Teachers and Teacher Educators Learning Through Inquiry: International Perspectives

Edited by:
Pete Boyd & Agnieszka Szplit

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This book is dedicated to the memory
of our friend and colleague
Professor Carey Philpott

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Language correction: Pete Boyd

Publication financed by The Jan Kochanowski University, Kielce, Poland
(project number 613527)

Publisher: Wydawnictwo Attyka, www.attyka.net.pl

Kielce–Kraków 2017

ISBN 978-83-65644-28-2

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Prologue: The Teacher As Researcher

This text contributes to a long-standing international debate around the knowledge and expertise of teachers. It focuses on inquiry, but relates this strongly to pursuit of the most effective approach, or pedagogy, for initial teacher education and for the continued professional learning of teachers. It will be helpful to begin with a somewhat simplified overview of this debate. On one hand some observers consider that education should be treated in a similar way to the field of medicine and require teachers to 'implement evidence-based practice'. Other observers consider that education should be compared to the more complex, real world field of healthcare and require teachers to 'develop research-informed practice' (Philpott, 2017; Boyd, 2016). Whilst both of these perspectives value the contribution to evidence of large-scale randomised control trial research and meta-reviews of such research, the evidence-based perspective tends to see this as sufficient, whilst the research-informed perspective sees the additional need for teachers to be more directly involved in knowledge creation through professional inquiry and practitioner research.

The subsequent chapters in this text are authored by teacher educators and focus on teacher and teacher educator inquiry. They generally support the 'developing research-informed practice' side of the debate on teacher knowledge and expertise. The chapters provide insight into the breadth and richness of the international movement that supports the development of inquiry-based teachers. This inquiry-based teacher movement is not new. In a chapter of his classic text entitled 'The Teacher as Researcher', Lawrence Stenhouse argues that the outstanding characteristics of the extended professional include: 'a capacity for autonomous professional self-development through systematic self-study, through the study of the work of other teachers and through testing of ideas by classroom research procedures' (p.144). It may seem surprising that this quote is taken from Stenhouse's text 'An Introduction to Curriculum Research and Development' which was first published in 1975. The inquiry-based teacher or teacher researcher movement survives, and to some extent thrives, and yet, with the possible exception of Finland (Sahlberg & Hargreaves, 2011) it does not seem to have become explicitly and firmly established across national school systems.

The debate around the knowledge and expertise of teachers may be usefully considered to hinge on decisions about the curriculum of teacher education, and it is worth diverting for a moment to consider and be informed by current debates

on the school curriculum. In questioning development of the school curriculum a useful argument has been made from a social realist perspective which builds on the theoretical work of Emile Durkheim and Basil Bernstein. This argument proposes that there is useful cultural knowledge which children should come to know, but that this knowledge is fallible and contested, not least because it has been developed socially by groups, for example of researchers. The conclusion is that the school curriculum should provide access to this rich body of cultural knowledge but must also provide skills and dispositions towards questioning that body of cultural knowledge, understanding how it has been developed and how to develop new ideas (Young, 2008; Wheelahan, 2010). Based on this argument Wheelahan is particularly critical of vocational programmes in England designed for secondary students. She argues that these programmes currently deny access to theoretical knowledge for disadvantaged or working class children and that this subsequently prevents these children from participating fully in society by contributing to the 'conversation of society' (Wheelahan, 2010). Returning now to our primary concern for the curriculum of teacher education. It would seem somewhat hypocritical and inconsistent to call for a social realist perspective on the place of knowledge in the school curriculum, including vocational subjects, and not to also apply that to the debate around the teacher education curriculum. Some confused political policy-makers in education in England have promoted the idea that teaching is a practical craft that is best learned by observing experts and learning by doing. This has led to 'school-based' teacher 'training' routes that have been replacing teacher 'education' programmes. These school-based teacher training programmes have generally tended to minimise theoretical content in favour of developing the practical wisdom of beginning teachers. It is ironic that some observers and policy-makers have on the one hand argued for a school curriculum heavy with theoretical content and yet have argued for competence based practical wisdom to dominate professional 'training' programmes for teachers.

