidad de disponer de una lista con las habilidades profesionales básicas de referencia para el diseño de las asignaturas, pero no debemos olvidar que la puesta en práctica de las habilidades personales, es lo que posibilita que el sujeto pueda aprender. Así, en el siguiente listado encontramos aquellas que consideramos fundamentales en nuestra labor docente, independientemente de la materia que se imparta. Estas habilidades incluyen:

- *Reflexión:* Se refiere a un proceso de análisis de la situación, evaluar cómo el proceso de aprendizaje afecta a los individuos en función a sus cualidades personales, expectativas de logro, experiencia previa y reconocimiento de las limitaciones y posibilidades. Este análisis nos permite, a nivel individual, que el sujeto descubra sus carencias, para luego reclamar las herramientas que necesita para su formación.
- *La toma de decisiones:* Como resultado del proceso de reflexión, vendría la toma de decisiones que supone identificar los objetivos a alcanzar tanto a nivel profesional y personal.
- *Responsabilidad:* Tenemos que ser responsables de las decisiones que se toman y asumir sus consecuencias, tanto para la vida del sujeto como para los demás.
- *Conocerse a sí mismo:* Para estar bien entrenado en las habilidades profesionales y personales, uno debe aprender a descubrir sus necesidades de formación. Por lo tanto, el diseño y planificación de los métodos de enseñanza deben ayudar a que en el futuro profesional pueda:
  - Conocerse mejor.
  - Descubrir las habilidades necesarias para cumplir los objetivos planteados.
  - Descubrir su proyecto vital y profesional.
  -

Estos aspectos nos conducen a una propuesta en la que la acción educativa lleve primero al docente y discente a una identificación y, posteriormente, a un entrenamiento de las competencias personales y profesionales que le permitan responder adecuadamente ante las cuestiones laborales que se le planteen.

El punto de partida de este trabajo de innovación lo encontramos en la necesidad que se plantea ante el eterno dilema entre formación académica y práctica profesional al uso. De todo ello, surge la necesidad de conciliar ambas formaciones y, a su vez, un replanteamiento de la formación para una práctica reflexiva. Según Schön (1992), la concepción de la práctica supone la puesta en juego de los conocimientos en la acción, reflexión en la acción y por defecto requiere de una reflexión sobre la reflexión en la acción. Esta propuesta nos lleva al convencimiento de que la práctica profesional de la Urología

requiere de una formación previa basada en estos principios de análisis, reflexión, planificación y evaluación.

Reconocemos que por historia y tradición, así como por el sistema de acceso al mundo profesional de la medicina, la formación universitaria se ha centrado más en contenidos, abandonando en ocasiones el resto de las dimensiones necesarias para un aprendizaje global, personalizado y responsable que lleve al estudiante al ejercicio profesional. Así, al igual que sucede en el mundo de la educación, si bien la medicina tiene su propios métodos, está condicionada por la idiosincrasia de los sujetos, clientes a los que debe atender satisfactoriamente. En este sentido Schön (1992: 19) nos expone:

> *… un médico reconoce una constelación de síntomas que es incapaz de asociar con una enfermedad conocida (…) como quiera que el caso único queda fuera de las categorías de la técnica y la teoría existente, el práctico no puede tratarlo como si fuera un problema instrumental que se resuelve mediante la aplicación de alguna reglas guardadas en el almacén del conocimiento profesional. El caso no figura "en el libro". Si se pretende abordar el problema con competencia, habrá que recurrir a algún tipo de improvisación, inventando y probando en la situación concreta estrategias de su propia cosecha.*

Esta aportación nos lleva directamente a entender la necesidad de dotar a los profesionales en formación de competencias personales que le lleven a la elaboración propia de conocimiento, para salvar las situaciones de incertidumbre, singularidad y conflictos de valores.

Entramos, por tanto, en una nueva dimensión de lo que se entiende como carrera profesional y que, según Bolívar (1998), no se puede separar de la vida personal y por lo tanto es indisociable de la trayectoria biográfica de la vida. No debemos olvidar que el ejercicio de la medicina, al igual que la docencia, es eminentemente vocacional, por lo que vida y profesión se funden en un mismo ser. Así, la propuesta de formación y desarrollo profesional en Urología parte de estos principios, con la clara intención de proyección profesional que responda no solo a la práctica médica, sino a que la propia práctica reflexiva será la retroalimentación de la vocación que les lleva al ejercicio profesional desde la investigación, autoformación, autoevaluación y, sobre todo, al diseño de un proyecto personal y profesional.

Hacia una mutación de la educación

La docencia y el ejercicio de la medicina son, por excelencia, dos profesiones que sin duda requieren de una característica común para quien las desarrollan: VOCACIÓN.
Quizás sea por eso, por la vocación de los que hasta ahora se han encargado de ellas, que continúe su existencia de forma más o menos satisfactoria para los usuarios. Pero el paso del tiempo y los cambios acaecidos en las últimas décadas han hecho que la vocación no sea suficiente para responder a las nuevas necesidades que plantea una sociedad plural.
Nos referimos, concretamente, a cómo los organismos encargados de la formación no han sabido, querido o podido velar para que lo que mueve a estos profesionales siga activo. La excesiva burocracia de las administraciones, el sistema de promoción profesional y la dificultad al mundo laboral, en unos casos, y la excesiva apertura en otros, donde la selección de personal no es la adecuada, han conseguido que se olvide cuál es en realidad el fin de la educación.
Ahora más que nunca es necesaria una profunda y seria reflexión sobre los principios de la educación y cómo el erróneo empleo del término ha conseguido desvalorizar su significado. Por ello, coincidimos con Martínez (2001:40), cuando señala que no es suficiente con una transformación en educación, sino que debemos apostar porque esas transformaciones adquieran la categoría de mutación; “que fueran cambios que aparecen y se transmiten de generación en generación”. Es necesaria una revisión del concepto de educación, asumir que el sujeto está en un constante proceso de educación y, sobre todo, redefinir la función docente.

Hacia un nuevo concepto de educación

Es evidente que los tiempos han cambiado, los estilos de vida, la economía, las relaciones internacionales, el empleo de las nuevas tecnologías para el aprendizaje y enseñanza… pero en el fondo, el concepto de que la educación es instrucción y transmisión de contenidos, es algo que cuesta eliminar de nuestros centros educativos. Lamentablemente, la idea de reproducción en educación persiste en nuestra acción docente diaria. No consideramos que ésta sea una cuestión de los educadores, sino más bien un problema de las administraciones y el sistema de evaluación de la calidad, basado en el cómputo del rendimiento académico, muchas veces erróneo.
Tenemos que asumir que la formación debe ir mucho más allá que la mera transmisión de contenidos y la gestión de los mismos. En este sentido, Delors (1998) propone en lo que denomina pilares de la educación que la formación se debe basar en: saber, saber hacer, saber ser y saber estar, para vivir y convivir.

Por lo tanto, entendemos que la educación posibilita que el sujeto se conozca a sí mismo, descubra sus potencialidades y diseñe su proyecto vital y profesional. Vista así, la educación debe ayudar a formar personas psicológicamente equilibradas con capacidad para tomar decisiones propias. Elzo (2006) propone que sean:

> *"…social y culturalmente insertados, éticamente responsables, con capacidad de construir su futuro, dueños de sus vidas, actores y no meros espectadores, agentes activos y constructores de su destino. Jóvenes críticamente autónomos y que sepan avanzar hacia un mundo más armonioso y justo del que les estamos dejando"*

La necesidad de que la educación retome su papel en la formación de las personas, ser y estar, en ningún caso supone o implica el abandono de los contenidos. Como ya se ha indicado, la incorporación al Espacio Europeo de Educación Superior ha llevado a la necesidad de revisar tanto los contenidos académicos, como las estructuras institucionales para que permitan una formación acorde a la demanda de la sociedad actual.

Lamentablemente, para muchos, el problema de la educación se reduce a una cuestión económica, lo que supone a nuestro entender una reducción al absurdo. La calidad y la innovación en educación requieren más de vocación, creatividad y voluntad. Por lo tanto, debemos focalizar nuestros esfuerzos en cambiar el concepto de educación hacia la ayuda que el educador da al educando para que se conozca a sí mismo y se desarrolle como sujeto libre en el mundo.

La educación es una constante

Cuando hablamos del profesorado en general, erróneamente pensamos o hacemos alusión a los profesores de primaria, sin caer en que los que ejercen en la secundaria y universidad también lo son. Especial trato merecen estos últimos, ya que se les atribuye la responsabilidad de formar a los profesionales de todos los campos laborales.

Paradójicamente, al menos en el caso de España, encontramos que a los profesores de universidad no se les exige ninguna formación pedagógica. De ahí que este trabajo se presente como una experiencia pedagógica de formación a través de la docencia, en el mundo de la medicina.

Si volvemos la vista atrás, veremos que de una forma u otra, en nuestra vida siempre hay un docente y/o educador. Pero si hacemos proyección de nuestra vida, encontramos que siempre necesitaremos a alguien que nos enseñe, al tiempo que nosotros enseñamos a otros, tal y como nos indica Mourieu (1998). Por lo tanto, el sistema educativo debe contemplar que en potencia todos los estudiantes pueden ser futuros educadores, en su desarrollo personal y/o profesional.

Con esta idea, queremos hacer una reflexión sobre la necesidad de que la escuela y los profesionales que en ella trabajan, los centros de secundaria y las universidades, así como otras instituciones encargadas de la educación formal, asuman su responsabilidad en la formación de competencias personales antes que profesionales. Así, la reflexión, humildad, responsabilidad… son valores que se deben entender como transversales no en la formación del sujeto, sino en su educación. Para ello, debemos diseñar los programas académicos que permitan poner al sujeto en conflicto consigo mismo, tomar decisiones y proponer soluciones desde una perspectiva positiva tal y como indica Pérez de Guzmán (2011).

Todas estas ideas nos llevan a proponer una concepción de la investigación educativa como parte de la labor docente, donde la investigación sobre la acción no solo es necesaria para la producción científica, sino que es de gran utilidad para el propio desarrollo del profesional. Reflexionar sobre la práctica, proponer mejoras y evaluar resultados en relación al quehacer diario, supone un enriquecimiento de las instituciones educativas.

Los principios docentes y el diseño de la actividad formativa

A la propuesta de la Convergencia Europea "aprender a aprender", debemos añadir "aprender a desaprender". Así, intentamos que la acción docente se centre en el estudiante facilitándole la identificación de sus necesidades de formación, haciéndole sentirse libre para que tome las riendas de su aprendizaje desde la responsabilidad y velando para que los contenidos impartidos sean de utilidad para su proyecto profesional y vital.

Tras la acción educativa encontramos la identidad profesional de los docentes, que condiciona su dimensión personal y vital. Nos referimos con esto a que la carrera profesional, en general, es una cuestión de responsabilidad. Ciertamente, nos encontramos con que la excesiva normativa en el campo de la educación limita mucho el campo de actuación de los docentes, pero es importante no olvidar que la idea que el profesor tiene sobre su propia acción es lo que determina la docencia. En este sentido, queremos reflexionar sobre la diferencia entre concebir la docencia como una mera transmisión y reproducción de información sin mayor preocupación o, por el contrario, el utilizar los tiempos de instrucción para el desarrollo de competencias personales de los estudiantes.

Así, entendemos que la carrera profesional debe incluir una dimensión estructural referida a los distintos puestos que se ocupan, pero también es necesario considerar, desde lo subjetivo, el crecimiento personal que dicha carrera implica. En este sentido se hace referencia a cuestiones estrictamente personales, donde las experiencias profesionales son el resultado de lo vivido en el pasado, reconstruyen la acción diaria y proyectan actuaciones futuras.

El docente debe desarrollar estrategias y herramientas que le ayuden a crecer personalmente a través de la reflexión y análisis de su práctica docente. Para ello, se hace necesario asumir un nuevo rol docente que incluya aspectos como la humildad, reflexión, responsabilidad, conocerse a sí mismo y, sobre todo, asumir el papel que se juega ante la sociedad.

Entendemos esta idea como uno de los principios en los que nos apoyamos, como ya mencionamos anteriormente, ya que estamos en una sociedad plural, dinámica y con grandes cambios sociales. Cambios que afectan directamente al campo de la salud y la educación. Por lo tanto, esta nueva realidad nos obliga a formar a los estudiantes de medicina en particular y cualquier profesional en general, a través de la investigación, la autoformación y la autoevaluación. Por ello partimos de la idea de que solo el sujeto es capaz de determinar cuáles son sus carencias y aspiraciones. Las repercusiones de esta actitud evaluadora y evaluativa las explica Picardo (1997:119) con gran acierto:

> *"La creación de una cultura o disciplina personal de autodesarrollo profesional debe emerger en las instituciones de formación docente – o antes; si a los estudiantes universitarios no se les exige o no se les introduce en el camino de las responsabilidades profesionales autónomas, si no se les ayuda a construir un hábito de lectura o actualización, difícilmente podrán autoformarse en el escenario laboral."*

Continúa su discurso centrándose en la necesidad de orientación profesional desde las aulas y su repercusión en la docencia. Lo explica en el siguiente texto:

> *"En última instancia, el tema del desarrollo profesional y de una cultura de autoformación tiene que ver con una visión de futuro y con la auto comprensión de la profesionalidad docente; mientras se haga docencia para sobrevivir o mientras se haga docencia desfigurada o saturada, no habrá espacios, tan siquiera para pensar en la importancia del desarrollo profesional; más allá de las inquietudes vocacionales, también el sistema tendrá que abrir los espacios iníciales para jalonar o para estimular esta preocupación profesional."*

En base a estas aportaciones, nos planteamos una experiencia metodológica basada en la investigación- acción, centrada en la reflexión por parte del alumno, dando espacios y oportunidades para que éste pueda hacerse a sí mismo.

Herramientas para la formación y docencia reflexivas

El diario

A continuación ofrecemos algunas propuestas para el seguimiento del proceso educativo, que pueden ser utilizadas por cualquiera de los agentes participantes en la acción educativa.

Figura 1. El diario

El diario como herramienta de elaboración y reflexión se ubica dentro de las metodologías cualitativas y etnográficas que incluyen: biografía narrativa, las historias de vida, como señala Bolivar (1998), el estudio de casos de (Stake) o la investigación acción en el aula, como señala Woods (1998)

En cada una de sus diferentes aplicaciones, el diario como instrumento permite un crecimiento tanto personal como profesional en la vida de los docentes. No debemos olvidar que el ejercicio profesional de los docentes, en cualquiera de los niveles y espacios educativos, se desarrolla en un contexto institucional y jerarquizado que transmite sus propios valores, no siempre adecuados y consensuados, pero que hay que asumir.

En este contexto, es necesario interiorizar e interpretar lo que dichos valores, creencias y formas de actuación suponen primero en el crecimiento personal, para en un segundo momento incluirlas en el ejercicio profesional. Lamentablemente, no son aisladas las prácticas educativas en la que se asumen los principios establecidos por la institución de forma irreflexiva, por lo que la docencia se convierte en ejecución de algo instrumentalmente establecido, más que en una experiencia vital y de crecimiento.

Autores como Porlán (1999) ven el diario como una propuesta útil para la investigación en el aula así como su carácter universal en cualquier disciplina y nivel educativo, permitiendo descubrir y establecer un itinerario para el desarrollo profesional y personal del sujeto.

A nivel de estudiantes, de una forma más o menos rigurosa según las edades, ayuda a desarrollar competencias personales como son: la reflexión, toma de decisiones, responsabilidad y, sobre todo, proyección de actuaciones.

Otra de las versiones es el diario de equipo de trabajo, que permite registrar las acciones, decisiones y actuaciones de los miembros del equipo docente, al tiempo que fomenta la

reflexión y participación. Por otra parte, propicia el crecimiento como grupo de trabajo y que la acción docente no sea la suma de acciones aisladas en un mismo centro.

Ejemplo – Utilización del diario del docente[1]

Mostramos a continuación varias anotaciones en el diario de clase de una docente en la formación de maestros, respecto de las impresiones de las primeras tutorías:

> *"Se observa que el alumno necesita un primer encuentro con el profesor donde manifestar sus ansiedades respecto de la asignatura. En una primera ronda de tutorías durante el primer mes de clase los temas que el alumno trata son: desconcierto ante una nueva metodología, manifestación de su falta de habilidades para el estudio en general y para la composición de apuntes en particular".*
>
> *"Manifiesta los problemas que el sistema de formación en secundaria les ha ocasionado y que salen a la luz con esta metodología. Nos referimos a cómo en niveles de formación anterior el sistema de copiar lo que está subrayado y de contestar lo que el profesor previamente ha dictado, les impide tomar decisiones y sobre todo la discriminación de la información importante".*
>
> *"Por otra parte, los alumnos en tutoría manifiestan su reparo a hablar en clase por miedo a que el resto de los compañeros los puedan señalar o no les sean de interés sus aportaciones".*

Esta reflexión permite al docente replantearse la metodología en función de las necesidades detectadas y volcar en las sesiones de clase estas conclusiones, para un mayor acercamiento a los estudiantes. Se consigue con ello la creación de espacios de seguridad en el aula, permitiendo la intervención de los alumnos. Así se muestra en diario del docente:

> *"Hoy, en clase, hemos hablado de este tema*[2] *y se ha concluido que la competencia hablar en público es necesaria en la formación de los docentes ya que comprende expresión oral, saber exponer sus ideas, con orden y coherencia, así como la competencia aprender a cambiar el discurso en función a la información que la retroalimentación del resto de los compañeros nos da. Ambas son competencias fundamentales en la formación de los docentes, por lo que debemos buscar actividades de clase que fomenten la participación".*

[1] En este caso su muestra un fragmento del diario de la Prof. Vargas en la asignatura de Teoría e Instituciones contemporáneas de la educación. Titularidad de Magisterio.
[2] Se refiere a lo reflexionado sobre la sesión anterior en el diario del docente.

La utilización del diario del docente, en el ámbito de la Educación y desde una visión pedagógica, nos ha permitido identificar los aspectos y/o dimensiones que impiden o favorecen una adaptación a la propuesta de Bolonia y a la formación académica como crecimiento. Así llegamos a concluir en la necesidad de elaborar guías para la docencia y el aprendizaje, que en primer lugar requieren de un posicionamiento del docente hacia su propia acción.

Guía docente en el proceso de enseñanza - aprendizaje

Como primera experiencia de innovación metodológica, se diseñó la *Guía para la docencia y el aprendizaje basada en ECTS*[3] que se puso en experimentación en una asignatura de Magisterio. Con ello se inició una línea de investigación-acción en donde la pedagogía retomaba su papel principal en la elaboración y diseño de espacios de docencia-aprendizaje.

Siguiendo las orientaciones de Bolonia, la elaboración de guías para la docencia y el aprendizaje es de obligado cumplimento para alcanzar una docencia que:

- Esté centrada en el desarrollo de competencias personales y profesionales de los estudiantes.
- Permita al docente mejorar su acción diaria y mantener viva la ilusión y vocación.
- Que los contenidos impartidos respondan a las necesidades de formación para el desarrollo profesional.
- Respete el ritmo de aprendizaje de los estudiantes.
- Proyecte y gestione la carrera docente.

Ejemplo – Prácticas de Urología: Guía para la docencia y el aprendizaje basado en ECTS

Respondiendo nuevamente a la propuesta de Bolonia se creó un espacio interdisciplinar entre la Pedagogía y la Medicina, dando como resultado el diseño de las *Prácticas de Urología* y la elaboración de la *Guía para la docencia y el aprendizaje basada en ECTS* específica para esta práctica y elaborada por los autores firmantes, en un intento de ofrecer una docencia centrada en el estudiante y todos aquellos aspectos que se vienen defendiendo a lo largo de este trabajo.

[3] La guía para la docencia y el aprendizaje basado en ECTS de la titulación de Magisterio se pueden encontrar en: http://hdl.handle.net/10498/9807 y en http://hdl.handle.net/10498/14666 versión inglés.

La guía tiene como propósito los aspectos mencionados anteriormente, así como ayudar al estudiante a identificar los espacios de formación y organizar la información para convertirla en aprendizaje[4].

Como se viene indicando, la formación reflexiva requiere de un posicionamiento del docente respecto a su propia acción y en función de la misma. Así, para la elaboración de la guía fue necesario primero un cambio de mentalidad del docente, sobre todo en la concepción de la Universidad como formadora y el aprendizaje como desarrollo del sujeto a nivel personal y profesional, así como las necesidades de formación en Medicina y su repercusión social.

Se presentan a continuación los pasos realizados en el diseño de la práctica y que han servido de orientación para la elaboración de la guía. El carácter universal de esta propuesta la hace aplicable a cualquier disciplina.

Paso 1 – Orientar al estudiante sobre qué es una práctica hospitalaria

El alumno debe entender que la actividad asistencial de un hospital es "organizada pero difícilmente planificada". Esta situación en ningún caso se debe confundir con desorden o falta de contenidos que aprender o poner en práctica. Queremos hacer especial énfasis en que el alumno entienda que durante su periodo de prácticas debe estar dispuesto a aprender "de todo, de todos y en todo momento". Es el alumno el que debe entender que el ejercicio de la medicina es, entre otras cosas, dar respuesta rápida y acertada a las situaciones que se presenten. La cantidad de casos o variables que diariamente se pueden dar en un Centro Sanitario, hace no sólo difícil, si no imposible, el diseño de unas prácticas cerradas, entre otras cosas porque no responderían a una realidad laboral para la que intentamos preparar al alumno.

Paso 2 – Determinar los objetivos del proceso de enseñanza–aprendizaje

Es importante distinguir entre los objetivos que la acción docente pretende para los alumnos y los que el propio profesor se plantea sobre su acción, y la posterior evaluación que le permitirán mejorar su docencia.