The key challenge for advocates of research-informed practice seems to be that of scaling up inquiry-based approaches. Developing teaching as an inquiry-based profession across a national system would probably require a commitment to research capacity building through Masters level qualifications for teachers. A commitment to teaching as a master level profession is already in place in many European countries, although in England a U-turn in policy in 2010 has all but halted progress towards its establishment. An inquiry-based profession would also require opportunities for teachers to participate in collaborative professional inquiry and practitioner research projects. Initial teacher education programmes and professional development opportunities for experienced teachers would be inquiry-based. More coherent and shared language of inquiry and ways of

collaborating in professional inquiry and practitioner research would need to be developed between school-based teacher researchers and higher education based teacher educator researchers. Writing 40 years ago Lawrence Stenhouse considers 'there are some signs of tension between the roles of teacher and researcher…it is worth facing these tensions and attempting to resolve them. For in the end it is difficult to see how teaching can be improved or how curricular proposals can be evaluated without self-monitoring on the part of teachers. A research tradition which is accessible to teachers and which feeds teaching must be created if education is to be significantly improved' (1975, p.165).

In chapter one, Hilary Constable creates a foundation for the subsequent chapters by examining the literature on 'practitioner research' and celebrating its variety of formats and purposes. She argues that practitioner research may be small-scale but real. Drawing on Carr and Kemmis she suggests that it can emulate research to promote a mixture of technical, practical and emancipatory outcomes. The identification and refinement of useful research questions is seen as a considerable challenge. First are the questions possible to answer in their current form? Second, what decisions will be made or at least informed as a result of this work?

In chapter two, Kate Wall and Elaine Hall use real world examples of their collaborative action research projects with teachers in England to illustrate three principles: Autonomy – the teacher knows which question to ask; Disturbance – good questions cause extra thinking; and Dialogue – ethical and robust research is communicated. They argue that the feedback loops created by the action research process helped the teachers to be reflective and strategic thinkers. They identify parallel pathways of metacognitive learning by students and by teacher researchers.

In chapter three, Rachel Lofthouse, Stefan McElwee, Claire King and Colin Lofthouse provide a critical perspective on the key features of lesson study by evaluating their real world application of different forms of lesson study in two schools in England. They argue, despite expressing some caveats about lesson study, that it can shift professional learning beyond the individual level and help to shape professional learning cultures in schools.

In chapter four, Carey Philpott critically engages with the literature on the characteristics of Professional Learning Communities (PLCs) and the Instructional or Teacher 'Rounds' that have been closely associated with their development. The potential benefits of such collaborative groups and activities are outlined, but this is followed by a formidable list of challenges in terms of developing effective PLCs. The risks identified include an over-emphasis on simplistic positivist measurement of learning, top down dissemination of 'research evidence', group think and the positioning of teachers as consumers rather than also as producers

of knowledge. The argument presented encourages the development of PLCs that are boundary-crossing to include other schools and perhaps also university education departments.

In chapter five, Jack Whitehead and Marie Huxtable consider a Living Theory approach to educational inquiry. In a Living Theory approach teachers ask questions of the kind: How do I improve what I am doing in my professional educational practice? Teachers using this values-based approach to professional inquiry and practitioner research aim to resolve tensions that may exist between their professional values and those that are externally imposed.

In chapter six, Pete Boyd and Liz White focus on teacher educators based in schools and in university departments. They argue that all teacher educators should be engaged in professional inquiry and those that are university-based should be engaged in practitioner research. The rationale presented is that effective teachers require essential research literacy skills and knowledge if they are to play their part in developing research-informed practice.

In chapter seven, Anja Swennen, Gerda Geerdink and Monique Volman present their research into the identities and professional pathways of 15 teacher educators based in universities of applied science in the Netherlands who completed a doctorate by part-time study at a research intensive university. Despite the huge commitment and effort required to successfully gain their doctorate these teacher educators did not pursue a new career pathway as research active academics but slipped back into the normative values and teaching focused values dominating their workplace departmental cultures. This suggests a lack of real value placed on researcher identity within the world of teacher education and a lack of connection between teaching and research within the field of teacher education.

In chapter eight, Leah Shagrir presents research on motivators and constraints for engagement in professional development, focused on research and scholarship, by teacher educators who are lecturers and university academics based in Israel. The study identifies personal, institutional and social factors influencing the engagement of teacher educators in professional development despite the context of heavy teaching workloads.

In chapter nine, Agnieszka Szplit explicitly addresses the potential synergy between what are often presented as two separate areas of teacher educator work – teaching and research. Focusing on synergy between teaching and research is relevant internationally but in the context of Poland, where teaching in higher education has not historically been given high priority, it is particularly pertinent. The chapter argues for the positive contribution to improving student experiences of practitioner research by teachers in higher education.