[4] Esta guía se ha utilizado para las prácticas de Urología en la formación de los estudiantes de Medicina de la Universidad de Cádiz. Disponible en: http://hdl.handle.net/10498/14667

Objetivos para el alumno

1. Adquirir una preparación humana amplia que permita acercarse al mundo de la medicina con madurez, respeto y rigor profesional.
2. Conocer la realidad del ejercicio profesional de la medicina en general a través de las prácticas clínicas de Urología en particular.
3. Identificar las necesidades de formación académica en el campo de la Urología y disciplinas asociadas o implicadas en las distintas patologías.
4. Adquirir un desarrollo óptimo de las competencias y habilidades específicas de la materia que se describe más adelante.

Objetivos para el profesor

1. Proporcionar un espacio y momento donde una actividad asistencial sirva de aprendizaje y/o estímulo para el aprendizaje.
2. Proporcionar metodologías y recursos que faciliten el aprendizaje y la formación integral del alumno.
3. Facilitar la reflexión crítica sobre la realidad y el quehacer diario del médico, con el fin de una mejor integración en el mundo profesional.
4. Al finalizar las prácticas el alumno debe saber más de la Urología que cuando se iniciaron las mismas.

Se pretende una formación desde la libertad, pero basada en la responsabilidad, desde la autonomía del alumno, pero con respeto al grupo, adaptada a sus intereses sin abandonar el rigor e importancia de los contenidos. Estimular el sentido crítico y la libre construcción de conocimientos de forma individual.

Una de las cuestiones más importantes que dificultan el aprendizaje de los estudiantes, es reducir la información y los contenidos en un sentido tradicional de la formación como instrucción, donde el libro es el gran protagonista en el proceso. Por ello fue necesario el tercer paso que se explica a continuación.

Paso 3 – Identificar los distintos espacios de enseñanza-aprendizaje

La práctica

Recordemos, y así se le muestra al alumno, que las prácticas son una puesta en juego de: “saber hacer, saber ser y saber estar”. Son espacios en los que el alumno puede tener conciencia de sus saberes; pero más importante aún, descubrir lo que necesita saber para su desarrollo profesional. Deberá poner en juego sus saberes para detectar sus necesidades de formación y posterior solución a nivel teórico, después de una búsqueda bibliográfica. Entendida así la práctica, es una excelente prueba de autoevaluación para el

alumno, donde con tiempo suficiente se le puede invitar a una reflexión de cómo transcurre su proceso de enseñanza-aprendizaje.

La tutoría

Una de las propuestas de la Convergencia Europea es "promover el uso y aprovechamiento de las tutorías". El proceso de enseñanza-aprendizaje está concebido dentro de las líneas metodológicas que proponen la tutoría como elemento fundamental en la formación. Es a través de ésta donde el alumno puede resolver las dudas que le han surgido en el tiempo de trabajo autónomo. La tutoría no se debe confundir con una sustitución de las sesiones de clase; es un espacio para revisar el trabajo elaborado, orientar al alumno en las distintas actividades a realizar y resolver dudas sobre distintos aspectos surgidos tras haberse enfrentado en solitario a los contenidos.

La entrevista

Al finalizar las prácticas y con el informe completo (uno por día) se concertará una cita para la entrevista con el profesor responsable. La entrevista consistirá en la valoración del informe por parte del alumno y el profesor, donde el alumno debe, no solo acreditar su asistencia, sino mostrar su participación y provecho en la adquisición de conocimientos para lo que dispone entre otras herramientas de una rúbrica que es de gran utilidad para conocer los criterios de evaluación y el nivel alcanzado por el alumno.

Paso 4 – Diseño de la metodología y materiales didácticos

Como ya se ha explicado, la propuesta metodológica se centra en el autoaprendizaje, autogestión y autoevaluación. Nadie mejor que el alumno sabe cuáles son sus necesidades de formación. Esto implica la incorporación del alumnado en el proceso de enseñanza-aprendizaje como un elemento central, haciendo que se comprometa en el desarrollo de su propia formación, al mismo tiempo que potencia la reflexión y la creatividad. Cuando hablamos de educación centrada en el estudiante debemos tener en cuenta estos principios básicos:

- Sólo el alumno puede decidir aprender.
- Asumir que cada uno aprende de diferente modo y ritmo.
- El aprendizaje está en función del interés del alumno y sus conocimientos previos.
- En el mundo, lo único que permanece es el cambio, por ello se necesita una adaptación constante y una concepción de aprendizaje a lo largo de la vida.

Los materiales que se le ofrecen son una propuesta de *Diario de campo* para el registro de la práctica diaria y posterior elaboración del conocimiento, que se materializa en la realización de un informe que debe incluir al menos los datos que se reflejan en la siguiente tabla. Cada uno de los apartados que se han propuesto son eso, una propuesta que se puede modificar según las necesidades, siempre y cuando los contenidos no se vean perjudicados.

Ejemplo de Diario de campo

Fecha y hora	
Lugar de la práctica	Quirófano, urgencias, consultas…
Profesor de prácticas	
Descripción de casos clínicos / situaciones/ (al menos un caso por día)	Descripción del paciente/s. Motivo de consulta. Circunstancias especiales (co-morbilidad, situación social…). Anamnesis realizada. Exploraciones realizadas. Pruebas complementarias solicitadas. Opciones de tratamientos médicos y quirúrgicos. Resultados de tratamientos. Medidas paliativas. Paciente hospitalizado (cómo llegó a esta situación, situación al alta, pronóstico), etc.
Descripción de dudas iníciales	Aquí el alumno tiene la oportunidad de describir sus límites de conocimiento en la materia que se trata. Lo habitual es que sea testigo de situaciones clínicas novedosas y por ello exista más desconocimiento que conocimiento.
Descripción de la solución a dudas con asesoramiento durante la actividad	La convivencia con los profesionales docentes permite intercambiar impresiones y sobre todo resolver dudas. Tutorías.
Descripción de la solución a dudas resueltas por el propio alumno	Existen fuentes de consulta a disposición del alumno: aula virtual, libros, revistas, conferencias en Internet, etc.
Otros aspectos respecto de la actividad realizada	Aquellos contenidos y/o aspectos que el alumno considere importantes para la construcción del conocimiento.

Por otra parte, se le presenta una propuesta de elaboración de informe donde se combinan en un solo ser, lo experimentado en las prácticas, lo aprendido de los profesores, lo deducido en la reflexión y aprendido en la investigación. Por lo tanto, la observación sistemática, el análisis de la realidad, el descubrimiento de los saberes y la investigación ante el desconocimiento, son los ejes de esta propuesta didáctica.

Ejemplo de reflexión a partir de las notas de campo

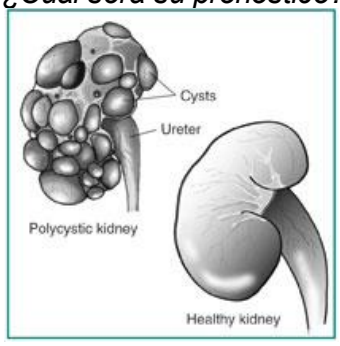
El día 15 de noviembre de 2011 realicé prácticas en HUPR. Se realizó la práctica en consulta externa con el Dr. Marañón.

Descripción del caso

Un caso que creo interesante describir fue el de un paciente que consultaba por quistes renales. El paciente tenía 45 años y no presentaba enfermedades de interés salvo una intervención de apendicitis en la infancia. Tanto él como su acompañante mostraban gran ansiedad por saber que un hermano mayor que él está en diálisis y su padre falleció de "riñón" sin precisar diagnóstico. El paciente aportaba una analítica general que aparentemente era correcta. El Dr. Marañón celebró que tanto la creatinina como la urea eran normales. Realizamos una ecografía en la misma consulta y se observaron quistes dispersos en ambos parenquimas renales. No existía hidronefrosis. El médico tranquilizó al paciente porque no precisa tratamiento y lo derivó para su seguimiento al nefrólogo.

Dudas que tuve en ese momento

¿Por qué no fue al nefrólogo desde el inicio?
¿Qué problemas dan los quistes renales?
¿Qué enfermedad será la causa de que sus familiares estén en diálisis?
¿Cuál será su pronóstico?



Resolví con el Dr. Marañón lo siguiente (en un descanso en la consulta)

Los quistes son muy frecuentes en el adulto y pueden estar vinculados tanto a enfermedades urológicas como nefrológicas. De una forma simple, los urólogos se ocupan de la vía urinaria (describió "la cañería") y de los problemas quirúrgicos del riñón como extirpación o reconstrucción. También me dijo que la mayoría de los quistes son asintomáticos como ocurría en este paciente. La enfermedad que probablemente sea la causa de la diálisis es la poliquistosis renal del adulto.

Consultas por propia iniciativa

Tras navegar por internet supe que el término anglosajón es "Polycystic Kidney Diseases" y a través del "Pub Med" encontré 6596 artículos que trataban de temas muy concretos respecto a esta enfermedad. En el aula virtual descargué las diapositivas que describen de forma muy resumida. Consulté en distintos portales médicos donde la información más general me resultó suficiente para resolver mis dudas. La poliquistosis renal del adulto es una enfermedad hereditaria de transmisión autonómica dominante.

Ejemplo de Rúbrica para la evaluación del proceso y final

El diseño de las prácticas contempla una rúbrica o tabla de criterios para la evaluación de las distintas actividades. Esta herramienta de evaluación pretende definir aquellos aspectos que el docente va a evaluar en los informes que el alumno debe presentar y defender con el profesor, para la obtención de una calificación óptima de la asignatura. Por otra parte, la rúbrica favorece la autoevaluación del alumno. Se recomienda una lectura de la rúbrica antes de iniciar las prácticas y durante la elaboración del informe que será posteriormente defendido en la entrevista.

Rúbrica para la evaluación

Actividad	Nivel 1	Nivel 2	Nivel 3
Asistencia a prácticas	Ninguna	Algunas < 75%	Todas
Asistencia a talleres	Ninguna	No	Si
Asistencia a seminarios	Ninguna	Uno	Todos

Actividad	Nivel 1	Nivel 2	Nivel 3
Realización del informe	No	Con carácter retroactivo	Con carácter diario y completo
Elaboración del informe final	No o sin aportación a nivel de contenidos	Descriptivo. Con aportación de contenidos. Nivel de utilización de términos médicos	Informe que responde a los datos obtenidos en el diario de campo. Relaciona contenidos de prácticas con otras fuentes de conocimiento. Ofrece respuestas y diagnósticos alternativos. Ofrece revisión bibliográfica con ampliación de al menos un caso de la semana. Correcta utilización de los términos médicos.
Nivel de deducción	No hay	Llega al diagnóstico	Llega a un diagnostico a través de la deducción y contemplando todas las posibilidades de error y justificando respuestas. Puede adelantar posibles complicaciones en función a la salud del paciente, edad, género…
Tratamiento	No propone	Conoce el tratamiento	Explica las necesidades médicas y propone un tratamiento demostrando que conoce sus efectos. Puede prever que no funciones y ofrecer otras posibilidades. Puede explicar hasta cuándo va a esperar para ver si funciona.
Formación integral	No hay	Se limita a la Urología	Puede llegar a plantear las posibilidades de trabajar con otras especialidades relacionadas.
Saber estar	Inadecuado	Adecuado	Adecuado

Análisis de las experiencias

Los datos obtenidos en el análisis de las dos experiencias metodológicas presentadas han sido de carácter cualitativo y cuantitativo, tanto en relación al rendimiento académico como a la mejora en la formación de los estudiantes y su satisfacción a nivel personal, donde se obtiene una formación integral, completa y resultado de la experiencia vivida. A nivel general, podemos concluir en la necesidad de organizar y diseñar acciones educativas

desde principios pedagógicos que guíen la intervención docente. Conseguimos por otra parte respetar los ritmos de aprendizaje del alumno desde el respeto a la ciencia y con un aprendizaje de transformación añadido. A través de la formación utilizando la guía docente, tanto profesor como alumno conocen los principios docentes de que se parte, los objetivos de formación orientados al desarrollo profesional, así como la metodología y herramientas de que se dispone para dicho objetivo. Por lo tanto, queda establecido *el triángulo formación- investigación-innovación*, tal y como se propone en el proyecto Estrategia Universidad 2015.

Conclusiones

Desde la Pedagogía, y tomando las motivaciones que nos llevaron a las experiencias metodológicas que se han presentado, podemos terminar destacando la necesidad de una reflexión sobre el propio concepto de aprendizaje, del que ya se ha hablado, y su aplicación en la Enseñanza Superior. Se hace necesario fomentar una ruptura entre el significado tradicional de aprendizaje, como el saber reproducir, hacia un aprendizaje transformación, que comienza en la singularidad del propio sujeto, la forma de adquisición de aprendizajes y la utilización de los mismos, tal y como indica Meirieu (1998:90):

> *"La autonomía se adquiere en el curso de toda la educación, cada vez que una persona se apropia de un saber, lo hace suyo, lo reutiliza por su cuenta y lo reinvierte en otra parte. Esa operación de apropiación y reutilización no es un "suplemento de alma", un añadido a una enseñanza que se haría, por lo demás de un modo tradicionalmente transmisivo, sino que es aquello que debe presidir la organización misma de toda empresa educativa."*

En definitiva, la acción educativa debe animar al sujeto a una superación continua y conocimiento de sí mismo, ofreciéndole los espacios y herramientas para responder a sus necesidades de formación. El docente, por su parte, debe diseñar sus asignaturas desde los principios pedagógicos que sustenten su intervención para posibilitar un desarrollo integral del estudiante.

Bibliografía

Bolívar, A., Domingo, J.Y., Fernandez, M. 1998. *La investigación biográfica en educación. Guía para indagar en el campo*. Universidad de Granada. Force.

Delors. 1998. La educación encierra un tesoro. UNESCO.

Elzo. 2006. *Jóvenes y Valores: la clave para la sociedad del futuro*. Barcelona.Fundación La Caixa.

Martínez. 2001. *El contrato moral del profesorado: condiciones para una nueva escuela*. Madrid.Colección Aprender a Ser. Desclee.

Ministerio de educación. 2010. *Estrategia Universidad 2015.* Madrid.

Mourieu, P. 1998. *Frankenstein Educador.* Barcelona. Laertes Psicopedagogía.

Pérez de Guzmán, M.V.Y., Pérez Serrano, G. 2011. *Aprendiendo a convivir. El conflicto como oportunidad de crecimiento.* Madrid. Narcea.

Picardo, O.Y., Escobar, J.C. 1997. *Historia de las ideas pedagógicas.* Documento en Red.

Porlán, R.Y., Martín, J. 1999. *El diario del profesor: un recurso para la investigación en el aula*. Madrid. Diada Editora.

Schön, D. 1992. *La formación de profesionales reflexivos. Hacia un nuevo diseño de la enseñanza y el aprendizaje en las profesiones*. Barcelona - Buenos Aires – México.Temas de Educación Paidós. Ministerio de Educación y Ciencia.

Stake, R. 1999. *Investigación con estudio de casos.* Madrid. Morata.

Woods, P. 1998. *Investigar el arte de la enseñanza. El uso de la etnografía en educación*. Barcelona: Temas de educación. Paidós.

Terminological Aspect in EFL (English as a Foreign Language) Teacher Education for Vocational Schools

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Abstract

The prominence of English as the world lingua franca results in challenges related to the use of professional discourse at higher education institutions in Latvia. The article reports the results of linguistic analysis of English ICT terms constituting the core ICT discourse to be acquired during the four-semester ESP (English for Specific Purposes) course for future teachers of applied information technology of the University of Latvia. The existence of overlapping and competing systems results in inconsistency in the use of professional terminology at all levels – starting with ensuring high-quality education and up to problems in communicating research findings to the global community. The article explores a number of issues concerning the impact of globalization on language use in professional communication, including the changing profile of tertiary level education. The data obtained revealed a number of problems related to the lack of language proficiency benchmarking and the need to revise existing inconsistent curricula with the aim to promote improved use of professional discourse. These problems are possibly associated with the initial phase of transition towards the multilingual and multicultural community.

Keywords: terminology, professional discourse, standard, language use, teacher education, vocational education

Introduction

Science and technology, alongside with other specialist areas have undergone rapid development and transformations in recent years, which results in the need to modify the tertiary level education curriculum and make it based on students' needs rooted in these changes. "Specialist communication now makes up about four fifths of all information, which is transferred and shared through scientific communication at an ever increasing rate via the new communication channels of the borderless, multilingual information society" (Recommendations for Terminology Work 2002, 8). The accuracy and, thus value of scientific knowledge is predetermined by the precision of terms defining concepts used to transfer the practices of experience and innovation.

The relatively short period when Latvia has become part of the European Union and thus of European education space, as well as rapid technological developments have resulted in the mixture of the local and other languages being used for different purposes and in different settings. In various degrees these languages gain prestige as a consequence of certain, not always clear-cut, power relations. Thus, the language considered 'prestigious' for some groups might not always be supported by other groups.

In the historic perspective, languages are associated with the groups they are represented by. The language of the more powerful group, thus, becomes the dominant one under certain conditions and in specific contexts, e.g., English is gaining position in the ICT field at least with professional users, which is not always viewed as a positive tendency by local officials, policy-makers, etc. It is obvious that language is the key factor in the process of nation formation, thus, the invasion of languages other than local is seen as a danger to local languages. Though the Latvian language regained its position as the state language since the declaration of independence in 1991, its power status still remains a painful question for the Latvian nation, as it is surrounded by at least two languages – English and Russian. At first sight, they might be viewed as peripheral, however, their impact is obvious, which results in different unresolved language related issues. The focus of the article is English as the source language for the terminological system of the ICT field in Latvia, due to its impact on local language use.

The necessity to raise educators' awareness of the importance of consistency in the use of professional terminology is revealed.

EFL Teacher Education for Vocational Schools

The history of teaching English as a second or foreign language takes its roots in the 15th century with William Caxton, who may have been the first to introduce didactic material entitled *Right good lemyng for to lerne shortly frenssh and englyss* (1483) with a highly pragmatic content (useful words, dialogues, etc.). Gabriel Meurier, a Frenchman who lived in Antwerp, could be the first teacher of English as a foreign language. *A Treatise for to Learn to Speak French and English* authored by Meurier was published in 1553. Other seminal works in didactics include *The English Schoolmaster* (1580), and *Familiar Dialogues* (1586), written by Jaques Bellot, a Frenchman teaching English to French immigrants, mostly craftsmen who needed to master English for their work purposes in London (Braine 2005, xi – xii). The rapid spread of English from the 16th century has culminated in the ever more strengthening role of an English teacher in the 21th century, being the result of the spread of English as the lingua franca for many professional spheres.

Modern reality puts forward new requirements to education, for globalization results in new objectives set for future specialists in all domains. Teacher education for a rapidly-changing

world is an ongoing objective for teacher educators. Therefore, the topicality of the problem discussed is substantiated by a number of factors:

- The growing importance of English as the dominant language in many professional fields and its impact on language use;
- Inconsistency in the use of professional terminology revealed as a problem in Latvia;
- The necessity to raise awareness of educators of the need to address the issue of officially recognized terminology and terminological practice in the framework of their study courses.

Terminology Development – Tensions and Conflicts

There are several parties involved in the process of terminology development, all with their own vested interest in it: the producers (scientists/ scholars and manufacturers) of technology or knowledge, its users, which, in their turn, can be either professionals (then this group partly overlaps with those involved in research and production of technology or knowledge) or simply consumers. In the latter case conflicts of interest and differences in needs may arise either at the level of definitions of terms or at the level of nomination – the choice of the term as such. As far as definitions are concerned – as Sager (1990) points out, non-specialists may need an encyclopaedic definition, not a strictly terminological one (Sager 1990, 48 – 49 in Temmerman 2000, 24). This is usually taken into account by general monolingual explanatory dictionaries, where definitions of most technical terms will now commonly differ considerably from those in terminological dictionaries, and the tendency is to offer quite simplified versions (e.g., in the *COBUILD* dictionaries). It is also taken into account by companies providing widely used technical services, e.g., telecommunication: both terms and their descriptions are often worded differently in internal communication and in instructions for consumers.

Another facet of the conflict, where the process of "naming" is the focus of attention much more than definitional issues, is the well-known tension between professional communities and the official bodies responsible for standardization of terminology. This situation is not unique either to Latvia or to the ICT domain. However, the ICT domain in Latvia is the site where the tension is particularly acute, for the reasons pointed out in Odina, Doroshenko, Stavicka (2011) research. They are, in brief, as follows: ICT develops at a very quick pace and most original terms are English, since so far most innovations in software development were introduced in English-speaking countries. When adapted to local needs in the professional environment, English terms are often rendered by Latvian "computerese", many of them being "non-naturalized" borrowings. ICT professional jargon is picked up by other internet/computer users who are mostly a relatively young section of the population, likely to use jargon as a fashionable and distinctive mark of belonging to a professional or age group. Professional ICT discourse takes place mostly in the spoken mode and in the mode of

electronic communication among insiders (including numerous blogs and professional chats). In these highly informal settings participants have equal status; communication is often face-to-face and always highly interactive, with rapid feedback. “Correctness” and compliance with the standards of usage (possibly even non-existent as yet) are not valued too highly (Odina, Doroshenko, Stavicka 2011, 89 – 91). The opposing side is represented by the standard-setters promoting the idea of the purity of the national language standing symbolically for both ethnic identity and political independence. Thus, their activities are closely linked to language policy and standardization practices and are strongly oriented towards them. While the link is understandable, the effects of standardization are sometimes problematized by specialists in the ICT field claiming that the standard-setters do not take into account the already existing practices. This is the conflict between “spontaneous term formation and designed and engineered term formation” which Sager also refers to as “secondary term formation” (Sager 1990, 80 in Temmerman 2000, 24).

Opposition to “traditional” overtly prescriptive approaches to terminology standardization is voiced also by some linguists who claim that when language planning and standardization are the primary and most important motivation, or when “the scientific study of terminology is confounded with the pragmatic activity of standardization”, the objective study of terminology is difficult (Temmerman 2000, 19), “that the aim at absolute uniformity of scientific terms would be an artificial and utopian process” (Cabre in Temmerman 2000, 30) and that prescriptive terminological activity should give way to “the study of real language usage”(Temmerman 2000, 31). Indeed, it stands to reason that while individual preferences for the prescriptive or descriptive approach may be a matter of taste, the descriptive approach should be primary at least in the sense that the actual state of affairs in terminology should be known before recommendations of any kind are offered or terms are invented by standard-setters themselves. **“**Prescription (, however,)… presupposes certain assumptions about facts which have to be correct. If the facts cannot be supported by experiential evidence, the prescriptions lack a basis for their application” (Temmerman 2000, 22).

This, in turn, would mean that corpora of data based on professional discourse cannot possibly be ignored by terminologists. Reliance on corpora, now a must for general-purpose explanatory English dictionaries, has already changed the face of modern lexicography whose prescriptive authority was enhanced, not undermined, by more informed choices made by compilers in their prescriptive practices.

It should be noted that it is the difference in the situational and linguistic contexts where unofficial and official versions of ICT terms are produced that is decisive. Official terms are produced and communicated in print, there is no direct feedback or it is delayed, the standard-setter is an authority with no immediate interlocutor.

Some other terminological systems, e.g., educational terminology, evolve under different conditions, even though Latvian educational terminology is also quite dynamic. It has

experienced significant changes, first due to regained independence of the Latvian state and the change of its ideological paradigm about 20 years ago, later due to the accession of Latvia to the European Union in 2004. Latvia has become part of the Bologna process concerning higher education, of the Copenhagen process which concerns vocational education and training; in 2009 the strategic framework for European cooperation in education and training ("ET 2020") was adopted concerning pre-primary, primary, secondary, higher and vocational education in the EU countries. These institutional changes go hand in hand with official translations of numerous respective EU documents into the Latvian language, i.e., translation, adaptation and naturalization of terms are closely monitored by official bodies, therefore official or institutionalized terminology prevails. Professional discourse in the domain of education is not, of course, limited to the written/print mode exclusively, but classroom/conference/public educational discourse is, by its very essence, derivative from texts produced in the print mode and mostly employs the officially established terminology, even though it may be recent or “brand new”.

This allows to assume that ICT and educational terminology in Latvia can be viewed as two opposite poles on a scale: ICT being the most “unruly” one where the gap between official and unofficial use is possibly the greatest, while educational terms conform much more closely to official patterns of use. In the first case the term in professional use is often born prior to standardization efforts and the professional community may resist them, in the latter case standardization in many instances seems to take place if not before, then at least shortly after the appearance of the original English term on the local scene. This does not imply that educational terminology in Latvia has no unresolved issues, but it does suggest that the two domains developing in very different ways are worth comparing.

Data Collection Method

The studies were conducted in the academic years 2007/2008, 2008/2009, 2009/2010 at the Faculty of Education, Psychology and Art, Teacher Education Department (LU PPMF SIN), the University of Latvia. The core database of the study, which explores the extent to which the terms of the Latvian official specialist ICT terminology are used in the community of young professional IT users, is 1000 ICT originally English terms. The list of terms examined was culled from a number of written materials in the field of ICT constituting the core ICT discourse to be acquired during the four-semester ESP course for future teachers of applied information technology of LU PPMF SIN. The studies dealt with the word-lists collected from the study texts and distributed to the informants: 100 future teachers of applied information technology from the LU PPMF SIN.

The informants were asked to indicate whether they knew the meaning of an item by choosing one of three options: YES (sure I know it), NS (not sure) or NO (I don't know it).

This is an adaptation of a technique developed and tested by Horst and Meara (1999). At the second stage of the survey the requirement was to write down the native terms the informants used in everyday professional communication to convey the concepts. When they had difficulties in recalling the native equivalent for the English term, the informants were asked to provide their own definition of the concept in English/Latvian or to incorporate the term in a meaningful sentence.

Thus, the informants supplied the terms used by them in communication produced mostly in highly informal settings, often spoken rather than written or in quick computer mediated messages.

Research Findings and Discussion

It is obvious that in Latvian ICT terminology two sets of terms were to be considered: unofficial and official. The officially recognized terms have been taken from the AkadTerm database. The established, official scholarly sources of definitions used for the terms in AkadTerm database are *Angļu-krievu-latviešu skaidrojošā vārdnīca/ English-Russian-Latvian Explanatory Dictionary* (1995) and Personālie datori. Angļu-latviešu-krievu skaidrojošā vārdnīca/ Personal Computers. English-Latvian-Russian Explanatory Dictionary (1998).

The sample for the analysis contained 73 original English terms from the letters A, B, and C in the list (for some of which several Latvian versions may occur even within one of the two lists, but much more often – in the users' list of terms).

For the analysis two poles of the spectrum have been chosen: Latvian terms which fully coincide in the officially recognized and users' versions and several groups of terms which differ in localization strategies.

The data were compared by three parameters: Latvian terms, original English terms preserved and transliterations/transcriptions.

32 English terms (out of total 73, i.e., less than a half) have *the same Latvian equivalents* in officially approved and users' terminology, e.g., *animation – animācija*, *base station – bāzes stacija, bookmark – grāmatzīme, clipboard – starpliktuve*, *compiler – kompilātors.*

The majority of these common versions – *24* are fully "*Latvian terms*", i.e., the words found in the Latvian language dictionaries, irrespective of whether their origin is native or not. Thus, *klients (client)* or *mikroshēma (microscheme),* though obviously borrowings or loan words, are, in this sense, "Latvian" terms. Three more are compounds with one Latvian stem (either native or borrowed a long time ago), the other stem is a transliteration or a transcription (*bitkarte*, *kibernoziegums*, *kibertelpa*). This accounts for *27* Latvian terms**.**

12 Latvian terms common to terminologists and users are full *calques* or loan translations (e.g., *address field – adreses lauks, base station – bāzes stacija, coding – kodēšana*), in *3* more compound terms one stem is a calque, the other – a transcription or a transliteration

(*bitkarte*, *kibernoziegums*, *kibertelpa*), all in all *15,* which shows that using calques/loan translations is a favoured choice for roughly half of Latvian equivalents.

At the other extreme, only *2* terms in the common versions are *original English* words wholly unassimilated: an abbreviation *BIOS* and *Bluetooth*, i.e., in this list they are an exception rather than a rule. *Transliterations and transcriptions* account fully for only *3* Latvian terms in the common list, e.g., *bits* (with the Latvian inflection for masculine gender nouns added) and for one of the stems in 3 more terms, e.g., *bitkarte*, i.e., *6 tokens all in all*. Thus, being both the means of minimal, graphical or phonetic, assimilation, transcriptions/transliterations are not much favoured either. This makes for 8 *unassimilated or minimally assimilated terms* in the list where terminologists and users have the same preferences.

It is significant that more than a half, i.e., *20* of 32 Latvian terms coinciding in the two sets have alternative versions in users' terminology. All in all *28* alternative versions are found there (since for some English terms there is more than one "unofficial" alternative in Latvian use). This leaves us with *complete consensus for only 12 terms out of 73 in the sample.*

The overall picture *for users' alternative versions* shows that preferences for the same categories are divided almost evenly:

- *Latvian – 11* (9 terms fully Latvian (e.g., *Bluetooth – zilzobis, bold italic – treknraksts*), 2 with one Latvian stem in the compound term (e.g., *cyberspace – kibervieta*);
- *original English terms – 7* (e.g., *background*, *bold*, *bookmark*);
- *transliterations/transcriptions – 7* (e.g., *background – bekgrounds, cut – kat* full or partial – for one stem of a compound).

All in all, with no or little trace of assimilation even to grammar: *14* tokens (including 2 abbreviations), which leaves Latvian terms in users' alternative versions in the minority.

However, the description of users' alternative terms would be incomplete without pointing out that some of them are totally *unconventional formations* which do not fit into any recognized models; more exactly, they are a mid-way house between original English terms and transliterations or transcriptions, combining them in various and unpredictable ways within one term. In this list there are *5:*

- *bekgrounds* (transcription + English stem + Latvian inflection);
- *blutūth* (an odd combination of transcription and original English spelling);
- *browsēt, browseris, browsēšana* (English stem + Latvian word-building morphemes + Latvian inflections).

To summarize, the comparison of coinciding terms and alternative users' versions shows that the amount of *unassimilated and conventionally or unconventionally minimally assimilated terms* is almost three times bigger in alternative users' versions: 20 versus 7 in the list of coinciding terms. This is mostly due to original English terms retained by users and to

blatantly unconventional assimilations. At the same time, the share of *Latvian* terms is almost three times bigger in the list of officially approved and in coinciding terms: 27 to 10 in the list of users' alternatives. Clearly, the official tendency is to use the resources of the Latvian language whenever deemed possible, while the users' tendency is to take the shortest cut, which involves minimal or no assimilation. The very fact that so many alternative users' versions show up for 32 coinciding terms, shows that the seeming consensus is highly relative and unstable.

The instances when official terminologists and users "agree to disagree" totally reveal very much the same contrasting tendencies or bring them out even more convincingly. One case in point is the officially recognized versions for terms which users have adopted without any assimilation at all in their original English form. The favoured official strategy for them *is a Latvian word* (whether of native origin or not, but registered in general-purpose dictionaries, e.g., *background – fons, body – rumpis, bookmark – grāmatzīme, bold – treknrasksts*).

The same holds true for the differing terms which with users have transcriptions or transliterations (conventional or not) as Latvian equivalents: the official equivalent is usually Latvian.

It is of particular interest that even when both official and users' terms are Latvian, i.e., the strategy in rendering a foreign term into Latvian is the same, the choice differs in 10 instances, either completely or in one of the stems in compound terms. While in three of them the justification for the officially approved version could possibly have been the preference for native Latvian words (*adrešu kopne* and *kopne* instead of *adrešu šina* and *šina*, *vadība* instead of *kontrole*), the users' versions are well-established borrowings registered in dictionaries. In the remaining instances where native word stock is found in both versions, it seems that the two versions are just different ways of translating English words which are often polysemantic in their technical uses.

The tendencies revealed in the selective analyses of particular points of agreement and disagreement between terminologists and computer users are also obvious in counts for the sample: the total amount of unassimilated and minimally assimilated users' terms is *57* versus *10* in officially recognized terms (English terms 13 versus 2; conventional transliterations/transcriptions 30 versus 8; unconventional 14 versus 0) – the difference speaks for itself.

Conclusions

The article dealt with a number of terminological issues which need to be considered within the tertiary level education curriculum, since the growing importance of English as the dominant language in many professional fields has an impact on language use among professionals, which results in inconsistency in the use of professional terminology. The comparison between the official ICT terminology and the actual linguistic practice of ICT specialists in Latvia has revealed the weight of usage against prescriptive advice. This may be partly due to the fact that standard-setters tend not to overlook the terms already in use in the professional environment, viewing them as jargonisms restricted to highly informal settings of communication, or simply being unaware of them. It may also be the case that the educational system is not too effective in instilling the norm and is to blame for the young ICT specialists' failure to use the officially recommended terminology. The dissemination of preferred forms should, of course, be promoted at different levels, and particularly by educators, but a higher level of cooperation between the bodies responsible for terminology standardization and professional communities, especially in the fields like ICT where the development of technological innovations makes terminology a highly dynamic system, is desirable.

References

Angļu-krievu-latviešu skaidrojošā vārdnīca. 1995. Comp.: V. Baumgarts, A. Baums, A. Gobzemis, G. Fricnovičs, I. Ilziņa, A/s SWH Informatīvās sistēmas.

Braine, G. 2005. *Teaching English to the World: History, Curriculum, and Practice.* Contributors: George Braine – editor. Publisher: Lawrence Erlbaum Associates. Mahwah, NJ.

Horst, M., Meara, P. 1999. Test of a Model for Predicting Second Language Lexical Growth through Reading, *Canadian Modern Language Review*, 56, 2: 308 – 328.

Odina, I., Doroshenko, E., Stavicka, A. 2011. *Language Planning and Proficiency in the Field of ICT – the Case of Latvia*. Hermeneia, AXIS Academic Foundation Press, Iasi, Romania, pp. 88 – 97.

Personāliedatori. Angļu-latviešu-krievu skaidrojošā vārdnīca. 1998. A. Baums, J. Borzovs, A. Gobzemis, I. Freibergs, G. Fricnovičs, I. Ilziņa, V. Skujiņa (ed.). Rīga: A/s «DATI».

Recommendations for Terminology Work. 2002. Federal Chancellery Terminology Section CH-3003 Berne.

Temmerman, R. 2000. *Towards New Ways of Terminology Description: The Sociocognitive Approach*. John Benjamins Publishing House.

Advantages and Implementation of Project Learning in the Vocational Education of Musicians

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Abstract

Vocational institutions for music education should cooperate with professional musicians more than they do today. This demand has not been understood in Finland earlier than the last few years. Work life contacts have been created through visits of musicians to educational institutions, for instance in the connection of instrumental clinics or master courses. The students have had opportunities to listen to the conceptions of the visiting masters of their work and been allowed to ask questions. In some cases the visit programs might have included playing music together. The master courses of the musicians have often served only as a comfortable change in the basic work.

The feedback presented in the present research showed that the work life cooperation based on the project learning model was fully realizable. The professional skills and work life competences of the students increase, which strengthens the development of professional identity to correspond to the special demands in the field of the occupation. Professional musicians gain experiences of a new kind of cooperation in the field of music.

Keywords: vocational education, project learning, ”musashop”, cooperation, musicians

Introduction

Music education institutions are expected more cooperation today than before. This was not fully understood before the last few years. Contacts with working life have been created by the musicians´ visits to educational institutions e.g. in instrumental clinics or master courses. The students have been given opportunities to listen to the visiting masters´ views on their work and to ask questions. In some cases playing together has been possible. According to my experiences the musicians´ visits have mainly served as pleasant changes in the normal daily routines. Learning and the compulsory cooperation which is required from all vocational educational institutions cannot be counted on it.

One of the central challenges in the vocational secondary education in the 2000´s has been creating and developing interactive work life relationships. By the end of the 1990´s the

situation in Finland was divided: both vocational education and the world of work acted separately, both in their own fields. The most critical opinions even questioned the meaningfulness of the education differentiated from the practices of work. The field of music was not an exception. It was very typical of the situation that all vocational education of the field took place totally inside the educational institution without systematic cooperation with the work life outside it.

I was a project leader in Oulu Conservatoire in 2003 – 2007. The project concentrated on developing work life cooperation in the field of music. The aim was to create an interactive model for the cooperation of the institution and work life with the help of the so called music workshop activities (see Figure 1). A music workshop or ”musashop” means a functional model based on project learning with the idea of the music institution members to carry out a performance (a concert / a gig) together as a cooperation of students and music professionals.

I collected feedback[1]using survey research method from the students, teachers and music professionals who had participated in the music workshops during the project (N=120). I used at the beginning of the project paper form, later web based eduZEF-system. Results showed the potentiality of the cooperative model in question. Professional and work life cooperation skills of the students increase, which strengthens the development of professional identity to correspond to the special requirements of the field. Professionals, again, will get experiences of a new kind of cooperation in the field of music. The “musashops” will rise to a significant role in the students´ learning processes and in developing education.

My research includes the quantitative and qualitative analysis of the collected feedback and ideas for further development to be availed of in teachers´ work life periods and carrying out the testing of competence based skills. On the other hand, it will be useful in developing the interest networks of educational institutions. All of them are core targets in developing vocational secondary education.

As the starting point of my research has been, together with the different actors in the field, the need to develop a model of teaching based on the real work practices of musicians, sufficient expertise was available for the project due to earlier cooperation. The findings are thus justifiable and applicable in the music education in our country.

[1]During the project, but also after it was over (years 2003-2011)

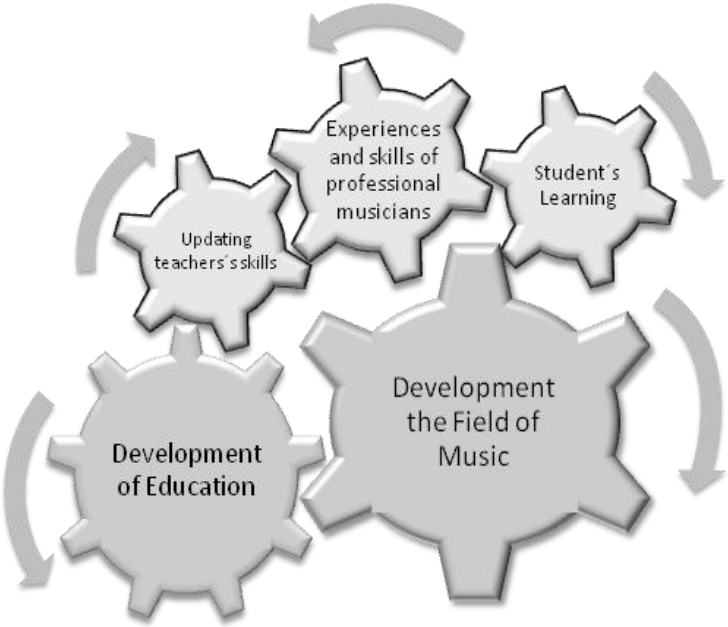


Figure 1. The framework of development according to my research

The framework of the research: research questions, background and pedagogical approach

In my research I will work on a model to be applied in the education of professional musicians. It will concentrate on the pedagogy of music as well as test the model based on project cooperation in practice.

The need for my research can be justified from the viewpoint of national development in the field of music, especially considering the demands of work life cooperation in vocational secondary education. According to the development plan of the Ministry of Education (2007) educational institutions are to promote quality in close contact with the work life of the field. A special target is on-the-job learning of students as well as teachers´ work life periods.

Modern organizational thinking comprises sharing responsibility and expertise. For instance when a student has the period of on-the-job learning, he/ she should be tutored by both a teacher and a specialist of the field in question. The aim is that work life periods will be concretely added to the activities of the educational institution: planning, implementation and evaluation. (Koistinen, Vuokila-Oikkonen 2008) The main interest will thus be how the above mentioned developmental challenges should be taken into account in vocational secondary education in the field of music. Consequently, the research questions concern the aims already mentioned:

-How should a secondary musical institution cooperate with the work life representatives of its field?

-What could be a functional model to realize work life cooperation in the field of music?

The background of the research - cooperation of educational institution and work life

One of the most significant challenges in vocational secondary education has been contacts to work life. As late as the end of last decennium the education consisted of theoretical studies added by practical exercises, possibly in limited work contexts. Real cooperation between the educational institution and work life was scarce. The situation may have been at its worst at the turn of the 80´s and 90´s when there were doubts about the meaningfulness of all vocational secondary education separated from the work life. (Klemelä 1999; Jokinen, Lähteenmäki & Nokelainen 2009)

Due to the educational reform in the 1990´s both in vocational secondary and higher education the basics of curricula introduced the conception of on-the-job learning. The greatest change was the requirement of 20 credits of on-the-job learning included in the vocational secondary studies. In practice this meant that vocational subjects were studied by doing the jobs typical of the field, in authentic work life situations. The purpose was to let the student get an overall picture of the work processes more clearly than before. (Ministry of Education 2007)

Carrying out the on-the-job learning in the field of music is challenging. Especially in pop & jazz music the work is freelance-based, without permanent jobs and professional music organizations, while classical musicians are mostly employed by orchestras and financed by the state and communities. Musicians´ Union has expressed a clear view on the matter: on-the-job learning shall not take work away from professionals. Educational institutions are demanded to arrange on-the-job learning in cooperation with, e.g., the professional musicians working in the field. (Musicians´ Union 2001)

Project learning as a part of educational activities in the field of music

A musician´s work will culminate in a performance. Its successful implementation demands a lot of work. Sufficient skills in instrumental competence are, of course, central, but preparing for a performance includes also other things. Mastering the theory of music is a prerequisite for composing and / or arranging; ensemble practice is essential as well as information and marketing skills and those of signing contracts. It is positive that all the musician´sduties have been given attention to in the bases of the new national curricula (see Figure 2.) of the vocational secondary exams in the field of music. (Board of Education 2010)

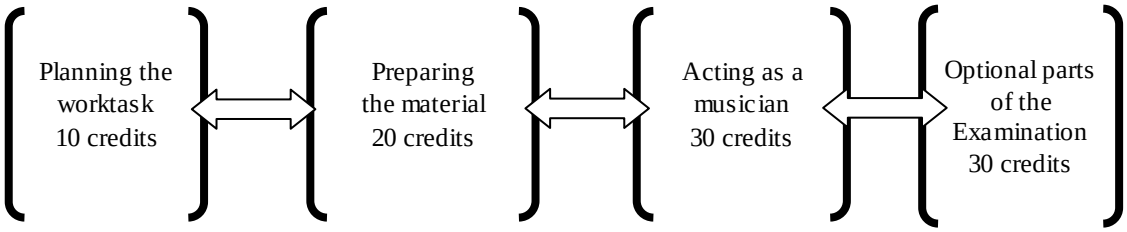


Figure 2. The components of the vocational secondary studies (90 credits). (Board of Education 2010)

The on-the-job learning in the above mentioned parts of the exam should be greatly realized as project working whose pedagogical background will be introduced in the following chapter.

Pedagogical approach to project work

Project learning has not one theoretical starting point, but it is based on various points of view. Most often it is connected to social constructivism and corresponding conceptions of learning which emphasize functional and situational learning, learning environments and social interaction. (Rauste-von Wright et al. 2003; see also Vesterinen 2001, and 2003)

Learning is connected to action; it takes place through action and for action. Through action an individual gets information of his/ her environment and of his/ her relationship with it, when the logical chain of matters - "which leads to which" - becomes evident. Active participation can also be seen as a kind of problem solving process in which an individual tries naturally to analyze and construct a picture of his/ her physical and social environment as well as his/ her role as a part of it. (Rauste-von Wright, et al. 2003)

According to Rauste-von Wright et.al. (2003; see also Tynjälä 1999) the activating learning process should also be combined with the situation in which the contents will be learnt and used. This is how the learners could get experiences about the general ways of acting in the field in question as well as meet naturally the central problems of the field and find proper alternative solutions to them. When planning teaching, attention should be given to the learning situations and environments so that they should be authentic from the viewpoint of the applicability of the knowledge and skills aimed at.