In chapter ten, Martijn Willemse and Fer Boei focus on research capacity building professional development for teacher educators in the Netherlands. The teacher educators are based in universities of applied science who are under increasing pressure to conduct and publish research and to supervise the research of their student teachers. The study identified three main findings: the need to define clearly what counts as practitioner research; the benefits of professional development involving practical hands-on research activities; and the need to ring-fence time for this work to support teacher educators in making it a priority.

In chapter eleven, Ruth Zuzovsky, Irit Levy-Feldman and Nir Michaeli evaluate the impact of developing professional learning communities (PLCs) involving 136 teacher educators based in a large teacher education college in Israel. The development of the PLCs did have considerable impact on collaboration and academic writing outputs but did not seem to have such a significant impact on developing researcher identity among these teacher educators. The study highlighted the affective issues in becoming a research active teacher educator alongside the cognitive and practical challenges.

In chapter twelve, David Powell focuses on the 'messiness' of action research by teacher educators and their student teachers. Messiness is taken to include the complexity, unpredictability, difficulty and dilemmas of pursuing collaborative practitioner inquiry. The challenges of such real world messiness are contrasted with the tidy kinds of accountability and measurement associated with quality assurance in our age of accountability.

In chapter thirteen, Josep Coral and Teresa Lleixà based in Catalonia, show how action research may form a pedagogical approach to advanced professional education. In their study of professional learning in Content and Language Integrated Learning (teaching a curriculum subject in a second language) the teachers follow cycles of classroom inquiry informed by theoretical inputs. The approach evaluated in this chapter guided teacher researchers through reasonably structured action research cycles but the emergent research design and responses to analysis of initial data helped to create a degree of control and ownership by the teachers.

We have recently lived through a thirty-year age of neoliberal high accountability contexts in schools and in higher education institutions (Ball, 2013; Biesta, 2010). The inquiry-based teacher movement requires high levels of collaboration and trust and achieving this seems to have been a particular challenge for the collective leadership of curriculum development in the current policy framework. A strong shift towards collective leadership is required if inquiry-based approaches are to thrive. This shift to collective leadership demands high levels of confidence and commitment from principals but also asks

that teachers 'manage up' to 'acquire support for the causes they are passionate about' (Hargreaves & Fullan, 2012). Inquiry-based teachers and teacher educators are required to pose and pursue tough educational questions and to commit to 'speaking truth to power'.

This text contributes to the international inquiry-based teacher movement. It provides insight into the varied ways by which international teacher educators adopt professional inquiry and practitioner research as central pillars of their professional identities and ongoing professional learning. Such inquiry-based teacher educators are able to adopt a pedagogy for teacher education and a strategy of modelling that help to develop inquiry-based beginning teachers who are ready to contribute in turn to collective leadership of curriculum development and school improvement.

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Practitioner Inquiry: Common Sense and Elusive

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Abstract

This chapter takes an overview of Practitioner Inquiry and its key points. The significant features, conceptual differences and arguments raised include: research, authority, action, public scrutiny and the disposition of the researcher together with critical consciousness. These arguments are sketched and discussed briefly. Sticking points in realising the aims and potential of Practitioner Inquiry are identified as: collective approaches, sustaining initiatives, the potential for incorporation and colonisation, conceptual and resource limits to approaches, paradigms, research questions, and knowing. Issues raised by these points are considered. The overview presents an even-handed assessment of different versions of Practitioner Inquiry and concludes that the locus of quality lies in the execution rather than the claim of each version.

Key words

practitioner inquiry, practitioner research, action research, teacher as researcher, educational change, incorporation, continuing professional development, research questions

Introduction

'Practitioner inquiry' is inquiry where practitioners investigate practice; that said, almost everything else about it is subject to debate, including its key features. Since its beginnings practitioner inquiry has grown in popularity and now is found in professional situations and universities world-wide. Unsurprisingly such a common practice encompasses a broad collection of activity and also a range of intention and outcome.

McNiff (2013) and Hopkins (2014) as well as Cochran-Smith and Lytle (1999b) point to the now widespread prevalence of practitioner research and its positive contribution to school improvement and, in Hopkins' case, to education system improvement. Practitioner inquiry appears to be common-sense but maybe it has only turned out to be so as it has become incorporated into educational and professional practice. Underlying the surface simplicity lie critical points and lively

differences of opinion. By 1999 Cochran-Smith and Lytle (1999b) had noted that teacher research had become so popular and yet varied that they were able to argue convincingly that it should be seen as a 'movement' not only because of the variety of manifestations but because the underpinning arguments for these versions differed.