Learning environment does not, however, mean only the physical surroundings of the places, but the term also refers to the emotional atmosphere of the teaching occasion. A teacher as the creator of it has a decisive significance. A student´s ability to deal with the new information is greatly dependent on his/ her emotional state. The more excited or over-active the learner is, the more limited are his/ her possibilities to act. The teacher, on his/ her part, should construct the learning environments which enhance risk taking and questioning one´s own and the others´ thinking and acting. (Rauste-von Wright, et al. 2003)

According to the above views, social interaction is essential in the constructivist learning conception. In open communication the thinking and interpretation of a student will become explicit to him/ herself as well as to the others. It, again, will make it possible to exert collective reflection: each member creates the basis of both learning from the others and of questioning one´s own preconceptions and "self-evidences". (Rauste-von Wright, et al. 2003)
From the viewpoint of musicians´ education one of the foremost challenges becomes combining the above mentioned principles with formal educational practices. What should education be like so that it would include sufficient amount of activities in authentic work life situations of the field to enhance the students without forgetting problem solving and constructive social interaction characteristic of people? Motivating tasks connected directly to a musician´s work, crossing over the border line between the educational institution and work life, and project work supervised by both the teachers and the professionals in the field is a functional solution to the challenge. (Jarvis, et al. 2003; see also Yli-Kauhaluoma 2006)

Music projects as models of work life cooperation

The method of project learning has been applied rather widely both in vocational and higher education. The experience has been that the professional way of working, educational targets as well as the student´s professional growth have been naturally joined together in it. Learning will take place in an authentic context in the cooperative way, but it will also include autonomous work. A project carried out together with the work life allows the essential ways and styles of acting at work to become a part of education, when they give a concrete experience to the student about the tasks and culture of the field. (Vuorivirta 2006)
The contents and phases of the project are different in different projects, but there are still four common basic elements to be found: start, planning, implementation and closing. It is logical that a project will be started by preparation and planning phases which comprise the choice of the theme, the choice of the persons included, learning goals, working plan and schedules. In the implementation of the project the emphasis is on passing through the entirety due to the plan. Closing the project comprises the evaluation of the results in relation to the goals and, especially in educational projects, in relation to what was learnt. (Pirhonen, Hämäläinen 2005; Viirkorpi 2000)
In my model the projects in the preliminary education for the occupations in the field of music follow the basic idea described above. The students act in the way typical of the occupation by carrying out concert or gig performances together with professional musicians according to the model of project learning in the so called music workshop. Music workshops or musashops are given themes according to the chosen contents. They can be connected to, for instance, a style in general, the production of a certain artist or the most important material for some instrument, and so on. The choice of possible themes in the projects is

wide. A central criterion in choosing the theme of a project will be the skills of the students, their educational needs and the aims

Carrying out the musashops includes the preparation of the material to be performed, individual practicing of the instrument as well as the ensemble work and performance with the professional musician. The musashop will be closed with an evaluation meeting in which all the central things in learning and project implementation are dealt with. Figure 3 will introduce the basic idea of the activity and the procedure of the implementation.

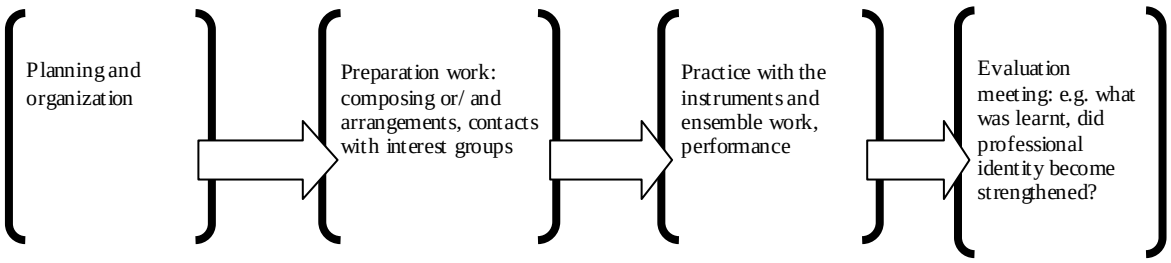


Figure 3.The basic idea of the musashop activities.

The figure above gives reason to notice that the action model of a musashop is very flexible. It is adapted to various productions with very different themes. Further, in the model there is programmed transformation to different needs and purposes. In other words it follows the time present as a learning environment and serves the needs of work life and education in a very versatile way. (See about the criteria of work life cooperation models Peisa 2010)

In addition to playing music, musashops include also many other duties of a professional musician. A student can for instance be responsible for material preparation and compose and/ or arrange the music to the ensemble engaged in the performance, or he/ she can take the responsibility for the information, marketing and selling the performance. All of them are important sub-areas in the education of musicians as well as in their work

In spite of careful planning, project work may also be subjected to the possibility of failure. In order to minimize the risks, the leading and guiding of the action are utterly important. In educational institution projects it often happens that the teacher takes the responsibility for the leadership of the project. This is well reasoned, but not always necessary. Depending on the students, one of them may also be responsible for the project. In any case the teacher is to have the administrative responsibility for the project. (Pirhonen, Hämäläinen 2005; also Mustonen 2006.)

Versatile action in the musashops can thus be connected to numerous parts of music exams, which gives a splendid chance to use musashops as a basic environment in both vocational secondary education in music (Conservatoire) and in showing tertiary level professional skills in authentic work tasks. In the following the stages of carrying out the musashop action will be presented in more detail:

1) the choice of the responsible teacher and the student group participating in the action,
2) brainstorming concerning artistic choices and the choice of a visiting professional musician,
3) signing contracts (musician, place of performance, technique),
4) planning advertising and information procedures as well as organizing the implementation,
5) choice and preparation of the material and planning the practice period,
6) practice period: instrumental and ensemble practices,
7) musashop work and performing with the professionals,
8) feedback and evaluation.

Findings

In my research I am creating a new model for the cooperation of educational institutions in the field of music and work life so that the learning environments of music education should correspond to the demands of work life. As the result of the developmental work the consciousness of various actors about each other in the field of music will increase. Accordingly, the educational institutions will get possibilities to develop new work life based teaching practices jointly with the professionals working in the field of music.
Since the starting point of my research is to develop a model of cooperation between educational institutions and work life based on authentic work tasks in the field of music, wide expertise can be hired to music workshops (musashops) easily and thus the results gained will be both adaptable for good reason and available of in various parts of music education programs.
The analyses of the results have shown the potentiality of the model. According to the respondents the project work corresponds to the real work of a musician, and skills gained from it are adaptable in the work life of a musician (see Tables 1 & 2).

Table1. How did the musashop correspond to your idea of the musician's work?

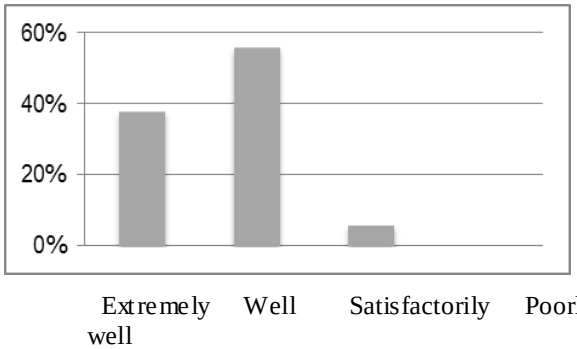
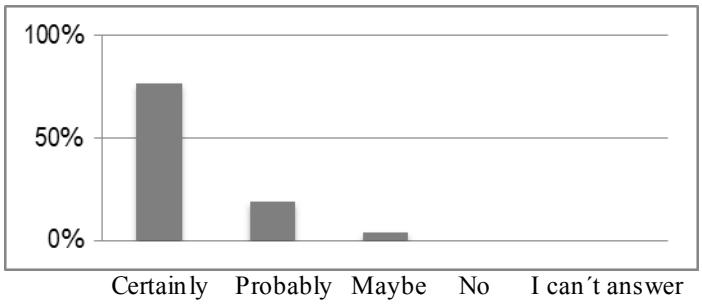


Table 2. Is the skills gained from musashop adaptable in the work life of a musician?

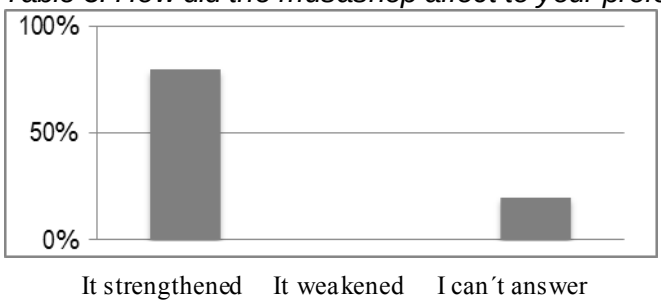


In the open part of each question the following comments, among others, came up:

"The musashop was extremely intensive (…) If has a huge effect on my future studying and profession" Student C2
"The musicians gave me constructive feedback (…) I found the new dimension for my performance and contents of songs." Student C3
" I think in a working life the work will be done in intensive periods like this" Student C7

The musashops effect for the professional identity was also enquired.

Table 3. How did the musashop affect to your professional identity?



The students experienced that their professional identity was significantly strengthened, when they were able to work together with the professionals. In addition to the music skills they learnt cooperation, taking responsibilities and initiative and on the other hand they experienced increased reliance in their own competences as young musicians.

"I learned a lot about playing in general. Stylistic issues, improvising and especially ensemble playing" Student P1
"I did learn about performing, good attitude and about myself as a musician" Student P2
"The musashop was in a miniature what I would like to do as my profession" Student C1

References

Jarvis, P., Holford, J. & Griffin, C. 2003. *The Theory & Practice of Learning.* Routledge: London and New York.

Jokinen, J., Lähteenmäki, L. & Nokelainen, P. 2009. *Ammatillisen sekä ammatillisen korkea-asteen koulutuksen ja työelämän yhteistyön hyvät käytänteet.* [Best practices for co-operation between education and work life]. HAMK Julkaisut, Hämeenlinna.

Klemelä, K. 1999. *Ammattikunnista ammatillisiin oppilaitoksiin. Ammatillisen koulutuksen muotoutuminen Suomessa 1800-luvun alusta 1990-luvun lopulle.* [Development of vocational education in Finland from the beginning of 19th Century to the end of 1990´s].Turunyliopisto. Koulutussosiologian tutkimuskeskuksen raportti 48. Painosalama Oy, Turku.

Koistinen, P. Vuokila-Oikkonen, P. 2008. Opettajien käsityksiä työelämän oppimisympäristöistä. [Teachers conceptions of work life learningenvironments]. Teoksessa Töytäri-Nyrhinen, A. (toim.) Osaamisen muutosmatkalla. Edita: Helsinki.

Mustonen, R. 2006. Näkymiä projektioppimisesta verkossa. [Outlooks for project learning in web]. Kajaanin ammattikorkeakoulu.

Opetushallitus. 2007. [Finnish Board of Education]. *Työssäoppimisenopas – kehittyvätyöelämäyhteistyö.* [Guidebook for learning at work – developing work life co-operation]. Helsinki.

Opetushallitus. 2010. [Finnish Board of Education]. *Musiikkialan perustutkinto – ammatillisen perustutkinnon perusteet.* [Basis of Curriculum for the field of Music].Helsinki.

Opetusministeriö.2007. [Ministry of Education. 2007]. *Koulutus ja tutkimus 2007–2012, kehittämissuunnitelma.* [Education and Research 2007-2012, Medium term plan]. Helsinki.

Pirhonen, M., Hämäläinen, R. 2005. *Oppimispoluille ohjaamassa, eväitä oppimisprojektien ohjaajille.* [Guidelines for the learning project supervisors]. Jyväskylänammattikorkeakoulu.

Peisa, S. 2010. *Oppimistatyöelämänkanssa.* [Learning together with working life]. Haaga-Helia ammattikorkeakoulu: Helsinki.

Rauste-von Wright, M-L., von Wright, J. &Soini, T. 2003. *Oppiminenjakoulutus.* [Learning and instruction]. WSOY: Helsinki.

Suomen Muusikkojen Liitto ry. 2001. [Musicians Union]. *Musiikin ammatillinen koulutus ja työmarkkinat – kirjelmä Opetusministeriölle.* [Professional education and labour markets in field of music – official letter to the Ministry of education].

Tynjälä, P. 1999. *Oppiminen tiedon rakentamisena, konstruktivistisen oppimiskäsityksen perusteita.* [Learning as constructive process, basics of constructivism].KirjayhtymäOy: Helsinki.

Vesterinen, P. 2001. *Projektiopiskelu ja oppiminen ammattikorkeakoulussa.* [Project studies and learning in university of applied sciences]. Jyväskylänyliopisto.

Viirkorpi, P. 2000*. Onnistunut projekti - opas kunta-alan projektityöskentelyyn.* [Succesful project – guide for municipal field project work]. SuomenKuntaliitto: Helsinki.

Vuorivirta, A. 2006. *Ohjauksellisetinterventiot oppimisprojektissa.* [Guidinginterventions in learningprojects]. Teoksessa (toim.) Ruohonen, S. Mäkelä-Marttinen, L. Luovuuden lumo – kokemuksia projektioppimisesta. Kymenlaakson ammattikorkeakoulu.

Yli-Kauhaluoma, S. 2006. *Yhteistyö tuo aikaa: tutkimus ajasta ja yhteistyöstä tuote- ja prosessikehityshankkeessa.* [Co-operation brings time: research about time and co-opereation in a product and process development initiative]. Teoksessa (toim.) Toiviainen, H., Hänninen, H. Rajanylitykset työssä: Yhteistoiminnan ja oppimisen uudet mahdollisuudet. PS-kustannus: Jyväskylä.

INFORMATION TECHNOLOGIES IN TEACHERS' EDUCATION AND WORK

Online Social Networking to Support Teacher Education Across the Pre-service In-service Divide

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Abstract

This paper outlines an innovative approach to the education of young teaching professionals across the pre-service and in-service teacher border. The approach is based on Lave and Wenger's notion of communities of practice (CoP), and the use of selected Web 2.0 tools. The approach includes constructing and running CoP communities for in-service teachers and pre-service teacher education papers, and then linking the two types of CoPs together. This approach has the potential to network pre-service and in-service teachers in a way that provides strong support to both parties. The context for this paper is secondary school geography teaching in New Zealand, but the approach could be used in any curriculum area in any jurisdiction. This paper reports on the ongoing development of the approach and on research that has monitored the progress so far.
Keywords: in-service teachers, pre-service teachers, teacher education, communities of practice (CoP)

Introduction

The importance of community in teacher education and development has been recognized for some time. The concept of a *community of learners* was developed in the field of adult and community learning (Brown & Campione 1994; Rogoff, Matusov & White 1996). Rogoff et al explain that the *community of learner* model contrasts with two common models of learning: the teacher dominated, transmission model on the one hand, and the learner-centred model on the other and note that "in a community of learners all participants are active: no one has all the responsibility and no one is passive," (p. 396). A learning community is genuinely collaborative, experienced participants may guide, but less experienced participants are also responsible for their own learning. All members contribute to the learning of each other (p. 397).

More recently the term *professional learning community* has become very popular (Eaker, DuFour & DuFour 2002; Bolam, McMahon, Stoll, Thomas, & Wallace 2005; Fullan 2005). This literature suggests five key characteristics of successful teacher learning communities:

holding a shared vision and sense of purpose; taking collective responsibility for all student learning; reflective professional inquiry and dialogue about serious educational issues; collaboration so staff in developmental activities go beyond the superficial; and group, as well as individual, learning where all teachers are learners with their colleagues (Bolam, et al. 2005, 8).

However, the approach to community-based learning for teachers most influential in this study is the *community of practice* (Lave and Wenger 1991; Wenger 1998; Wenger, McDermott & Snyder 2002). Wenger currently defines a community of practice as a group of people "who share a concern or a passion for something they do and learn how to do it better as they interact regularly" (Wenger 2005). In this study the community of practice is a group of secondary school geography in-service and pre-service teachers who are 'passionate' about geography teaching and in learning from one another about how to teach geography better.

In his 1998 book Wenger suggests that engagement in social practice is central to learning and that it is not the individual nor social institutions that are central to the learning process, but the many communities of practice to which we all belong. Wenger contends that meaning is negotiated through the two complementary processes of participation and reification. His term participation is in line with our common understanding of the word participation, as taking part with others in some joint activity. The process of reification, however, is less well known. He defines reification as "the process of giving form to our experience by producing objects that congeal this experience into 'thingness'" (Wenger 1998, 58). In other words "certain understanding is given form," (p. 59). Reification is the formalising of ideas and understanding into a procedure or a tool such as curriculum document, a model of the inquiry process, a new teaching programme, and new resources and activities. These new reifications come to have meaning and become understood as teachers participate together in designing them and in putting them into practice.

Wenger suggests communities of practice are bounded but also discusses the idea of boundary or border and what happens at the 'boundaries' of overlapping CoPs. In this study the teachers in the *Isolated to Connected* CoP work in their own schools and departments, which are also CoPs. The Initial Teacher Education (ITE) teachers are part of different CoPs with different purposes in their class(es) at the university. These communities are bounded but also overlap when the two contrasting groups work together in the same community on-line. Ideas can be imported into and exported from the overlapping communities for the mutual benefit of all.

Over the last seven years there has been considerable discussion about teacher professional development facilitated through Web 2.0 applications. *Web 2.0* is a term that has become widely used in e-learning circles since 2005. Tim O'Reilly has described Web 2.0 as an "architecture of participation" (O'Reilly 2004). In other words the second 'phase' of

the web is characterised by greater social interaction and collaboration where web services and applications allow users to publish content without the need to write code. This allows “bottom up” participation. Web 1.0 on the other hand was characterized by a "top-down" approach to content, consisting of largely standalone and static web pages, and usually requiring the use of complex code to construct (O’Hear 2005).

Educators were quick to note that Web 2.0 can “support teacher learners, distributing cognition across persons, tools, and resources to expand the system’s expertise—members create and improve knowledge of the community collectively” (Lafferriere, Lamon & Chang 2006, 78). There are many web applications available for such activity. Some common applications used to create on-line interactive, social networking sites for teacher professional development include Facebook, Twitter, Edublogs, PB Works and many, many others.

The application that enabled in-service and pre-teachers in this study to come together as an online learning community was Ning. Ning was an early Web 2.0 platforms launched in October, 2005. Ning first came to my attention via an article featured in a web post on the Education Week on-line site (Education Week 2009). The article by Elizabeth Rich tells of a young teacher positioned at the pre-service in-service boundary (Rich 2009). The beginning teacher had completed a degree in secondary English education and and was anxious about what might be awaiting her in her first school. She stumbled upon *The English Companion Ning* and was excited by the materials and ideas there. “But staring at pages of groups, forums, curricula, and multimedia resources”, she started to panic. So she started a discussion under ‘New Teachers’ entitled ‘HELP!!!’ She explained she was about to start teaching a book called *Walden* and wrote, "I am in the overwhelming process of preparing for the year and I am STUCK. There are no instructional materials for the class and the last teacher isn't too keen on sharing. I have NO CLUE where to start. Any help would be great." She reported to Rich that in less than 12 hours, “there were roughly 60 responses from novice and veteran educators from across the country”. The young teacher summed her experience up by saying "I cannot believe the help and support I got on the Ning. It's really been an incredible resource" (Rich 2009).

Geography education academics and teachers have been working on CoPs in the Waikato Province of New Zealand for more than 15 years (Keown, Chalmers, Peace & Morris 1998; Chalmers & Keown 2002; Keown 2004; Keown 2009). However, we only began using Ning as platform for CoPs in 2010.

Description of the Ning Site

Ning is 'typical' social networking site; the *'main'* page is the 'front door' of the community and highlights recent activity in the community. The top bar of the main page includes 10 function buttons. These different sections are important for the 'work' of the community in different ways and nature of each of these 10 dimensions of the Ning Community structure is briefly discussed below.

Each member has their own home page accessed through the ***'my page'*** button. Members can load a photo and a brief profile. This page also has a 'wall' where members can write messages to the individual member. This is semi-private space as these messages do not show up in the public space of the front page.

The *'members'* page lists all members on the site, and as in other social network sites, individuals can become friends. The full list of members can be searched.

The *'photos'* page is a place where members can post photos that reflect themselves as individuals, or more importantly photographs that will be of interest and practical use to other members of the community in teaching.

The *'videos'* page similarly allows members to upload video clips. In the I2C community members used this function as a site for sharing valuable teaching resources.

The *'forum'* function contains 'open' forums and discussions that are readily available to all members. Anyone can start a forum or a discussion. This area is a key discussion space for the community.

The *'events'* page is where planned community events can be advertised.

The *'groups'* function allows members to form a group around a topic or issue. Within the group members set up discussion of interest to them. Members who have not joined a group cannot post in these discussions.

The '*blogs'* page is a space where any member can set up a blog.

The *'chat'* function opens a chat room where members can discuss in real or synchronous time.

Methodology

The study is best described as a mixed methods study (Creswell 2000, Cohen, et al. 2000). In this study elements of exploratory mixed method, grounded theory, narrative and Action Learning and Action Research approaches are blended in way appropriate to the nature of the study (Tashakkori & Teddlie 1998; Creswell 2000, Cohen, et al. 2000; Zuber-Skeritt 2001).

The data reported is drawn from the text of the online record of a specific Ning community entitled *Isolated to Connected* (I2C). This community is made up of 84 participants, mainly practicing geography teachers, but also pre-service teachers and interested members of the local e-learning community. The volume of data was such that it was not practical to analyse all of it in depth. It was, therefore, necessary to select from the large quantity of data available. Herring outlines five data sampling techniques to do so: random; by theme; by time; by phenomenon; by individual or group, or convenience (Herring 2004).

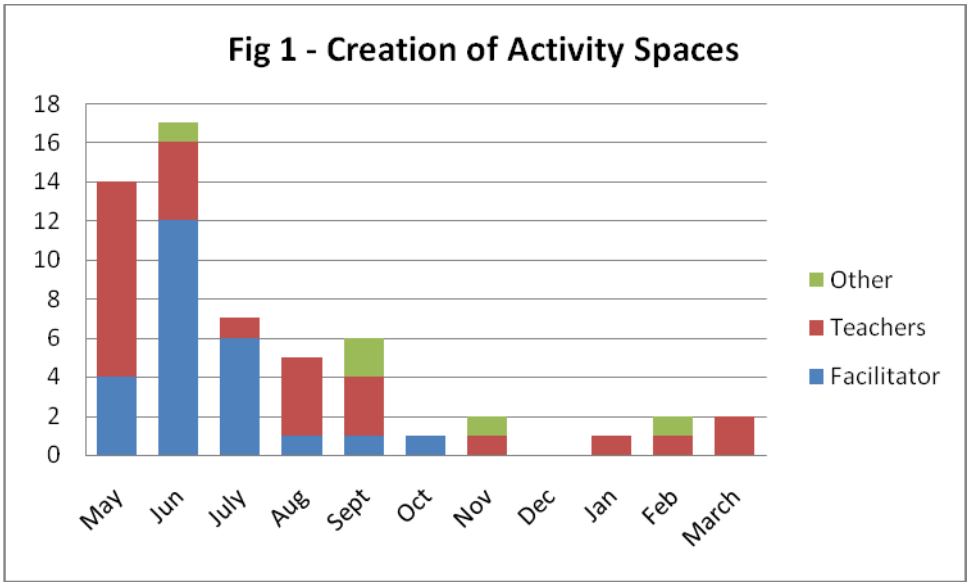
In this study on one level or plane I examine the narrative of the community as a whole. In this part of the analysis a theme of 'structure' is used and *structural analysis* is the main analysis tool (Job-Sluder & Barab 2004, Keown 2009). The structural analysis examined activity in the public parts of the site. That is the main discussion areas: forums, groups, walls, and blogs. Content analysis was used to undertake counts of individual participation and engagement in various aspects of the site (Cohen, Mannion & Morrison; Herring 2004). These were then tabulated and/or graphed.

At another plane or level I examine the nature of the participation of the pre-service teachers in the community, some of whom became beginning teachers during the time of the study, to examine at a much deeper level their experiences at, and across, the pre-service in-service border, in the community and over time. Here I use a *semantic analysis* (Job-Sluder and Barab 2004, Keown 2009). In a semantic analysis what individual participants said and did becomes the centre of investigation. A sample of four 'boundary' or 'border' ITE teachers was selected for this analysis.

The Establishment of the Isolated to Connected CoP (I2C)

The development of the Isolated to Connected community began in mid-March 2010. The initial work on the site was completed by a geography teacher awarded a Royal Society Fellowship to run the site in a way that would connect with geography teachers in isolated rural and small town schools with colleagues in large urban schools. The Royal Society Fellowship teacher is henceforth referred to as the full-time facilitator (FTF). Following three months of background work by the full-time facilitator a face-to-face weekend meeting was called with 20 people who were to make up the initial members of the community. The site was opened to school-based participants immediately after the face-to-face weekend in early May of 2010. 'Word of mouth' communication soon alerted other geography teachers to the community and its benefits and there was constant pressure to allow more people into the community. Progressively the community grew from the original 20 to over 80 at time of the analysis reported in this paper.

Structural Analysis of selected aspects of the I2C CoP



The development of topic and discussion spaces

Fig 1 displays the pattern of establishment of posting and discussion spaces over the 11 months of community life analysed in this study. The figure shows the number of new 'spaces' added by the FTF, teacher members (including ITE teachers) and other members. The 'other' members included school advisors, e-learning consultants and University lecturers and library staff.

The pattern shows strong growth in the scope of the community over the first two months and steady further expansion over the 3rd, 4th and 5th months. The establishment of new discussion spaces then fell to relative low level for the remaining six months of the study period. Another interesting aspect of Fig 1 is that teachers were more important than the facilitator in establishing new discussion topics in seven of the 11 months of the life of the community analysed in this paper.

Within the first month 14 new spaces for activity and discussion were opened. Teacher participants established 10 of these spaces and the FTF established four. These included four high-level groups based on the year level structure of the New Zealand geography curriculum for senior secondary students. These were which established in the "Groups" section of the site. At the same time a number of more generic forums and discussions were set up in the "Forum" aspect of the site. For example, a forum on using the web tools in geography and one on using movies in geography education were established. In the second month of operation a further 17 spaces were opened for business. This time the FTF was the initiator of many of these, opening 12 of them. Teacher members open just 4 new spaces

and an e-learning community consultant opened one space. At this point the rate of establishment of the new spaces slowed.

In the third month a further seven spaces were added. Just one was established by a teacher and the remainder by the FTF. A steady growth of spaces continued over the next two months with five more added in the 4th month and six in the 5th month. Teachers and others added most of these reversing the facilitator dominance of months two and three.

In the final months of 2010 just three further spaces were established. These were mainly procedural and associated with an evaluation of the community's work over its first eight months and thinking about what might happen with the community in 2011. This dramatic slowing of new topics is understandable as the final months of the year are dominated by external exams, end of year activities, preparation for the following school year and schools are closed in early December for summer the holidays. Another factor in the slowing of new activity at this point was that the fulltime facilitator's fellowship was concluding.

The Involvement of Initial Education Teachers across the Pre-service In-service Divide

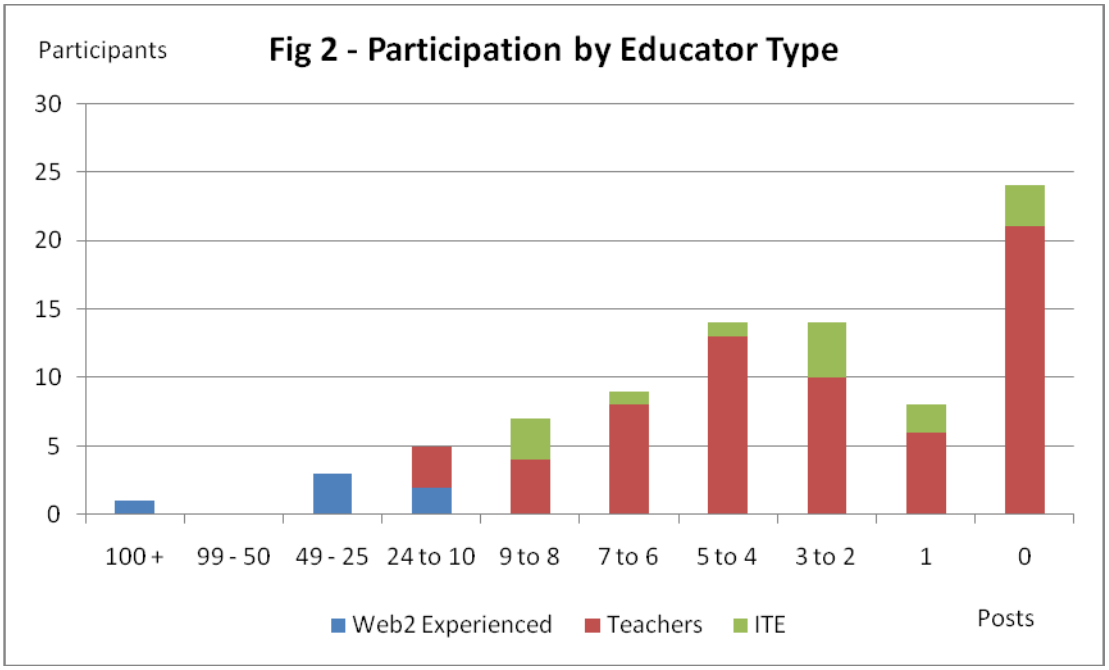
Fourteen members (17%) of the current community have taken part in the community as pre-service teachers. In New Zealand we refer to the pre-service phase of the teaching life cycle as Initial Teacher Education or ITE. Eight of the 14 were pre-service teachers in 2010 and are now in their first year of teaching. Six are current ITE teachers.

Fig 2 shows the pattern of contribution to the community by three groups of participants. The three groups are experienced Web 2.0 educators, shown in blue on Fig 2. They are people who had worked in previous CoPs. Two of these were teachers, the others were people working outside the school sector. Teachers (shown in brown in Fig 2) are those working as teachers but new to Web 2.0 activities. The third group, comprising the ITE teachers, is shown in green.

The participation ratings were calculated by totalling the number of post of various types each participant made within the community in 'public spaces' – forums, discussions, blogs, and walls. Participants were sorted into rank order from 1 to 84. The ranked list was broken into groups as shown on the horizontal axis of Fig 2. That is the top participant (the fulltime facilitator) posted more than 100 entries in public spaces. At the other end of the scale twenty four participants made no posts in public spaces (21 teachers and 3 ITE teachers).

Fig 2 shows that the web experienced members posted more often and just three teachers made 10 posts or more. In contrast 21 of the 68 teacher members, and 3 of the 14 ITE teachers failed to post anything in public spaces. It is also evident that most teachers and ITE teachers posted between 1 to 9 entries in public spaces. However, as ITE teachers only made up 14 of the participants and teachers 65 it is difficult to fairly compare the relative participation rates of teachers and ITE teachers. To create a fairer comparison (although still

one with difficulties) Table 1 displays the percentage of teacher and ITE teachers in seven posting groups.



The most interesting aspect of this in relation to this paper is that three of the ITE teacher engaged with the community at a relatively high level (8 to 9 postings). The ITE teachers also had a better posting rate at the 1 and 2-3 posting levels and there were a lower proportion of ITE teachers who made no postings.

While the numbers are small and this can only be regarded as interesting at this point, it does indicate that ITE teachers appear keen to take part in dialogue and teacher community activities across the pre-service in-service border.

Table 1. Teacher and ITE Teacher Posting rates as a % of Group Numbers

Posting Categories	*Teachers*	*ITE Teachers*
24 -10	4.6	0
9-8	6.2	21.4
7-6	12.3	7.1
5-4	20.0	7.1
3-2	15.4	28.6
1	9.2	14.3
0	32.3	21.4

Structural analysis of the top three ITE Teachers

The next part of the analysis focuses on the nature of the engagement of contrasting ITE teachers across the pre-service in-service border. I will focus on the nature of the involvement of four pre- service (ITE) teachers who joined the community in 2010 and who are now in their first year of teaching as they have actually been on both sides of the 'border' in the past year. The names used in this section are pseudonyms.

As was evident in earlier discussion three ITE teachers stood out as the some of the most enthusiastic participants in the community. Fig 3 shows the nature of the engagement these three individuals in 2010. At this point these they were in the second half of their Post Graduate Diploma in Secondary Teaching studies. Fig 3 shows that all three became involved in the I2C CoP very soon after the FTF ran an introductory session for them. They remained engaged in the CoP for 44 days, until the end of their academic year. In the first 8 days the three had 22 posts to or from them. This is more than half of the traffic logged in the 44 day period. Clearly there was a good deal of early activity from all three.

Fig 3 also shows interesting different patterns of engagement. Helen was the most active person during this time with 19 of the 40 posts shown associated with her. She was also the most consistent case with postings to and from her occurring regularly through most of the 44 day period. Christine featured in 14 posts and Michelle in just seven.

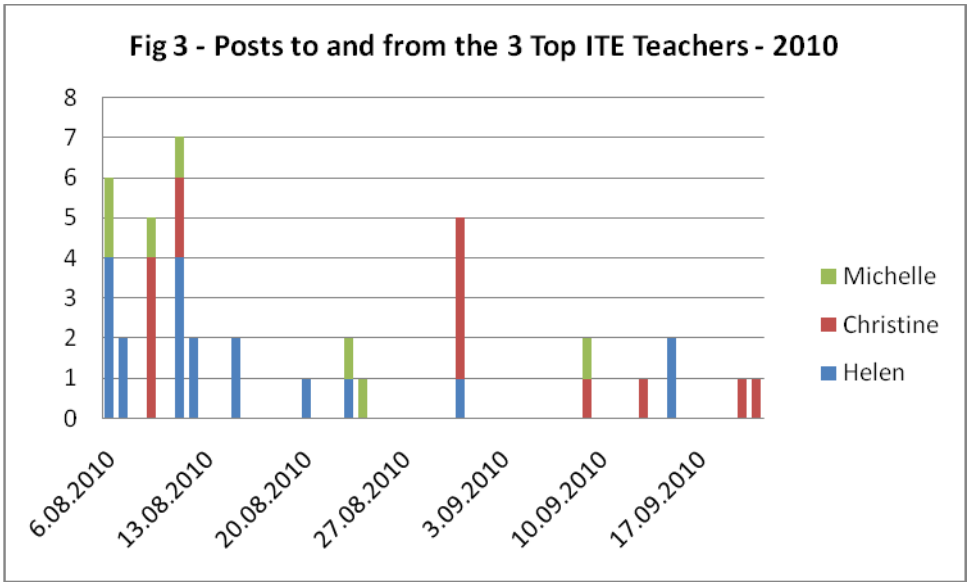
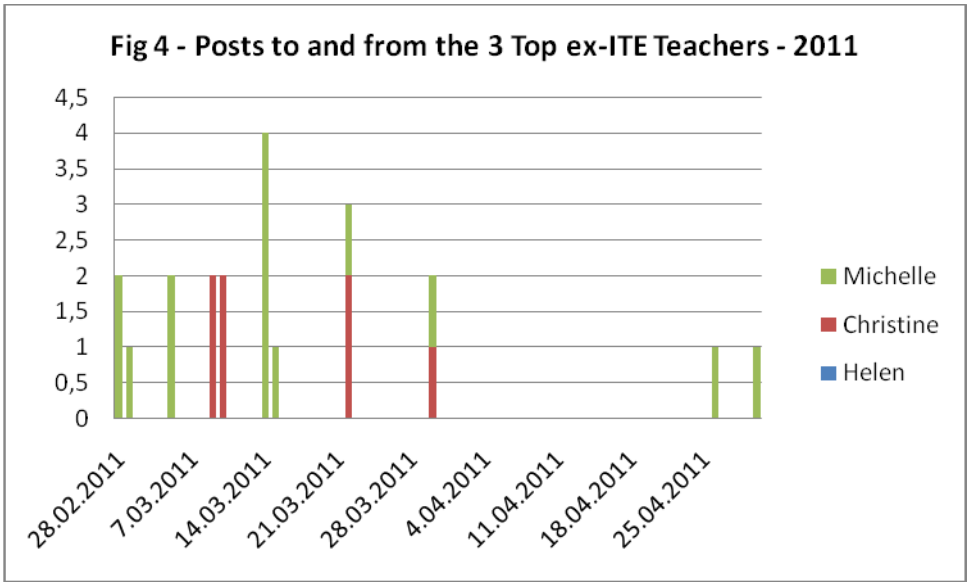


Fig 4, which covers a 62 day period in the first part of 2011, the first two months of their first year of teaching. This period of activity shows a different pattern in comparison to 2010. Firstly there are less postings (21) and 19 of these are concentrated within a 32 day period.



Secondly, Helen the most active individual in 2010 does not engage at all in 2011. Michelle on the other hand, who was relatively inactive in 2010, dominates the ex-ITE activity in 2011 with 14 of the 21 posts associated with her. To look more closely at what is happening here and why we move to the semantic analysis.

Semantic Analysis

Helen

Helen was very busy on her first day in the community. She immediately joined two of the groups. She commented on a video clip the group 'owner' of the Amazonia discussion had posted. She them posted a clip of her own. The FTF noticed Helens arrival and welcomed her. She also thanked Helen for the clip she added. The next day Helen added two power point presentations she had created while on practicum earlier in the year.

Four days later she added another presentation in the same discussion. It would appear that Helen was happy to be actively contributing to the group as she had some classroom tested material to share with the CoP. On this same day the FTF invited Helen to ask for any help she might need with her second practicum which was just beginning at this point. Then of the following day an experienced teacher posted a message say how good he thought Helen's PPTs were and that he was going to use them for revision with his class over the next two days. All this activity occurred over just six days. Helen was contributing and getting positive feedback.

In her last seven messages Helen and the FTF talked about a GIS course advertised in events and a Wiki and Pizza evening the CoP was hosting. Helen registered for the GIS event. She also asked questions in two other discussions but did not hear back from anyone

on these. This may have been discouraging as Helen has not appeared in the CoP since. But it also was also very late in the school year.

Michelle

Michelle joined the CoP at the same time as the others in early August. Fig 3 shows seven postings associated with Michelle in 2010. Only one of these was initiated by Michelle herself and that was just to join the CoP. The other six posting were all from the FTF welcoming Michelle and inviting her to take part in the community in a variety of ways. Michelle did not respond to any of this. She may have been looking at resources but she did not put anything into the community.

However in 2011, as a new teacher Michelle became very involved in the community over the month of March. At this time she would have been teaching for just over a month. Her engagement with the I2C community began on the last day of February. She joins two groups and asks a question in the e-learning discussion. She also starts a new discussion on an assessment standard at level three of the curriculum. The 'owner' of the e-learning discussion gave a detailed reply to Michelle's question a few days later. There was also a relatively quick response to her standards question. These responses may have been very encouraging for Michelle. A week or so later Michelle posted two substantial messages on a blog about Maori issues in Geography. This included a resource Michelle felt was valuable. Unfortunately as blogs were not used much in this community she did not get any response. However, she is not deterred. A few days later she adds another discussion in which she asks a question about another standard. Again she gets responses from a range of teachers and advisors over a 15 day period.

Both Helen and Michelle were ITE teachers who have shown they were very willing to work across the pre-service in-service border. Helen was quite confident to take part as an equal in the I2C community. She was happy to share material she had developed as an ITE teacher on practicum and to ask questions and discuss issues with experienced colleagues on the 'other side of the border'. Michelle in contrast was, it would appear, happy to just draw from the I2C CoP in her pre-service ITE year but was quick to engage quite strongly with the community once she had 'crossed the border'. Initially she was interested in using the community to seek advice from more experienced colleagues about issues she was facing as a new teacher. Then as she gained support from others and became part of the community she too began to share ideas and engage in professional discussion with more experienced colleagues. Both Helen and Michelle provide examples of the way teacher learning can take place with a CoP across the pre-service in-service border. These were two confirming cases of the potential of this type of teacher professional learning at a key point in the teacher life cycle. I will now look very briefly at some quite different cases.

Simon

Simon is one of the three ITE teachers who appeared to have not contributed to the community as his name does occur in the public spaces of the CoP. However, when a deeper analysis of engagement in the community is undertaken there are actually 15 entries associated with Simon in the on-line records of the community. All of these occurred between Simon and the FTF on his personal page in the community. The FTF sent a number of messages to Simon, as she did to other ITE teachers, to encourage him to engage in the community. Some 10 days after Simon joined the community, and while he was on practicum he was asked by his school associates to teach the Level 2 topic on Tourism. He explained to the FTF. "I am racking my brains to come up with a lesson … and could definitely use your help" (I2C on-line record, August 19, 2010). That evening the FTF posted three messages to Simon giving him ideas, power points, websites and documents to assist him. At the conclusion of this exchange Simeon said "Thank you so much for going to the effort to find that information, it has helped me greatly! This site is really paying off" (I2C on-line record, August 19, 2010). So Simon did engage but only with the FTF on his own member's page. He did not join any group nor engage in any dialogue with any other member of the community.

Maurice

Maurice is a genuine non-confirming case in that there is no evidence of any engagement with the CoP. He joined the community on July 29th, 2010 and was welcomed to the community by the FTF and his lecturer. Three further messages were sent to Maurice over the next 49 days inviting him to become involved and sending him useful resources. However, he did not respond. Having formally joined the community he had obviously been to the Ning site and signed in. He may have drawn resources from the site but he never became involved in any dialogue with other CoP members.

Between Maurice and Simon and Helen and Michelle there were 10 other mid-range ITE participants. All of these engaged, but at different rates as shown in Table 1.

Conclusion

This paper set out to report on an initial attempt to 'trial' an on-line community of practice working across the pre-service in-service boundary. The paper is a preliminary report in the sense that it only uses some sample data from the study. However, even on the limited data reported here there is enough evidence to suggest that the idea is viable. ITE teachers and practicing teachers were able to share ideas and resources across the boundary. Some ITE

teachers who were introduced to the community before they took up their first teaching position came back to the community once they had 'crossed the border.' They had gained confidence in the worth of the community and continued to use it for further professional growth. Some ITE teachers such as Simon did not engage fully, and two of the 14 did not actual participate at all. They may have 'lurked' and drawn material from the site but did not contribute. There is enough promise in these findings for those of us involved in the I2C CoP to continue working across the boundary.

References

Brown, A., & Campione, J. 1994. Guided discovery in a community of learners. In *Classroom lessons: integrating cognitive theory and classroom practice,* ed. K. McGilly, 229-270. Cambridge: MIT Press.

Chalmers, L. & Keown, P. 2002. Professional development in geographical education using the internet, Proceedings of the Commission on Geographical Education, Durban, http://geog.tamu.edu/sarah/toc.htm

Chalmers, L., Keown, P., Peace, R., & Morris, T. 1998. Geographic education: an internet approach to professional development in Geography. In *Proceedings of Geo.Ed.97/Kaupapa Aro Whenua Geographical Education Conference*, ed. E. Bliss, 80-83. Hamilton: New Zealand Geographical Society.

Cohen, L., Manion, L., & Morrison, K. 2000. *Research Methods in Education.* London: Routledge.

Creswell, J. 2000. *Research Design: Qualitative, Quantitative and Mixed Method Approaches*. Thousand Oaks, CA: Sage Publications.

Eaker, R., DuFour, R., & DuFour, R. 2002. *Getting started: Re-culturing schools to become learning communities.* Bloomington, IN: National Education Service.