Practitioner Research is a topic that is widely explored by authors. Some titles explicitly portray an angle or colour in the view to be presented by their authors, for example: *Passionate Enquiry and School Development: A Story about Teacher Action Research* (Dadds, 1995); Systemic *Action Research: A Strategy for Whole System Change* (Burns, 2007); *Researching Your Own Practice: The Discipline of Noticing* (Mason 2002); *Action research: a methodology for change and development*; (Somekh, 2006) and *Action Research: Living Theory* (Whitehead & McNiff, 2006). But necessarily, authors of all the books present some view of practitioner inquiry: tacitly in their recommendations for carrying out inquiries and explicitly in the form of arguments. Similarly, the authors in this book, by the varied research approaches and methods that they choose as well as the theorisations that they bring, present a range of views of practitioner inquiry in education.

Cochran-Smith and Lytle (1999b) summarise the unifying features as seeing teachers as 'knowers and thinkers' and identify as important strands: critical and democratic theory; commitment to progressive education and a challenge to the usefulness of research. They also note that teacher research can appear to shift shape.

> *Each constructs the role of teacher as knower and as agent in the classroom and in larger educational contexts. In addition, some of these traditions and projects carry with them distinctly critical views of education and of knowledge and power relations within it. What we are suggesting, then, is that the intellectual and educational projects that fuelled the current U.S. teacher researcher movement had in common a critique - either implicit or explicit - of prevailing concepts of the teacher as technician, consumer, receiver, transmitter, and implementor of other people's knowledge. (Cochran-Smith & Lytle, 1999, p.16)*

Emphasis, flavours and colours

Baumfield et al. (2013) provide a delightful comment on action research:

> *We have structured this book as if research was a fairly linear process, since a book that reflected the unpredictability of real life would be difficult to read. (Baumfield et al., 2013, p.137)*

As with a book on Action Research, so with a chapter: a characteristic of practitioner inquiry is the multidimensionality of the positions and arguments.

There are shades of opinion on almost all aspects: These differences might be described as spectra or scales, where an idea can be seen as essential at one end and optional at another; manifest in one way at one place and another elsewhere. Flavours and shades of emphasis are visible in the terms used for versions and varieties of practitioner inquiry. However, there are also limits: issues of fidelity, step-changes and cut-off points; what to one person is fundamental and without it the activity does not 'count', to another is merely desirable; what to one person is a pleasing addition is to another the whole point of the activity. And, it has to be acknowledged, there are contradictions. Furthermore the positions and arguments are not independent but pull at and influence each other or, like watercolour paint, bleed colour from one to another.

There is risk in this range and variety as summed up by Cochran-Smith and Lytle:

> *In this sense, the growth of the teacher research movement hinges on a paradox: As it is used in the service of more and more agendas and even institutionalized in certain contexts, it is in danger of becoming anything and everything (Cochran-Smith& Lytle, 1999a). As we know, however, anything and everything often lead in the end to nothing of consequence or power (1999, p17).*

Overall the conceptualisations of practitioner inquiry are reminiscent of the foundation concepts of chemistry: elements, mixtures and compounds. Some ideas are like elements: variously discrete or active in association with other ideas; other ideas are commonly mixed together and yet others are part of compounds and *necessarily* 'go with' and are shaped by other ideas. This chapter identifies some of the main ideas and debates which form the background to practitioner inquiry and selects some of them for further review. And it turns out, just like real life, practitioner inquiry is messy, purposeful, contradictory, enlightening and confusing.

Neither is practitioner inquiry discrete, as will be seen, practitioner inquiry merges into other related ideas including professional and organisational development, educational improvement and research itself. Nor is it confined to education, but is demonstrably present in health, police, business and social work. This book is concerned with practitioner inquiry in education and this chapter will largely address that context.

In this chapter the term 'practitioner inquiry' is being used broadly, as an umbrella term, encompassing a range of practices. The extent to which other terms are appropriate or accurate or interchangeable is not merely a matter of naming but involves analysis in which the stance of the researcher, the place of authority, the socio-political context, and the place of action in the research are all significant elements.