Education Week, 2009, Education Week Teacher PD Sourcebook, http://www.edweek.org/tsb/articles/2009/10/01/01ning.h03.html

Fullan, M. 2005. Professional learning communities writ large. In *On Common Ground*, eds. R. DuFour, R. Eaker & R. DuFour, 209-223. Bloomington, IN: National Education Service.

Herring, S. 2004. Computer-mediated discourse analysis. In *Designing for virtual communities in the service of learning,* eds. S. Barab, R. Kling, & J. Gray, 338-376. Cambridge: Cambridge University Press.

Job-Sluder, K., & Barab, S. 2004. Shared "we" and shared "they": Indicators of group identity in online teacher professional development. In *Designing virtual communities in the service of learning,* eds. S. Barab, R. Kling, & J. Gray, 377-402. New York: Cambridge University Press.

Keown, P. 2004. Continuing professional development of Geography teachers. *SAGT Journal*, 33: 26-39.

Keown, P.A. 2009. A Virtual Community of Practice Approach to Teacher Professional Development. PhD Thesis, University of Waikato, http://hdl.handle.net/10289/3278

Laferrière, T., Lamon, M., & Chan, C. 2006. Emerging e-trends and Models in Teacher Education and Professional Development. *Teaching Education*, 17(1): 75–90.

Lave, J., & Wenger, E. 1991. *Situated learning: legitimate peripheral participation*. Cambridge: Cambridge University Press.

O'Hear, S. 2005. "Seconds Out, Round Two," *The Guardian,* November 15, 2005, http://education.guardian.co.uk/elearning/story/0,10577,1642281,00.html.

Oliveira, F. 2005. Ning Launches! TechCrunch Website, http://techcrunch.com/2005/10/04/ning-launches/

O'Reilly, T. 2004. O'Reilly About: Spreading the Knowledge of Technology Innovators, http://oreilly.com/pub/a/oreilly/tim/articles/architecture_of_participation.html

Rich, E. 2009. The World's Largest English Department http://www.edweek.org/tsb/articles/2009/10/01/01ning.h03.html

Rogoff, B., Matusov, E., & White, C. 1996. Models of teaching and learning: Participation in a community of learners. In *Handbook of education and human development,* eds. D. Olsen & N. Torrence, 388-414. London: Basil Blackwell.

Tashakkori, A. & Teddlie, C. 1998. *Mixed Methodology: Combining qualitative and quantitative approaches*. Thousand Oaks, CA: Sage.

Wenger, E. 1998. *Communities of practice: learning, meaning, and identity*. New York: Cambridge University Press.

Wenger, E., McDermott, R., & Snyder, W. 2002. *Cultivating communities of practice*. Boston: Harvard Business School Press.

Zuber-Skeritt, O. 2001. Action learning and action research: Paradigm, praxis and programs. In *Effective change management through action research and: Concepts, perspectives, processes and applications,* eds. S. Sankara, B. Dick, & R. Passfield, 1-20. Lismore: Southern Cross University Press.

Production of Virtual and Network Teaching Material – Goal and Reality

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Abstract

When learning is transferred to network, teaching has to be implemented in a controlled way. All teachers on all levels should be able to utilize electronic material and material freely available in the social media. To produce learning material for specific fields and degree programs teachers need support. Good virtual teaching requires efforts and resources to guarantee both technical and pedagogical functionality.
Keywords: e-material, e-material production, integrated teaching, virtual and network teaching

Introduction

Production of virtual and network teaching material is an essential matter in the Finnish Universities of Applied Sciences (UAS). The teamwork memo 2010 of the Finnish Ministry of Education and Culture states that in order to support learning there shall be electronic learning and other material freely available in the network, including social media. E-learning material has to be of high quality and cover the whole curricula and the bases of qualifications (Ministry on Education and Culture 2010). Scientific research on virtual learning focuses mainly on pedagogical, technical and usability matters (Weller 2007; Sampola 2008; Tenno 2011), but there do not exist many studies about the production processes of virtual learning material from the viewpoint of a vocational teacher.
Consequently, the strategy of the Finnish Virtual University of Applied Sciences 2012 defines as the goal to offer virtual studies up to one fourth of each student´s studies, independently of the degree program. In the course supply the special characteristics of each educational field should be taken into account. In the same strategy it is defined that each University of Applied Sciences has to produce versatile material to the network so that all students have equal rights to virtual exchange of studies. This requires the development of joint electronic material in a customer-oriented way with the support of national and international network (The Finnish Virtual University of Applied Sciences 2007).

The Finnish Ministry of Education and Culture (2010) sees the threat of traditional teaching models being imported directly to the virtual learning and teaching contexts. If the technologies are only used to support e-learning, the learning design will be correspondingly conservative; if they are used to support technology-driven learning, the learning itself may be secondary to technology (Kukulska-Hulme & Traxler 2007). In this case the full potential of the virtual teaching is not utilized, and the use of technologies does not bring added value sufficiently to education and learning experiences. The idea that technology helps learning and teaching raises a question: how should the technology be used meaningfully?

The vision of the Ministry of Education and Culture (2010) assumes that all people working in the educational field will have by 2020 sufficient knowledge and skills to use technology in a pedagogically meaningful way in education. The Finnish Vocational teacher education is in a central role in providing the needed technical skills for the teachers. Consequently, all vocational teachers in Finland are obliged, besides acquiring the necessary qualifications and competences in pedagogy, also to gain the skills in virtual and network teaching including social media.

The promotion of information and communication technology in education has long been concentrated on infrastructures and the availability of the equipment as well as teachers´ in-service and continuing education. The emphasis should be moved to the development and publication of virtual learning and teaching material. Teachers need tools for that as well.

Preliminary Studies

The universities of applied sciences offer their studies at the portal of the Finnish Online University of Applied Sciences. Their material bank is called DIGMA, and every UAS degree student has a flexible study right to choose courses from the DIGMA material bank free of charge (The Finnish Online University of Applied Sciences 2007). The supply of the DIGMA material bank covers the contents of teaching only fragmentarily. This is because the material production has been accomplished by teachers who have interest in this area of action; the production has not been focused on the basis of the real needs. The curricula and special characteristics are not covered to a sufficient extent. Table 1 presents different amounts of courses available to the UAS students in the DIGMA material bank in each educational field.

Table 1. Courses available in the DIGMA material bank in various educational fields.

Course category	*Amount*	*Course category*	*Amount*
Management	12	Hotel, catering and tourism	9
Business and Economics	25	Social services	23
Languages	27	Arts	4
Culture	17	Technologies and Production	162
Sports and Leisure	2	Healthcare	53
Logistics	2	Data management	49
Natural resources	31	Information Technology	55
Tourism	18	Security	5
Others	4	Research methods	11
Judicial administration	4	Communication and media	12
Teaching and Education	17	Environment	40
Entrepreneurship	5		

In order to produce material on the basis of real needs and in bigger amounts the production process of virtual learning material has to be supported. This support was the focus of a study carried out by the author of this paper in Vaasa University of Applied Sciences. A course template was developed for Moodle learning environment in 2008. The background study showed that teachers need help in technical solutions and quickly available peer-support as well when producing material to virtual learning environment. They suggested common, low threshold rooms to be reserved for experimenting and producing virtual and network-based learning material as well as for getting familiarized with other teachers' network implementations. The teachers also felt that the virtual material production processes were complicated and that they remained alone in the processes. Some teachers even said that because they did not identify the virtual teaching possibilities or technologies, they could not ask for assistance or support. In other words, they felt that asking for help in a situation where they did not recognize the origin of the problem was like acting in the darkness. When choosing appropriate technologies one has to know what technologies are available. Further, Mishra and Koehler (2006) argue that knowledge about technology is useless if it is not combined with knowledge about teaching. They continue saying that good course design requires both an understanding of how technology is used to produce and share knowledge, understanding of the contents and that of pedagogies.

The core challenges found in the study implemented in Vaasa University of Applied Sciences are to develop the competences of the staff, to develop suitable material and to find resources for material preparation. Studies show that the teaching staff lacks skills in using

and mastering the tools related to virtual learning environments. Although information and communication technologies have been available in teaching for a long time, their use is still scarce and asymmetrical. The use of information and communication technology in education is marginal. This is shown in a study carried out in 23 countries in 2008. The study shows that today it is office tools that are mainly taught in ICT-education (Law, Pelgrum & Plom 2008).

Thus Finnish vocational teacher education is faced with a great educational challenge. Since the entrance requirements of applicants do not include previous teaching experience, teacher education has to offer face-to-face and virtual as well as network teaching events integrated in the whole of 60 ECTS studies for adequate basic competences.

Research Background, Research Questions, Data Collection and Method

According to Schank (1999) classrooms are "out" and they should no longer be built. Instead we should spend 1/3 of the day at computers, 1/3 discussing with others and the remaining 1/3 doing something else. In the future, learning environments will most likely be performed using mobile technology and different sorts of nets (Daniels, Lauder & Porter 2009). Schank states that computer-based learning is best suited to an individual work station and does not fit to a classroom. He also says that social learning is as its best in small "coffee shop-like" spaces, where learners can gather informally. This kind of requirements increase, but at the same time less attention has been given to how teachers manage to handle with the virtual material production processes.

The School of Vocational Teacher Education in Oulu University of Applied Sciences has organized the course of Social Media Usage in Adult Education and Net-based Study Counselling (called STUDIO) in years 2009 – 2010 four times altogether. The purpose of the course is to offer necessary pedagogical skills and ITE tools for the present and future adult educators working at the moment mainly in adult education organizations, universities, universities of applied sciences, adult sixth form colleges, liberal education organizations as well as in other organizations and associations.

The central aim of the STUDIO education is to develop the pedagogical competences and supervision skills of adult education actors. It offers a possibility to get acquainted with supervision in net-based learning as well as with social media and its various uses in adult education and learning. Today social media is regarded as a kind of learning environment. Social media is an essential facilitator for learning, teaching and education and it serves both formal and informal learning (Kiviniemi & Kurkela 2009). Implementation of social media in learning, teaching and education is an innovation process that has implications at all levels in a university. Users can also use appropriate information technology in unexpected ways, which can course unintended negative consequences (Kane & Fischman 2009).

The feedback from those courses, the oral material about troublesome matters raised in the tutoring discussions during the courses, as well as the practical problems appeared in the implementation of the courses formed the research material in the first report made in the School of Vocational Teacher Education in Oulu. The courses gathered the total of 80 participants out of whom 66 have passed their courses of 7 credits until now.

The participants experienced the usage of social media to be trendy, and they felt that they had to seize to the chance offered. Many participants admitted that being visible in the social media was necessary not to become stigmatized out-of-date. Many of them did not reflect on the philosophies, meaningfulness or weaknesses of the social media deeply, but they considered the social media in itself the most important. They regarded it as their tool only and a place where to be seen.

Individual teachers think very often over the same questions especially when material production to the network and social media is concerned. One salient point is that the organizational support and rules of using social media in education are missing from the teachers (Paaso & Tenno 2011). Social media is not a single application or service like a traditional network learning environment. Researchers of social media see it as a process which is built by all users together (Kallila & Toikkanen 2009). Teaching usage of the new media is still considered a skill to use technology only, although it is a question about a new type of learning environment and a new culture of actions (Tozer, Gallegos & Henry 2011).

The research questions of the further study are:

What kind of actions and methods can assure the virtual teaching material production processes to be expedient and systematic?

How to take the special characteristics of each educational field into account?

The present study focuses on inquiring what are the most central lacks in vocational teachers' skills in virtual material production processes. How to assure sufficient virtual and network teaching skills, including social media, for vocational teachers? The aim is also to develop methods which will help most teachers to gain good virtual teaching competences during the basic, supplementary and continuing vocational teacher education. The study is being implemented by using mixed methods. This way of performing a study enables integrating both the quantitative and qualitative method so that they complement each other (Johnson & Onwuegbuzie 2004). The research material was collected through thematic interviews, observations and quantitative data among the teachers in Oulu University of Applied Sciences.

Preliminary Results

The preliminary studies show that many teachers need help in technical solutions when creating material to virtual learning environments. They tell that it is important to have common rooms where they could see what kind of possibilities virtual environments offer for teaching. One interesting aspect that rose up from the interviews is the peer-support. Teachers also told that it is easy to explain their needs in virtual material production to another teacher who already knows the working environment and educational field. Some teachers wanted to experiment different functions in shared private platforms for getting familiarized with different technologies. Teachers found it valuable to be an assistant teacher in another educator´s virtual implementations in order to see how the technological solutions functioned in real situations.

According to the report one more fact can be pointed out. In their overall enthusiasm of social media practices teachers tended to forget the questions connected to security and openness when planning their teaching.

The preliminary findings speak for integrated teaching of substance and virtual skills. The information will help to focus on the problems and their real time solutions. In addition to teachers´ own professional development, virtual teaching competences will probably have a significant role in promoting education export.

Discussion

The production of virtual and network teaching material is an essential matter in the Finnish Universities of Applied Sciences, but still the use of information and communication technology in education contents is marginal. Each UAS student should be able to perform one fourth of the studies virtually, but e-learning material covers the contents of different curricula only fragmentarily and the special characteristics of the degree programs are not covered to a sufficient extent.

The goal that all people working in the educational field in Finland will have by 2020 sufficient knowledge and skills to use technology in a pedagogically meaningful way in education requires knowledge about technology and knowledge about teaching and pedagogy. Good course design requires both understanding of how technology is used to produce and share knowledge, understanding of the contents, including pedagogical issues. Good virtual teaching requires efforts and resources to guarantee both technical and pedagogical functionality.

When using social media in education, many teachers do not reflect on the philosophies, meaningfulness or weaknesses of the social media deeply. Many teachers consider the social media in itself the most important and a place where to be visible. The overall

enthusiasm of social media makes the teachers to forget the questions connected to security and openness when planning their teaching.

References

Daniels H., H. Lauder, & J. Porter (Eds.). 2009. *Educational theories, cultures, and learning. A critical perspective.* London: Routledge.

Johnson R.B., & A.J. Onwuegbuzie. 2004. Mixed Methods Research: A Research Paradigm Whose Time Has Come. *Educational researcher,* October 2004 vol. 33 no. 7: 14-26. Available at http://hedc.otago.ac.nz/hedc/sld/Postgraduate-Students/mainParagraphs/01/document/EDUCATIONAL%20RESEARCHER-2004-Johnson-14-26%20copy.pdf

Kane G. & Fischman R. 2009. The Shoemaker's Children: Using Wikis for Information Systems Teaching, Research, and Publication. *MIS Quarterly,* Vol. 33, No. 1, March 2009: 1-17.

Kiviniemi K. & Kurkela L. 2009. *The Role of Social Media in Informal and Formal Learning,* presentation and paper in the 10th international conference on VIRTUAL UNIVERSITY in Bratislava 2009.

Kukulska-Hulme A. & J. Traxler 2007. Designing for mobile and wireless learning. In *Rethinking Pedagogy for a Digital Age. Designing and delivering e-learning,* eds. H. Beetham, R. Sharpe. London: Routledge.

Law N., Pelgrum W.J. & Plomp T. 2008. *Pedagogy and ICT use in schools around the world: Findings from the IEA SITES 2006 study.* New York & Hong Kong: Springer (NY) & Comparative Education Research Centre, The University of Hong Kong.

Ministry of Education and Culture. 2010. Koulutuksen tietoyhteiskuntakehittäminen 2020. Parempaa laatua, tehokkaampaa yhteistyötä ja avoimempaa vuorovaikutusta. Opetus- ja kulttuuriministeriön työryhmämuistioita ja selvityksiä [The development of education and media society 2020. Better quality, more effective cooperation and more open interaction. Memoranda and accounts of the work groups in the Ministry of Education and Culture.] 2010:12, 8–14. Available at http://www.minedu.fi/export/sites/default/OPM/Julkaisut/2010/liitteet/okmtr12.pdf?lang=fi Referred 25.2.2011

Mishra P. & Kohler M. 2006. Technological pedagogical content knowledge: a framework for teacher knowledge. *Teachers College Record*, 108 (6): 1017–54.

Opetushallitus 2010. Ota nämä asiat huomioon. [Pay attention to these things. Available at http://www.edu.fi/materiaaleja_ja_tyotapoja/tvt_opetuksessa/sosiaalisen_median_kayttoehdot_opetuksessa/ota_nama_asiat_huomioon

Paaso, L. & Tenno T. 2011. *Mielikuva ja todellisuus sosiaalisesta mediasta – opettajan puheenvuoro.* [Image and reality of the social media – a teacher´s address]. To be published in Meidän Helmet [Our Pearls].

Sampola, P. 2008. *Käyttäjäkeskeisen käytettävyyden arviointimenetelmän kehittäminen verkko-opetusympäristöihin soveltuvaksi.* [Developing an evaluation method suitable for learner centered usability in net-based learning environments]. Vaasan yliopisto [University of Vaasa]. Acta Wasaensia 192. Acta Wasaensia.

Schank R. 1999. The death of classroom. Available at http://www.designshare.com/Research/Schank/Schank1.html

Tenno T. 2011. *Surffaajat ja syventyjät. Verkko-oppimisympäristön pedagogisen rakenteen ja opiskelijoiden toimintaorientaatioiden tarkastelua* [Surfers and Devoters. Examining the pedagogical structures of net-based learning environments and the functional orientations of the students.] Lapin yliopisto [University of Lapland]. Acta Universitatis Lapponiensis 196.

The Finnish Virtual University of Applied Sciences. 2007. *Suomen Virtuaaliammattikorkeakoulu – strategialinjaukset vuosille 2008–2015.* [The strategy plans of Finnish virtual university of applied sciences for 2008-2015. Available at https://www.amk.fi/material/attachments/vanhaamk/5avdGzREz/5u9GKeErU/Virtamk_strategialinjaukset_2008_2015_versio1.0.pdf

The Finnish Virtual University of Applied Sciences. 2010. DIGMA-oppimateriaaleja ammattikorkeakouluille. [DIGMA learning material for universities of applied sciences.] Available at http://www.amk.fi/digma.html.stx .

Tozer, S., B. P. Gallegos & A. M. Henry (Eds.) 2011. *Handbook of research in the social foundations of education.* New York : Routledge, 2011.

Weller, M. 2007. *Virtual learning environments. Using, choosing and developing your VLE.* London: Routledge.

Good Practices in the Use of the ICT in Education

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Abstract

We have described some “good practice models” as a tangible result of this study, in order to give a referent for teachers and educational institutions. With these models, we are writing a “Good Practice Guide” that will let know and exchange experiences between teachers. These experiences, which are related to educational innovative experiences based on ICT, will add some guidelines for the formation and pedagogical update of teachers.
Keywords: good practices, innovative experiences, information and communications technology (ICT)

Introduction: the research

The research Project that has been the framework for this paper was entitled “Regional educational politics and their effects over teaching innovation in schools based on ICT”. Our first proposal was to analyse educational politics applied and their consequences in teaching innovation on primary and secondary schools, when this innovation is based on Information and Communications Technology (ICT). From a methodological point of view, we have considered a mixed system that combines qualitative techniques (narrative interviews and content analysis of documentation and educational legislation) and descriptive techniques (elaboration and application of questionnaires).
Within our objectives, we want to highlight two of them, which we consider the most relevant ones for this paper:

- Identifying innovative initiatives with ICT used in primary and secondary schools, derived from politics applied.
- Elaborating a Good Practice Guide referred to innovative processes that apply ICT as a resource.

Selection of all the cases (primary and secondary schools) has been carried out in three phases. In the first stage, we have identified the entire primary and secondary schools that have minimum requirements.

For the second phase: “selection of the sample”, we used Teachers´ Centres (CEPs). When being in contact, we asked for centres that could be an example of good practice centres. There were chosen eight centres.

In the third phase, we started visiting each centre to present our project to the Administration of the Schools, and especially to ICT coordinator. We asked for the teachers that could be chosen to carry out good practice with ICT. We obtained 11 teachers from these recommendations, that is, 11 teachers that were considered as generators of “Good Practice with ICT”.

In Table 1, we can observe centres and number of teachers.

Table 1. List of schools and interviewed teachers

Level	Place	Number of interviewed teachers
Primary	Rota	2
Secondary	Cádiz	1
Primary	San Fernando	1
Secondary	Algeciras	1
Primary	Conil	3
Primary	Medina Sidonia	1
Secondary	Chiclana	1
Secondary	San Fernando	1
	Total	11

Initial concepts of good practice with ICT and innovation

Regarding the first concept, the *“good practice”* concept is extended and used in different fields: business, social, organizational, financial, educational, etc. and so that, in each case, this concept takes different definitions that is adapted to each field. In our research, we take the concept set out by De Pablos and Gonzalez (2007).

For these authors, “good practice” should not be understood as the best conceivable action in a specific context, but actions that suppose a transformation of habitual running forms and that form part of the germ for a positive change in traditional practice.

Regarding the second one, educational innovation, in the framework of this research, is seen as an initiative group that led teachers into thinking in a new form when carrying out their

tasks. As Landow (2004) says, this is not an ambitious use of the concept, in the sense of changes coming from innovation are radical or total changes, but these new forms of working can lead to a beneficial change, although it is not a successful change or it is not a change for a long period. However, these changes add the value of re-thinking teaching and learning (De Pablos y Gonzalez 2007).

On the other hand, once contributions of teachers have been analysed through interviews, we have tried to conceptualize, in a general way, what a good practice is in the opinion of the subjects of this study.

After this short conceptualization, we are going on to comment, firstly, the type of interview that we have used to collect data, and, secondly, three examples of "Good Practice".