Practitioner Research

A point of agreement about practitioner inquiry is that it is practitioners who do it; whether or not it is research is another question. One point of discussion then is the extent to which practitioner research can or does claim to be research and whether or not it is 'proper' research.

Three issues are:

- What counts as research?
- How could or even should practitioner research relate to other research?
- Is practitioner research in any way different from other research?

There are two lines of argument here. The first is that practitioner research claims to be just that: research by practitioners. In making that claim it subject to the same tests for truth and quality as other any other research in or about similar problems or settings. The second is that practitioner research is different, more or less, only in size or scope it and on this basis, is sometimes described as small-scale research. In this case the question '*is it research?'* can be answered by arguing that if an activity is subject to the same quality controls as other research and passes those tests then it is acceptable as research or, possibly even, good. (Miles et al., 2013)

Until recently Practitioner research has not fared well in the academy, being open to the criticisms that it is often conceptually and methodologically weak, criticisms that are sometimes true. McNiff refers to some of these as "a teenager form of action research" (McNiff, 2013, p.6). As well as elaborating the argument, Labaree (1998) makes a powerful analysis of the low esteem in which even mainstream educational research is held by other university departments, policy makers and the general public. In a context where even conventional educational research has to struggle for recognition it is unsurprising that practitioner research is not always welcomed.

Authority

To be 'research' practitioner research must on this argument subscribe to tests for research. However, the tests, the rule book, was authored. Behind claims to be simply a version of research stands a discussion about authority: who decides whether or not it is research?

Historically, academic research has been owned by the academy, effectively universities. From the academy come not only those tests for research: mapping to a context of what has gone before (literature), conceptual underpinning (theory), appropriate methods (reliability, validity, sample size) which award work the title

'research', but also control of the gateway to making quality controlled findings respectably public, publication in academic journals. Custom and practice left the tests of research in the hands of an academic elite.

At first glance this is not at all unreasonable, after all expertise in research *does* lie in universities. It is when the idea is re-cast as having the authority to create new knowledge that it is more unsettling. Neither is it necessary to see this as a conspiracy to exclude practitioners from research although there are people who have argued this.

Quite apart from the quality-of-research argument, successful and respected researchers have contended that whilst practitioner research may be a nice idea, it is too great a demand (Macintyre, 1997). A thorough understanding of the real challenges of doing research at all, the skill base and experience needed as well as time to carry out research, let alone trying to do it in parallel with classroom practice, are so great that they are reason enough to decide against researching practice as a practitioner. A more challenging view is presented by Davies who argues, amongst a series of iconoclastic pieces, that giving teachers access to research could do more harm than good (Davies, 2016, http://garydavies.org).

A second line of argument offers a different answer to the question of the research status of practitioner research. The line of argument here is that rather than being a poor relation of 'proper' research, too small or idiosyncratic or otherwise weak to make the cut, it is distinctive, different in kind and of equal value. For example, McNiff (2013) maintains that practitioner research makes a third paradigm alongside positivist and interpretivist social research and further argues that it has become accepted as such.

The challenges to authority included in practitioner research can be far more fundamental than a discussion about whether a research report is good enough for publication. What advocates of practitioner research saw was that what was needed to achieve publication was passing tests set by the academy. That who was authorised to create new knowledge, to ask research questions, was subject to tacit social stratification in which universities were the authority and furthermore what was deemed to be knowledge-about-teaching was not defined by teachers.

Action Research

A widespread view of practitioner research is of repeated cycles of activity: identifying a concern, investigating aspects of it, acting to improve practice and evaluating the outcome. The term 'Action Research' draws attention to this combination and sometimes the term is used interchangeably, almost synonymously, with practitioner research.

A key feature is that the cycle recurs and issues are addressed iteratively in successive cycles: this idea is commonly represented in charts. It is rare for more than one or two cycles to be completed although an honourable exception is Inoue (2014), who clearly demonstrates the benefits added by repetition.

These diagrammatic representations of cycles explicitly include action in each cycle (but oddly not often knowledge, a point I shall return to). Mason notes that diagrammatic representations of action research can be misleading if they are taken to be a prescription to *"try to proceed from one stage to another"*, noting that it is more realistic to "*internalise those stages and learn to recognise when a change of activity might be helpful"* (Mason, p.55).