Narrative interview as tool for data collection

Briefly, we are going to comment the characteristics of the type of interview that we have used and from which we have obtained data for this research. Our interest was centred in knowing personal trajectory that the studied teacher had followed until the development of a good practice with ICT. This "personal history", from our point of view, could give us relevant keys in the followed process beyond the simple description of his educational work. We have taken the starting idea with regard to narration from Medina (1999). He considers that the narration can be defined in a wide way as a synthesis of multiple events and incidents in a complete and singular story. From this point of view, plot has the power of making a simple story based on significant incidents, or if we prefer it, transforming diverse facts in a story. In this connection, an event is something that goes beyond a mere crazy idea or something that simply occurs: an event is the thing that contributes to progress in narration, both its beginning and its ending. According to this idea, narration is always something more than a mere enumeration or a successive order of events and incidents. Narration organizes them as an intelligible unit. The meaning is not a thing or a static formal property, but a process, so, always is an historic element and it is carried out in a concrete moment. Narration establishes a context. It has a subject, an "I", that serves to experiment something and establishes a sense. Narration gives a structure that organises information. Narrative discourse is expressive and exploratory and it is formulated as an informal conversation that pretends to tell an experience presented as a unit.

Having this into account, we have planned that each interview should last between one and three hours, and should be developed in several sessions (preferably two sessions). We tried to make an experience story, under a narrative structure: beginning, development and ending. Interviewer and interviewee have had a margin to think about the result of the initial questions. These questions are set out in an open way, so, in a second approximation we can use contributions or findings that were in the first session. In the first session, we located

the story in a concrete context, in a concrete timeline and in concrete causes (motivation). With the results of this first session, we elaborated a summary from which, we reached a consensus between the interviewer and the interviewee; this was shared as a reflection element for the second session. The narrative interview pretends to identify keys for auto-comprehension of analysed reality. So, interviewer may try to capture generating topics that are contained in the experience of the informer: the thread of the plot that gives sense to changes and images that are produced in the reality. These inflection points are fundamental when analysing narrations. We have to bear that these will not be simply described in the research inform in mind, but analysed and interpreted.

Good practices with ICT examples identified

Following the above mentioned criteria, we have selected a group of 3 practices that we have considered the most relevant ones and we have grouped in Table 2. We have also to indicate that, the majority of materials that we have used in these practices are located in Helvia platform (http://www.juntadeandalucia.es/averroes/helvia/sitio/). This is an educational platform developed in free software for the Education Regional Government of Andalusia.

Table 2: Selection of good practices

School	***Practice***
A.- Rota	Development of students autonomy
B.- Conil	Web logs creation for the learning process of students
C.- Chiclana	Establishment of relations with the environment

A. - Development of students' autonomy. Primary school, ROTA

Justification of the selection. This section introduces changes in teaching process that imply changes in the role that students have had until this moment. These changes are oriented to individual and group work, but highlighting the advising in learning process developed by the teacher and in the high autonomy developed by students.

Competences developed with this good practice. Developed competences are included in two fields. On the one hand, instrumental and technological competences, as:

- Searching information in the Internet.
- Using text-edition and presentation programmes.
- Storing information in portable devices.
- Sending information by e-mail.

On the second hand, interpersonal competences, as:

- Selecting information in a cooperative way.
- Negotiating forms of presenting the materials.
- Exposing the elaborated work.

Description of the good practice. First of all, we have to take into account the initial level of this teacher. In this sense, we have to highlight that she used ex-cathedra teaching and a textbook as an exclusive way in her classes. To initiate her way in the ICT world, she has to overcome some barriers and she has followed a way that we are going to describe. She considers herself as a technophobe person, and this phobia to technology has been the first step that she has overcome.

To overcome this fear and to initiate in the use of computers, she started a course about J.Clic (http://clic.xtec.cat/es/jclic/index.htm).

As a complementary strategy to gain skills and necessary knowledge, she used advising between teachers.

Until this part, this was the basic process to introduce the use of ICT in her classroom. But the significant part of the process is that she started to introduce changes in her subjects. These changes imply changes in her role (a more advising function than directive one) and in the students´ role (from receptive students to autonomous ones). Teacher shows the need of "controlling" the learning process of her students. In this sense, she does not need to change her previous model (ex cathedra classed and textbook).

She is sure with this model. If she decides to use ICT is more because of the acquired compromise (she has signed an ICT project in her school) than the need of changing her teaching style or the detection of a problem in her classes. So, she tries to reproduce the previous model without technologies in an ICT context. However, this approach is not realized.

Firstly, she uses activities designed with J.Clic as a way of making motivating the contents that she is going to teach. Secondly, she uses the platform to upload materials that she has previously selected and the links of appropriated Webpages. She makes very sure pupils do not use other materials than the ones she has selected. Control is constant in this first phase. Roles have not changed until this moment.

However, she begins to introduce small changes. First of these changes is to plan that the students should make individual works and works in pairs. This involves an offer of a high

variety of contents, where they can choose; students also can surf the web to find information and with this basis, they can elaborate their work.
The second change that she made was elaborating audio-visual presentations, with “Power Point”. Due to the success that autonomous work has had, she decides taking a step forward and she suggests they will expose the activities in class and they will upload them in the digital platform in order to can be seen by all students.
This step forward is going into roles changes in deep. In classes, time that was previously used for ex cathedra classes (that have not disappeared, but it has been reduced) is used for a variety of tasks. Teacher gives individual advice or in pairs; and students search information, selects it, organizes it and present the information. The added value of not being only an activity for the teacher in order to achieve a mark, but an activity to present to the partners of the classroom and the centre, constitutes a value that was not present before the use of ICT in the classroom. So, she has obtained a methodological change that was not pursued. Teacher is satisfied, because of the perception that the level of knowledge and skill acquirement has been increased; and students have increased their motivation towards the subject object of their study.

B. - Web logs creation for the learning process of students. Primary school, CONIL

Justification of the selection. We have selected it because of the effort of the teachers’ team who develop ICT project to adapt their methodologies to needs that they perceive (from social needs to academic needs). That is, they constantly participate in courses in order to apply them to their daily teaching process, collaborating and exchanging information between them (basically, the coordinator and two teachers). On the other hand, students give a positive answer to this type of initiative.

Competences developed with these good practices. Competences that students develop have to do basically with:

- Developing autonomy of the student in the learning of subjects.
- Developing autonomy of the student in the elaboration of works and activities related to subjects.
- Encouraging communication with students.
- Encouraging motivation of learning a discipline.
- Developing skills to use tools (ICT).

Description of the good practice. Firstly, we have to highlight two aspects that have favoured this practice: the collaborating atmosphere of the centre and the initiative of three teachers who forms part of the ICT team. Within the general context of the centre, we can say that they are fully aware of the importance of adding ICT team. On another hand, two interviewed teachers that have their own blog, are lovers of technology per se, and think that it is

necessary to encourage its use in an educational context with the purpose of being adapted to this historical and social moment that we are living now: we cannot teach as teachers taught 100 years ago if present demands are different. In this sense, interviewed teachers consider that the need to have a continuous training to make the most of ICT. So, in the moment when they are starting with blogs, they develop their own blogs to be in contact with students and with other teachers. In words of one of the interviewed teacher:

In the line of the philosophy of education of interviewed teachers, teachers are very satisfied with the way of adding this new practice in their teaching method. Motivated students, enrolment of students on their subjects, and students making things that they really like serve as a reference for these teachers. Also, this project creates an emotional bond between teachers (especially three of them), and it also creates a type of proud because of being pioneers as ICT centres and continuing with this. Both teachers proudly mentioned their blogs, because these blogs suppose an application of the things that they have learnt in the courses. The links for their blogs are:
http://juanmorilloca.wordpress.com/ ; http://barbatero.wordpress.com

C. Establishment of relations with the environment. Secondary High school, SAN FERNANDO

Justification of the selection. It explains the process followed to establish relationships with the nearest environments of the school: parents, institutions, libraries, groups and activities of teachers' formation and other international centres.

Competences developed with this good practice. In this innovation, instrumental and technological competences are developed, but the most important competences to highlight are interpersonal competences, as participation of parents and students, and starting to learn how to behaviour in a democratic environment, adding ideas and making decisions.

Description of the good practice. Firstly, we must highlight that this practice is carried out in a centre with a medium-low socio-economical level. So only a few families use ICT and students does not have computers at home or the mentality of parents is restrictive about this use. These parents think that computers are a free time object only used for fun.
The interviewed teacher is teacher of French in this centre and she is very enthusiastic with the use of ICT. In the process of this good practice, we identify a series of consecutive phases that describe the methodology that it has been followed. The beginning starts with

the objective of being interesting and to have more participation of the students. With this purpose, the teacher describes her “methodology”:
In a second phase, and parallel to this last year, they created a teachers workgroup, related to new technologies and with a philosophy and a hope of changing education or the way of teaching, making the most of collaborative work that they could carry out with ICT:
In a third moment, we thought about the importance of parents’ participation, involving them in the learning process of their children.
But they also carry out some activities related to parents´ education regarding new technologies, from an initial contact with short courses, to a high involvement with the use.
Right to here, this is a short description of the three good practices that have been analysed. After this description, we are going to describe the group of difficulties that have been identified and that do not favour the development of these practices.

Difficulties perceived by teachers in order to achieve better practices

Varied difficulties have been observed and, in advanced until we will make the analysis of the rest of cases, we want to dedicate a section to analyse them, in order to understand the present situation of low development of ICT at schools.
We are going to organize identified difficulties (Table 4) according to the involved agents: students, teachers, the administration of the school, parents and educational administration; and in function of the affected field: technical or pedagogical-didactic.
We have confirmed that, if educational practices with ICT have been developed in primary and secondary centres, this is due to two factors: politic will of developing this technological implement, and the attitude of reception and illusion of a teachers group. They have accepted the deal and have attracted other teachers to assume this responsibility. If we also have into account that technical aspects in technological market involve a need of updating the resources and a permanent formation of the agents, we are before good scenery to have lots of difficulties.

We are going to start with students. We have marked 4 difficulties. Perhaps, the most surprising one could be the absence of technological competence, especially in students located in less favoured areas, when talking in economical parameters. But it is clear that is not an absence present in all students,

Table 4. Difficulties identified to develop Good Practices

Agents	***Affected area***	
	Technical	Pedagogical-didactic
Students	-Absence of technological competence	-Non authorized use of ICT resources -Inadequate abilities to work in groups -Slender abilities to select relevant information
Teachers	-Absence of ICT training	-Absence of time to prepare materials -ICT is lived as a threat to daily life of the class. How can we substitute a book by a computer? -Loss of time in classes when starting and ending them -Using computers as a prize/penalty in classes and not as a didactic resource -Increase of the dedicated time: reading e-mails, doubts of students, correcting activities… -Pressure felt by finishing the established programme
Administration of the school	-Absence of coordination between other teachers of the centre -Limited communication between centres	-Increase of tasks that are difficult to combine with assigned teaching

Family	-Shortage of technological resources at home -Not sharing the same software that the centre have	-View of computer and the internet as an accessory linked to fun time -View of the internet as a danger for their children internet
Educational administration	-Insufficient and deficient technological resources that are continuously updated and this does not favour teachers´ tasks -Slow and insufficient answer to demands -Absence of flexibility in the free software offered	- Networks for the Exchange of materials are not advertised in a good way

Not all students have access to a computer with internet and this decreases possibilities of acquiring a certain competence in its use. On the other hand, in earliest ages, we have to sum up the distrust of parents towards this tool, because this is a new tool, not presented in their childhood. So this tool generates a rejection, putting into practice the saying “it is better preventing than curing”.

Regarding the three pedagogical-didactic difficulties identified, we think that they have a highly contextual component. First of them, “a non-authorized use of ICT resources”, is referred to students´ indiscipline when following the guidelines of the teacher. This can have a double justification. First of them is related to this affirmation: the students that usually has this behaviour usually are undisciplined not only with a computer, but in the rest of contexts. Secondly, they usually have computers at home but these elements are used as a fun tool to enjoy with, so they reproduce this behaviour at school.

In relation to teachers, we have included as a technical difficulty the absence of ICT formation. Teachers feel this absence of formation and we have to take into account that interviewed teachers use these resources successfully. We have grouped the widest collection of difficulties in the pedagogical-didactic section. Here, there are more difficulties. On one hand, we highlight those difficulties that involve a bad use of technological resources and, on the other hand those ones that has to do with an increase of the “workload”. Regarding the first ones, introduction of ICT in classrooms has not supposed any changes. These are not considered as a tool that improves learning process beyond using them as

reinforcement of good behaviour in classes. Some of interviewed people recognized that this use was not exclusive of other partners, they had used this tool under this aspect. They recognize that they have discovered ICT possibilities that go beyond supporting pedagogical methodologies centred in teacher and that has a behavioural conduct. In relation to the second group of difficulties, those ones that increase "workload" are lived in a distressing way. These have been added to a project that is necessary to develop, but they have to give up previous routines and substitute them with other ones that are more expensive and change organization and design of teaching-learning processes. Meanwhile, their partners, those ones that have not been added to this initiative, develop a role that they dominate and with it they are more or less comfortable, but overall, sure. Comparison does not benefit to interviewed people, however, they consider that an effort is worth it and they do not want to move backward. One of the interviewed people, before the possibility of changing from one centre to another and that this last one would not be a ICT centre.
We are now moving onto the administration of the school, where we have incorporated ICT coordinator of the centre. "Technical" difficulties have been centred in coordination between teachers of the centre and with other ICT centres of this environment. Teachers are mainly centred in activities that they can use in classrooms; they are centred in their subjects and in students´ groups that they teach. However, they discover that difficulties and good decisions are shared by the other teachers, from the centre and from other centres.

However, the problem is wider. The main difficulty observed brings by the overlap of two organization and teaching systems. ICT centres do not become technological centres from one day to another. Process is slow and it is not widespread. Not all teachers have been added to ICT. ICT centres have in their own staff some teachers that systematically use ICT, and other ones that use them as a complement, as a support for their teaching form. But the majority of staff does not use this technology, because of ignorance or rejection. This involves two organizing forms for the same professional group.

Conclusions

In this work, we have tried to offer a nearest view to the actual situation of the process of incorporating ICT to educational public centres in the province of Cadiz. We have planned it from the perspective of highlighting those experiences that we have identified as "Good Practices". But we have not refused responsibility of picking up those aspects that have meant an obstacle in the path created by politics created by Administration.
We think that we have a long path to cover and steps done until now, are pertinent steps but they are insufficient ones. They are pertinent steps because they have generated a culture of methodological change that we have not achieved in previous attempts. But they have been

not enough because penetration of this policy has been so poor: it does not have impregnated to all teaching community of ICT centres, and it does not have arrived to all schools.

We can make note of possible reasons for this. First of all, it is the chosen way to begin the change through presentation of projects by schools. This is a positive way to guarantee that teachers are the own main characters as promoting agents of pedagogical initiatives, as volunteers to assume the challenge. But this way, does not take into account a wide collective that does not want to begin changes process based in ICT.

On the other hand, innovation is a collateral effect more than a found effect. Introduction of ICT in teaching-learning processes, by teachers, does not begin from need identification that can be covered through ICT use, and it is not thought as an efficiency way to introduce innovations that can suppose real improvements. Interviewed teachers express that causes of incorporating ICT are classified in four types:

- Assuming contracted responsibility.
- New form of motivating.
- Personal interest.
- General view of society as technological society.

Regarding first cause, we have to locate us into the concrete context of the school. The signature of an ICT project by teachers means not being an obstacle for the initiative of other partners. And when project is going on, it also means an obligation of “doing something” as a form of assuming “contracted responsibility”.

Second cause, is framed within casual discoveries when using in some occasion a computer resource in a classroom and checking the effect of “attention increase” in students. In this situation, we do not think that ICT have an innovator value as García Valcarcel (2005) indicated, rather is a behavioural control that can be done and, in extension, possibilities of continue with traditional “lessons”.

Third cause is positioned in individual sphere of personal interests. That is, contact with ICT outside of the professional area, outside of the school, provokes interest to some people. Into the extent that administration encourages its use, they observe a possibility of developing activities centred in personal interests but in a professional area. Pedagogical innovation, here, is also absent, so the main objective is centred in knowing the tool and not in its pedagogical possibilities.

Fourth and last cause is centred in contextual view: “if we live in an ICT society, schools have to develop them too”. This is a cause related to mimesis more than reflection. School must not be anchored in the technological XIX century world; it must advance with

technological evolution that surrounds it (Area 2000). This view does not give space for questioning social function of educational system, of teaching forms and the citizen model that they defend. So, this view pretends to avoid critics related to the most evident: an adoption of forms (using computers and looking like XXI century institutions) and an approach of changing processes (we will use the same approaches from XIX century).

However, although this exposed information, and how we have previously indicated, innovator effects are being achieved without having been found. When we plan that students have to look for and select information, when we ask them for doing this activity in small groups, or when we plan that they have to elaborate a material that has to be exposed before the class or before the school, we are asking them for changing their role of passive students into a more active and collaborative role. When we plan these types of activities, teachers do not have other option than "assessing" students in a more individualised way; they should orient their students in their learning process and feel the need of working in a collaborative way with other partners that are carrying out similar changes in their classrooms.

Pedagogical innovation is not pursued in a conscious way. However, changes in classrooms have been introduced, and these changes cannot have been introduced without ICT.

References

Area, M. 2000. Problemas y retos educativos ante las tecnologías digitales en la sociedad de la información, *Quaderns Digitals,* 28. Retrieved from: http://www.quadernsdigitals.net/index.php?accionMenu=hemeroteca.VisualizaArticuloIU.visualiza&articulo_id=284

García-Valcárcel, A. 2005. Estrategias para una innovación educativa mediante el empleo de las TIC. *Revista Latinoamericana de Tecnología Educativa*, (2), 1: 41-50. Retrieved from: http://campusvirtual.unex.es/cala/editio/index.php?journal=relatec&page=article&op=viewFile&path[]=12&path[]=9

De Pablos, J. y González, T. 2007. Políticas educativas e innovación educativa apoyada en TIC; sus desarrollos en el ámbito autonómico. Published in Actas de las *II Jornadas Internacionales sobre políticas educativas para la sociedad del conocimiento.* Granada.

Landow, G. 2004. *Innovación educativa e hipertexto. Éxitos y fracasos de una universidad en apoyo de la nueva tecnología*. In I. Snyder (comp.): Alfabetismos digitales. Málaga, Ed. Aljibe, 149-170.

Medina Liberty, A. 1999: La naturaleza narrativa de la mente y de la pedagogía. *Revista de Educación/Nueva Época*,. Retrieved from: http://www.quadernsdigitals.net/datos_web/hemeroteca/r_24/nr_278/a_3602/3602.htm

Impact of Implementing an Educational Innovation (ELM) in a Teacher Education Programme (M.Ed.)

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Abstract

This paper is about one bridge between classroom reality and educational vision: 'I am a humanist, I want to be the best teacher I can, I want to reach every child, I want to help him/her grow – how do I do that with 40 kids in my classroom?'
The paper is about a technology called 'ELM' – Eye Light Monitor.
Keywords: Eye Light Monitor, educational innovation, teacher educational programme

Introduction and theoretical rationale

New winds are beginning to blow in schools' endless corridors. Some change is felt. Generation gap has never been more apparent, much of it is attributed to the digital divide.
The reality that children are spending so much time on the internet (mainly Facebook) is scary, even if they are communicating with real and virtual friends, adopting new forms of language, values and culture, new skills and new lifestyle. It seems that school has been losing its relevance to children's lives.
Educational beliefs are revisited. Abused and beaten terms like 'Experiential Learning'; 'Constructivism'; 'Inquiry'; 'Communication'; etc. are re-examined in light of new technologies that can empower them more than ever before. Philosophical beliefs are reinterpreted and used to revaluate common educational practices, while administrative system are pulling harder into learning standards and production models.
The divide between 'people' oriented philosophical vision 'content' oriented reality seems to growing every day.
Teacher's education is getting more challenging, more demanding, while classroom reality remains the same.
Through all this clouds of chaos, a young student-teacher is emerging, asking: what am I going to do tomorrow morning in my classroom?
ELM proposes a way to keep an open channel of communication between teacher and students. ELM can provide a continuous flow of information about the student, become a

means of self-awareness, create a human link between the student and teacher, and provide a teacher with an indication of developing trends within a class. ELM provides the teacher with a dynamic picture of individual student's state-of-mind levels, focusing on issues like stress, misunderstanding, confusion and lack of engagement.

ELM is mentoring software. This paper is a study of ELM in a M.Ed. program in Educational Technology.

Faculties of education consistently make claims about the importance of sustained interaction and meaningful collaboration in the building of teachers' professional development (Wadmany & Levin 2009). However, research suggests without an intentional structure in place, the benefits of these claims are typically not realized (Darling-Hammond & Bransford, 2005). Further, claims have been made about the role information communication technology (ICT) can play to enable reflective practice, interaction and collaboration (Crichton & Kopp 2009). Solomon and Schrum (2007) suggest that ICT can play a role in creating and sustaining professional learning communities, creating an environment of trust through productive dialogue and constructive feedback and support (Bonk, Wisher, & Lee 2004).

The research presented in this paper explores one such learning environment – ELM. Further, this paper illustrates the importance of rigorous collaboration and social interaction among educators, and researchers in the development, implementation and modification of innovation for teaching and learning. While many educators are still wrestling with ways of integrating ICT into their teaching contexts, some actually take the bold step of designing software solutions to address perennial problems.

ELM was developed (Yaniv 2008) to provide a continuous flow of information about the student, become a means of self-awareness, create a human link between the student and teacher, and provide a teacher with an indication of developing trends within a class.

Methodology

This is a single case study methodology, focusing on the dynamics between the mentor and the students. The dynamics between the teachers and the students were expected to be triggered by the use of a web-based software tool named ELM (Eye-Light Monitor).

It is anticipated that the findings of this case-study will inform on a specific role of technology as a communication channel between one and many. Probing into the dynamics elicited by this communication channel, it is anticipated that this research will provide understanding of the role of ELM in empowering teachers with a real-time monitor of each of their students' well-being in large classrooms, while providing a summarized image of their own teaching practice.