In general, practitioner inquiry is directed towards improving practice and action is desirable *at some* stage. Action on this view is desirable but not immediately essential. This pragmatic view is taken by Baumfield et al. (2013) who note that, in practical terms, researchers may have to make hard choices since the length of time for a research project may not allow for all stages of an inquiry and include both research and action. They also allow that gaining understanding may be a more pressing priority than action. Baumfield et al keep the overall disposition of practitioner research *towards* improvement but allow that immediate questions may address either understanding (What's going on here?) or action (What happens if?).

Another and different view is that all research is directed to creating new knowledge but that action is intrinsic to improving practice: action research is specifically directed to improving practice here and now and, without action it is not action research. Here it would not be appropriate to use the term action research as synonymous with practitioner inquiry.

There are further conceptual differences. One position *requires* action as *a means of* research, essentially a phenomenological approach, where the action itself is the focus of the research and where understanding is developed by taking action, by 'pushing into the experience': the action and the investigation are parts one of another, reciprocally revealing issues. One may study jumping in a swimming pool with a big splash by jumping in a swimming pool with a big splash. In this view attempting before-and-after studies is inauthentic - change is not exactly a goal, more a condition of life.

Emancipatory action research occupies another position. Here researchers take part in a collective exploration where the actor/researchers are part of conscienization and emancipation. The action in this version of action research is emancipatory in itself and has an emancipatory purpose.

Action then can be presented as an option, an intrinsic part of the research or an intrinsic part of the purpose. Change (for the better of some aspect of practice) can be seen as *the* goal, a goal, a possibility or premature until we can

work out what's happening; it can also be seen as the way of understanding or a help to understanding.

Made Public

Stenhouse offered a British Education Research Association annual conference the definition of research as *'systematic inquiry made public'* (Stenhouse, 1980, p.1), a definition and related discussion (Skilbeck, 1983; Kemmis, 1983), which has retained resonance in practitioner research.

The phrase 'made public' has been interpreted diversely. Made public is used with the methodological sense of 'open to scrutiny', a check on the veracity of the work. Another meaning concerns a sense of audience to whom findings will be communicated and 'made public' A further turn of interpretation migrates 'making public' into dissemination and/or publication; the former emphasising practical and immediate value to fellow professionals and the latter academic credibility.

'Made public' is also used in the sense of 'carried out in public' the research is seen to need, even require, a social setting to support the work, to help identify assumptions hidden (at least temporarily) from the actors and researchers and to formulate questions. This is commonly described as a critical community and members are critical friends.

However critical consciousness makes a much more fundamental demand: that it is to the community that the actor researcher owes duty and allegiance in the process of continuous conscienization. A much more demanding idea.

Critical Consciousness

Stenhouse's seminal work *An Introduction to Curriculum Research and Developmen*t seemingly presented a straightforward argument: that educational questions should come from teachers, and that as well as being the instigators of research teachers should themselves pursue the questions and become researchers. In addition, he saw generating and pursuing those questions as an intrinsic part of being a professional (Stenhouse, 1975). This line of reasoning contains challenges to authority; it states that teachers are competent to ask questions about practice and that arguably they are in a better place to ask and pursue them than academics. Stenhouse argued that the academy was there to help teachers not to overpower them: turning the historical arrangement upside down, revolutionary.

These questions are not simply technical questions but moral questions; about what teachers should be doing. *An Introduction to Curriculum Research and Development* arose from one such project –the Nuffield Humanities Curriculum Project (Stenhouse, 1968)- that positioned the teacher, not as the purveyor of ready-made opinions to be adopted by school students, but as facilitators of rational discussion in which students would use evidence to come to their own conclusions. High school students were positioned as inquirers into complex social issues such as race by providing them with a selection of mainly printed materials and the teacher had the task of chairing the ensuing discussion, and remaining neutral. This might seem to be a reasonable proposition: it is similar in many ways to more recent initiatives such as philosophy for children and young people (Anderson, 2016) but it was wildly ambitious for its time. The teachers in the Humanities Curriculum Project found it underminingly difficult and this became the platform for the idea of 'not-knowing' being a legitimate, even ideal, professional stance and of openness to inquiry into teaching and learning being a central feature of the work of teachers. This disposition, to make intelligent investigations the response to teaching challenges, was further developed in the Ford Teaching Project (Elliott & Adelman, 1983).

Ambitious or not, the line of reasoning takes us to considering critical consciousness. Critical consciousness stems from authentic moral self-motivation that underlies and empowers participants. This swathe of argument rests on neo/post-Marxist scholarship and, typically, the examples given by Freire and Habermas use a hermeneutic style of investigation consisting of cycles of action leading to increasing consciousness or understanding (Freire, 1970, 1974; Habermas, 1981). Here the action in action research has an emancipatory purpose. Researchers take part in a collective exploration where the actor/researchers are part of conscienization and emancipation. In this version managing to respect and stay with the authentic issues and questions raised by practitioners is of the utmost importance.

The Researcher

Practitioner research is commonly taken to imply research into *his/her/their own* practice although the wilier wording used in the introduction to this chapter – practitioners investigate practice- allows some flexibility here, effectively practitioners are 'doing research'.

Practitioner inquiry implies the aim of improving practice. A more penetrating way of looking at this is to focus on what the researcher is supposed to be experiencing and intending, as well as doing. At bottom the practitioner is 'making

(new) sense of' the situation. A broad swathe of argument places the researcher in a critical setting and the research activity as *praxis*, seeking *phronesis* (practical wisdom) (Kemmis, 1983). In critical action-research the change intended is to the consciousness of the actor. In an extensive body of work Whitehead argues for a disposition and actions which are moral as much as research activities and focuses on a critical exploration of living theory, that is: what it is to act in and to research in an educational (sic) way. For Whitehead this includes embracing contradictions in research, as well as in teaching, as realities (Whitehead, 2016, Whitehead & McNiff, 2006).

All this is a long way intellectually from a piece of 'small-scale' research, which can be carried out by a practitioner and which may lead to greater understanding, suggest a line of action or evaluate an intervention and, most importantly, without any explicit ideological commitment other than to pragmatism.

Conceptual Differences

An internet search using *"What is action research?"* threw up the following as the first entry:

> *Practitioners who engage in action research inevitably find it to be an empowering experience. Action research has this positive effect for many reasons. (Sagor ASCD)*

A rather startling claim in view of the range of possibility demonstrated in the preceding sections of this chapter. Significant conceptual differences underlie these different manifestations. Yet this empowerment is what action research is known for, although by no means always, let alone 'inevitably', is it achieved nor frankly always even intended.

Carr and Kemmis (1986) offered an authoritative way of configuring and bringing order to the gamut of possibility, classifying action research in terms of three tiers of politico social positioning: technical, practical and emancipatory (Table 1).

Interest	Knowledge	Medium	Science
Technical	Instrumental (causal explanation)	Work	Empirical-analytic or natural sciences
Practical	Practical (Understanding)	Language	Hermeneutic or 'interpretive' sciences
Emancipatory	Emancipatory (reflection)	Power	Critical sciences

Table 1. Positioning Action Research (Carr & Kemmis, 1986, p.136)

Fullan (2007) identifies 'fidelity' and 'mutual adaptation' as features of educational change – fidelity means 'faithful to': essentially if an innovation is not 'faithful to' critical aspects then it has not been implemented, something else has been implemented. Mutual adaptation is the expectation, possibly demand, that actors adapt a change to suit their circumstances. Most educational changes involve elements which require fidelity and elements which are open to or demand mutual adaptation, although some are less negotiable than others and it is necessary to be discriminating in the judgment of which are which (see Constable & Long, 1991; Long & Constable, 1992). Action research has considerable space for mutual adaptation but this is not unlimited.

These two frameworks of analysis -Fullan and Carr and Kemmis- work well together. By identifying what is considered non-negotiable: asking what are the stances and action to which an action researcher must be faithful, versions of practitioner research can be allocated to Carr and Kemmis's tiers (1986, Table 1) imposing some order on the range of versions.

The three tiers can be seen as categories in which tests for fidelity show where the version is intended to be situated.

Outcomes: Celebrations and Disappointments

Practitioner inquiry is now both more and less than might have been envisaged in the 1970s. Many challenges remain and others have become more visible.

On the 'more' side, practitioner inquiry is geographically widespread. It is professionally widespread as well: for example in education, policing, business, nursing and social work; it has become recognised as a structure for continuing professional development and as a skeleton for academic study. In some cases it has become acceptable as a contribution to academic research. Practitioner inquiry has allowed more people to contribute to school and curriculum development. It has brought joy and delight, even personal empowerment, to some and given a mature definition to professionalism: *'a disposition to examine one's own practice systematically'* (Stenhouse, 1975, p.156).