This case study embodies the essential characteristics of a qualitative research project as summarized by Merriam (1999, 11):

1) The goal of eliciting understanding and establishing the meaning of the case.
2) The researchers as primary of data collection.
3) The inductive orientation of data analysis

1. The fundamental basis of this case study was to understand the impact of real-time, self-reported, student data on two major layers of student-teacher interactions: The individual student layer and the whole classroom layer. At the individual student layer, this study is aimed to examine the teacher's ability to:

1) Identify trends leading to potential learning problems a student might be developing.
2) Identify shifts in student's attitude.
3) Identify developing stress situations in individual students.

At the whole classroom layer, this study relies on another important function of ELM: to provide the teacher with a summarized averaged data of all students. At this layer this study examines the teacher's ability to:

1) Reflect on his/her own impact on classroom performance.
2) Identify real-time impact of pedagogical strategies and classroom tactics.
3) Reflect on his/her own self-image as an effective teacher.

2. Merriam considers the researcher as the primary instrument of data collection and promotes the use of fieldwork. This study was conducted by the researchers while co-delivering a graduate course in a teachers college. ELM has been used by the researchers and their students throughout the semester. The impact of this usage is examined here.

3. Inductive orientation to data analysis is an inherent process of using ELM. Each week the data is examined at both the individual student layer and the whole classroom layer and decisions are made based on its interpretation. It is the impact of these interpretations that are studied in this study.

Research questions

Will the use of ELM help the teachers:

1. Identify trends leading to potential learning problems a student might be developing that will illicit teacher's intervention?
2. Identify shifts in student's attitude that will illicit teacher's intervention.
3. Identify developing stress situations in individual students that will illicit teacher's intervention.
4. Reflect on his/her own impact on classroom performance, reflection that will result in taking action.
5. Identify real-time impact of pedagogical strategies and classroom tactics.
6. Reflect on his/her own self-image as an effective teacher.

Procedure

ELM has been introduced in a graduate level course named 'Learning a Change in Education', at a large teachers college in Israel in 2011.
32 students, all teachers with at least 3 years of teaching experience and 2 instructors participated in this study.
The students were asked to use the ELM tool every week. They were instructed to relate to five criteria, record any change they sense and annotate it.
The instructor (Hanan), while receiving the students' graphs, quickly scanned the profile to identify needs for intervention, consulted with his co-teacher (Rivka) and responded accordingly.
There is no attempt to generalize the findings of this experience. This study adds to a battery of studies conducted on ELM and serve to better understand the ELM method.

Rational for the selection of this case

Because of this unique co-teaching situation, Hanan's (the developer of ELM) perspective as a researcher/teacher can be balanced by Rivka's presence and experience. This study might shed more light on the use of ELM than previous 'single teacher' studies (Yaniv 2008; Crichton and Yaniv 2011; Yaniv and Crichton 2011).

ELM – The Tool

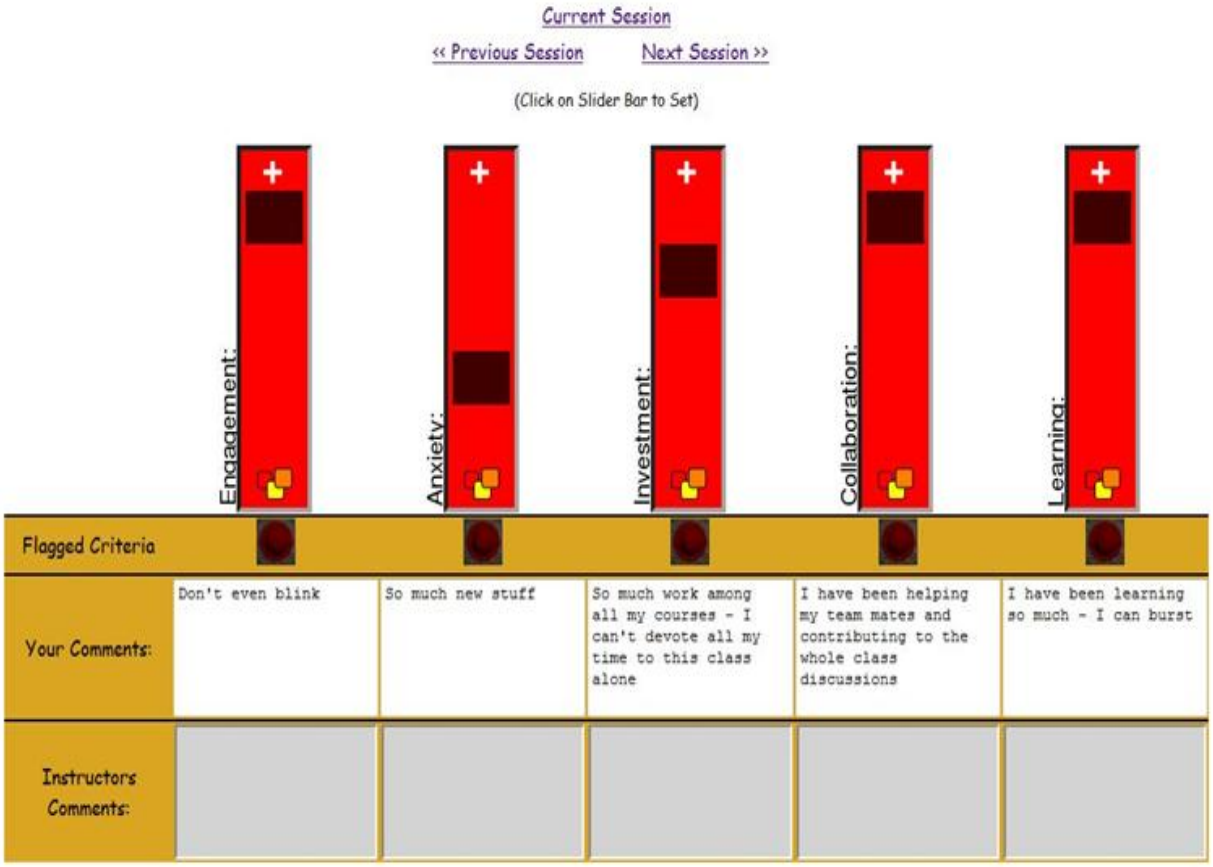

Image 1. ELM Student's Weekly Report

Description

ELM is a web-based tool, developed by Hanan Yaniv for rapid and efficient communication between teachers and students, mentors and mentees. Through a set of "sliders", each representing a criterion for the users' 'state of mind', the teacher/mentor can monitor individual and group dynamics and attend to potential problems as they begin to emerge.
ELM offers the means of pre-setting the criteria for each group of students (class).
The criteria used in this study were:
Involvement: How much were you involved in the last class meeting?
Interest: What was the level of interest you've felt during the last class?
Learning: How much do you feel you've learnt in the last class?
Frustration: What was your frustration level during the last class?
Relevancy: How much of the last class you feel is relevant to your own needs?

Each week, the students were asked to login into their ELM account and feel out the weekly report. They were asked to move each criterion's slider to the level they feel represents their status and annotate the reason with a short statement explaining that level. The annotations are needed if they feel there has been a change since last week's report (ELM offers a graph that shows all previous levels):

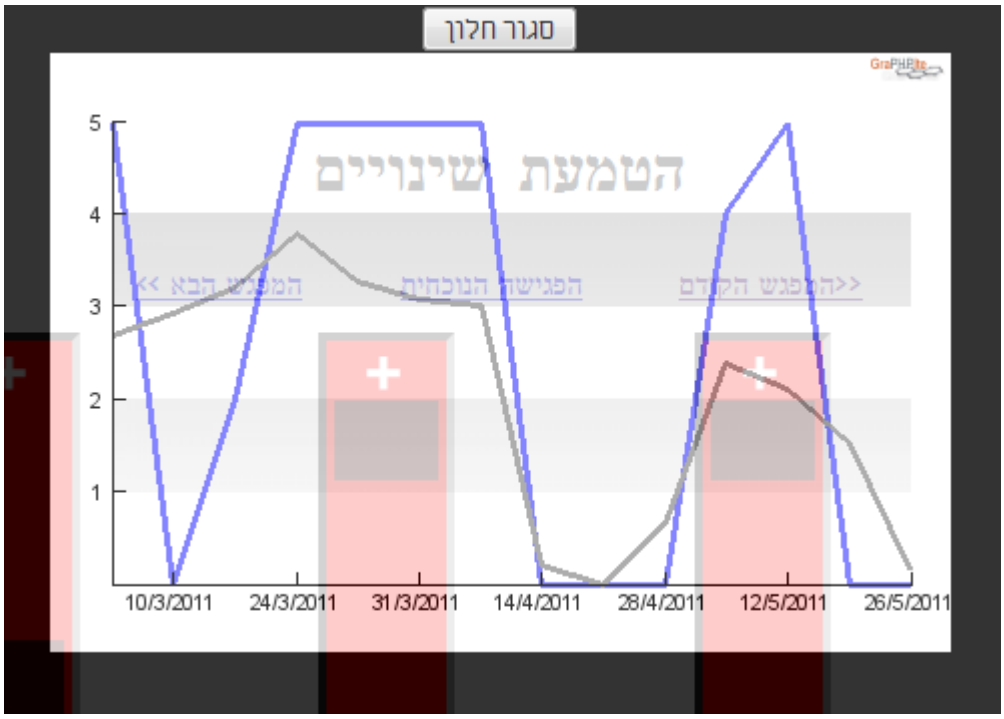

Image 2. Student's 'Interest' Graph (no class 14-28 Apr.)

The instructor can communicate short messages to the student entering text under each of the bars, usually in response to student's annotations.

Besides the individual student's report, the instructor can get the whole class averages presented on a bar graph (Image 3).

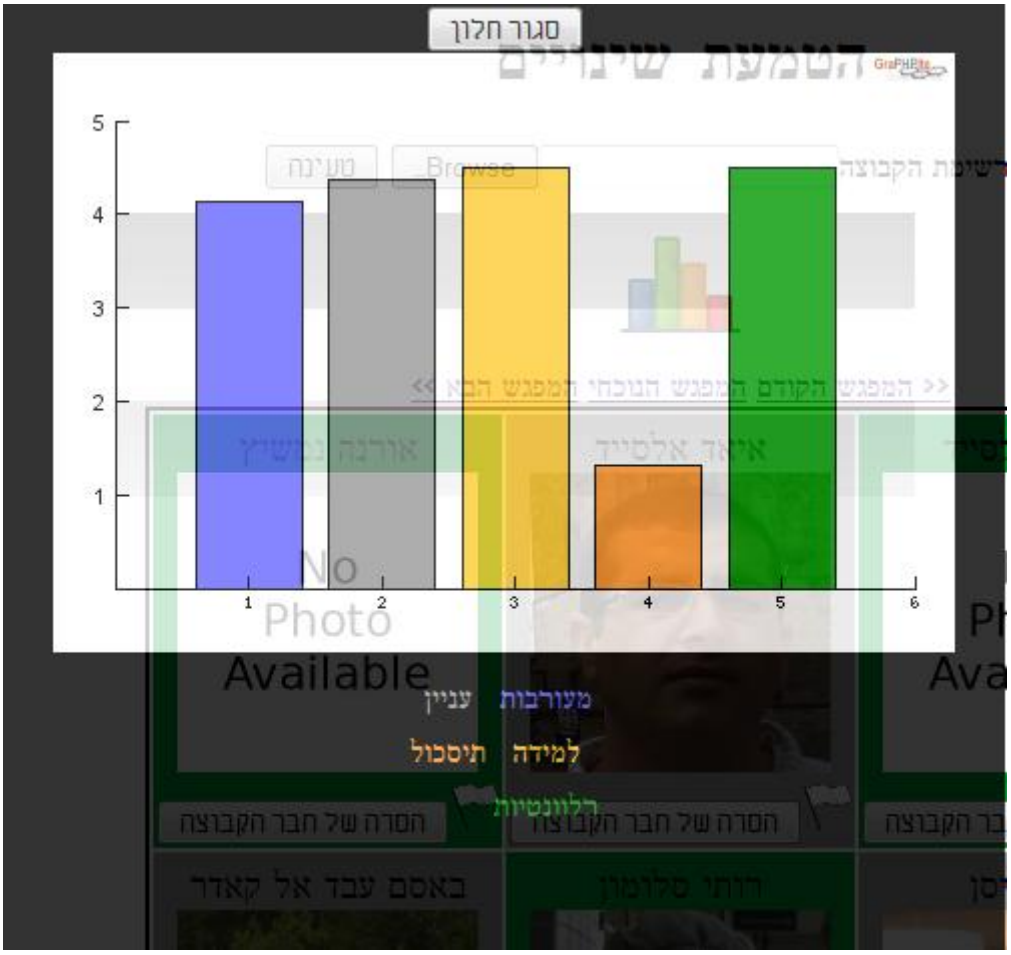

Image 3. Whole class weekly averages for each of the criteria (from left: Involvement; Interest; Learning; Frustration; Relevancy)

ELM provides an average criterion history for each criterion.

Data collection

The tools that were selected triangulate information from various resources to increase the validity and reliability of the results:

1) ELM individual students data.
2) ELM whole group averages.
3) Hanan's interventions reports.
4) Rivka and Hanan's discussions of the data and intervention strategies.
5) Hanan's reflections as co-instructor.
6) Rivka's reflections as co-instructor.

Results

At the individual student layer:

The following table (1) shows Hanan's interventions in 3 levels:

1. Respond to a student's annotation to a specific criteria.
2. Initiate a response based on student's data (no student's annotation).
3. Invite the student to a face to face meeting.

Respond	Initiate	Invite
75	16	4

Table 1. Frequencies of Hanan's Interventions

Examples of Hanan's Interventions:

1. Respond to a student's annotation to a specific criteria

Trigger: Hi 'Frustration' level (4 out of 5), comment: 'It so different in the field'.
Response: 'What's different?'
Student response: 'technology is so scarce in kindergarten'
Intervention: encouraged the student to rise up the issue in class.

2. Initiate a response based on student's data (no student's annotation)

Trigger: Very low 'Involvement' level (2 out of 5).
Response: 'What's going on?'
Student response 'My involvement has been internal – I didn't speak'

3. Invite the student to a face to face meeting

Trigger: Student reports are below class's averages 3 weeks in a row. No annotations.
Intervention: Because there are no annotations accompanying such low settings, meeting with the student with an attempt to understand his attitude.

At the whole class level:
ELM provides a weekly average bar diagram of all criteria (Image 3). That option provides the instructor with a probe into class atmosphere, alerting about potential problems that might be developing.

Here is an example of the weekly averages that required intervention (Image 4):

Image 4. Low averages of 'Involvement' and 'Learning' observed at the fifth week of the semester

From previous experience, these averages are way below normal functioning of the class. It was clear to the instructors that a change in strategy is required. A meeting between Hanan and Rivka, had resulted in changing the time the students are assigned for their team presentations (they were presenting an article every week in teams of fours students per team).

The following week's graph (image 5) is showing a much better image:

Image 5. Sixth week averages show improvements.

During the 14 weeks of the last semester (Feb. – June 2011), there were 3 instances of instructional strategy changes that were triggered by the weekly averages graphs:

Week	Strategy Change
4	Limit students' presentations time to leave more time for class' discussions
7	Redefine class assignments and marking criteria
10	Redefine 'Learning' and encourage students' own reflection at 'what have I learnt so far'

Table 2. Instructional strategy changes evoked by ELM's whole class weekly averages

Through the Instructor's Eyes– Hanan Yaniv's Impressions (Similar to Crichton and Yaniv 2011).

Understanding ELM student data requires an instructor to ethically and thoughtfully probe into her/his personal philosophy of education, the on-going atmosphere of a specific course, the way ELM is introduced and integrated into the course design, and the link between ELM and assessment and grading criteria and the impact both have on the chemistry between students and their teacher. In this case of co-teaching, we needed to be aware of our personal differences in the way we interpret our role as teachers and students' role as learners. Because of many years of working together and sharing a similar vision of

education, Rivka and myself have the fundamental trust and respect needed to coordinate such a delicate teaching environment, in which we are both facing real-time feedback from our students. It is this harmony between us that made it possible to reflect together and modify our strategies, resulting with amazing changes in students' self-reported revelations about themselves and their role as teachers.

In the years I've been using ELM, I have found that the biggest challenge I face is detaching assessment anxiety from ELM data entries. In the competition charged environment of post-secondary education, if the students feel that ELM might influence their grade - there is no hope for honest reporting. Further, the instructional strategy the instructor adopts influences ELM student data. Loyalty to Rogers' statements mentioned is critical. Specifically:

- "I have come to feel that the only learning which significantly influences behaviour is self-discovered self-appropriated learning.
- Such self-discovered learning, truth that has been personally appropriated and assimilated in experience, cannot be directly communicated to another" (Rogers 1952, 227).

I always tell my students during my introduction of ELM that I will provide feedback only on issues I feel require feedback. I tell them that I will contact them personally if I feel intervention is needed. The need for feedback on everything they do is very consistent in all groups of students I have met. I feel this dependency on feedback is a result of so many years of behavioural conditioning in conventional schooling. My feedback policy is an attempt to wean my students from some of their need for feedback and external validation while shifting some of the responsibility over their own learning back to them. In some classes, when I manage to establish trustful relationship with my students, the message is well received. In some of my classes there are always some students who resist my personal philosophy and it shows significantly in the ELM data - both at the personal level (their data entries; for example they might tend to score items consistently higher as they might not trust my motives, or lower to show me how infective my teaching methods are) or a professional level (for example in the college student evaluation of their instructors at the end of a semester).

Through the Instructor's Eyes– Rivka Wadmany's Impressions

In many respects, social interaction and sharing should be an intuitive part of professional teaching development; in reality many educators find teaching to be a solitary profession in which one's work is done behind a closed classroom door with little time for conversation with colleagues. In this case of co-teaching, Hanan and me have the opportunity and the possibility to reflect together, to plan together and modify our instructional strategies,

resulting from ELM students' data, their reactions and self-reported revelations about themselves.

The use of ELM requires a solid vision of educational philosophy. Both of us, we share the same educational vision and the same sense of mission. The use of ELM without this kind of harmony might result a tension between the instructors.

ELM also provides a general picture of the class's atmosphere, recognizing that student's reports of boredom, lack of engagement, frustration are actual reflection of my own effectiveness. Using the insights provided by ELM, Hanan and me, we can then detect situations in which new energies or a shift of teaching strategies are needed to re-engage the class, or an individual student, before the class, as a whole, or students, individually and to encourage them.

Discussion and Future Development and Research

This paper presents a multi-perspective journey into the challenges of implementing a pedagogical innovation. Hanan Yaniv, the developer of ELM, has been using ELM throughout his academic career in the past seven years and can coordinate this paper's findings with his previous work as a teacher and a researcher. Rivka Wandany, Hanan's co-instructor and co-researcher, has been introduced to ELM for the first time and her reflection represents her role as a new user.

There are three major conclusions that can be drawn from this semester's experience:

1. The need for a synchronized, harmonized educational vision between the two co-instructors.

   The use of ELM requires a solid vision of educational philosophy. The tool doesn't make much sense if the educational environment is not guided by a strong belief of Humanistic philosophy of any colour. Both Yaniv and Wadmany share the same educational vision, the same sense of mission and the same passion. Any attempt to use ELM without this kind of harmony might result in increased tension between the instructors.

2. The crucial importance of a real time monitor at the individual student level and at the whole classroom level.

   ELM can 'save' a student and can 'save' a course. Developing trends of low values with no annotations can point at attitude changes that can result in students' drifting into a 'transparency'. ELM provides a real-time probe into developing problems and triggers a timely intervention that can stop the decay.

3. The crucial impact of and real time monitoring of data-based intervention.

   The impact of any form of intervention should be studied in real time. The direction of that impact (if any) should be monitored; as unexpected drafts of unexpected events can lead is astray. ELM's real time monitoring of trends can show the impact of any intervention as soon as it can be noticeable and help the instructor steer it in the desired direction.

The issue of trustful atmosphere is critical as it affects the reliability of ELM. It appears that the less trustful the students were, the less they wanted to use ELM to share their difficulties, and therefore, the less feedback they will get, and the more frustrated they become.

The next phase in ELM development will focus on its reliability and validity with a large sample size. As well, research attention will be given to (1) development of training / support documents, and (2) the expectation of feedback / response in an online environment, probing the degree to which the use of social software (chat, email, Facebook, etc.) encourages immediate response and continuous interactions.

References

Bonk, C., Wisher, R., & Lee, J. 2004. Moderating learner-centered e-learning: Problems and solutions, benefits and implications. In *Online collaborative learning: Theory and practice*, ed. T. Roberts, 54 - 85. London: Information Science Publishing.

Crichton, S. & Kopp, G. 2009. The value of ejournals to support eportfolio development for Assessment in Teacher Education. Special Education – ePortfolios. *Canadian Journal of Teaching and Learning (CJLT)*, 34:3.

Crichton, S. Yaniv, H. 2011. *Impact of ELM on Professional Interaction in Preservice Education Courses. Towards a New Pedagogical Horizon with Educational Technology.* (In preparation)

Darling-Hammond, L. & Bransford, J. (Eds.). 2005. *Preparing teachers for a changing world: What teachers should learn and be able to do.* San Francisco, CA: Jossey-Bass.

Merriam, S. B. 1999. *Qualitative Research and Case Study Applications in Education.* San Francisco: Jossey-Bass.

Rogers, C. 1952. *On Becoming a person. Boston:* Houghton Mifflin.

Solomon, G. & Schrum. L. 2007. *Web 2.0: New tools, new schools.* Eugene, OR: ISTE - International Society for Technology in Education.

Wadmany, R., Levin, T. 2009. Changes in Instructional Practices in Technology-Enriched Classrooms and Student Views on Learning. *UCFV Research Review,* Vol. 2, Issue 3: 36 – 53.

Yaniv, H. 2008. ELM – Eye Light Monitor: Assessment in a World of Hybrid Values. i-manager's. *Journal on Educational Psychology,* 2(1): 60-69.

Yaniv, H., Wadmany, R. 2011. ELM: *Individual Digital Mentoring in Teacher Preparation.* Meital Ninth Conference, Tel-Aviv University, Tel-Aviv, Israel. June 28. (Refereed).