On the 'less' side Practitioner Research, has not shown in practice all of the benefits promoted on its behalf. Not surprising, there were very many hopes and aspirations. Practitioner research has received criticism that it is weak even in its own terms –teleological approaches, poor methodology and weak analysis and unfounded conclusions (Labaree, 1998). Hopes included that practitioner research would contribute to the body of research available on education, the idea being that many small studies could add up or grow into something more substantial. Practitioner Research has not connected well with mainstream

educational research in universities nor, in England, with evidence based policy. On size and scope grounds alone systematic reviewing (see: EPPI, 2016) is very unlikely to pick up and include practitioner research, neither do common methods of practitioner inquiry lend themselves to the protocols developed for these reviews. Other ways to synthesise large numbers of small scale research studies are still being explored.

Practitioner research has promised much in terms of institutional or functional-group development and although it may not have quite become the continuing, continuous and incorporated practice that was envisaged it does seem to have been part of unfreezing responses to needs for school improvement and professional development. Arguably the movement, including its sticking points, has catalysed developments and has made possible or supported explorations of other forms of professional and organisational development such as lesson study (Arani, 2010), partnerships with stakeholders (Kershner et al., 2013), organisational development, and collaborative research with universities Boyd (2014).

Ideal Types and Unfinished business

Sometimes arguments and particularly diagrams are taken as prescriptions, instructions on what to do, whereas they are based on 'ideal types' in the Weberian meaning –based on ideas (see: Kim, 2012). Notably diagrams of cycles are clearly unlikely to be sufficiently subtle to be taken as a detailed prescription.

It is, of course, more common than not to find that realisation falls short of aspiration but where this happens repeatedly there are critical points to be identified and addressed. The remainder of this chapter discusses on what may lie behind some of the issues arising from the previous sections.

Professional and Organisational Development

An important outcome of action research is professional or organisational development. This is a powerful argument in support but raises the question of what standards apply; in what way is its quality to be shown: professional development or research; or what is the way to claim both.

Sustained

From as long ago as Lewin and Stenhouse, proposals consistently envisage practitioner inquiry becoming sustained, indeed, the aim is to become so. Likewise, Freire's conscientization aims at a permanent change in quality of critical consciousness. Sometimes these aims may be achieved but what is more visible are reports of early implementation. Fullan draws attention to the over

representation of early stages of educational change in practice and in research: Initiation and Implementation. The final stage –incorporation in which a change has become 'what we do round here' is harder to find and similarly much less researched. It may be needful to recognise that practitioner inquiry suffers intellectual entropy and continuous re-instatement may be necessary to reach a steady state.

Collective Approach

Undoubtedly collectivity is involved in sustaining practitioner inquiry and in all versions of practitioner research some form of collective or group approach is seen as an advantage; in some it is more than that, and it is seen as essential. Pragmatically, any single individual is in a weak position to implement an educational change let alone change the climate or culture of a school. In those arguments for practitioner research which rest on critical theory or ideas of teacher as researcher the collective setting is an essential dimension. (see: Cochran –Smith & Lytle, 1999a)

With the best of intentions, the collective dimension of the challenge can be lost. Where practitioner research has been incorporated into university programmes it has been powerfully shaped by its setting. Academic qualifications are characteristically awarded to individuals not teams and the standards for higher degrees powerfully influence the practitioner research that is supported. Without additional, effort practitioner research in such a context does not support group and collective approaches nor the iteration of repeated cycles. In relation to school and system improvement this point can be a stumbling block.

The advantages of working collectively continues to be addressed imaginatively sometimes in the context of higher degrees and sometimes in other supportive structures (see, for example: Kershner, et al., 2013; Boyd, 2014; Hopkins, 2014; SUPI, 2016; Wilkinson, 2015).

Incorporation and Colonisation

The context of practitioner research has changed as globalisation has proceeded and governments have become more concerned about international comparisons and seek to mandate educational achievement. Hopkins (2014) has been a significant figure in practitioner research for several decades and traces the renewals and developments of teacher-research through five editions of his book, drawing on the development of his own views and also on experience of working in several educational settings including government advisor. He notes the gradual incorporation of practitioner inquiry into systems. A trend has been an increasing attention to the school and the school system:

"... the mid-1980s is that teacher-researchers have to increasingly take a whole school and at times systemic perspective. They now have to interpret and adapt policy to their own teaching situation, and link their classroom research work to that of other colleagues and whole school priorities as well as to the process of teaching and learning. (Hopkins, 2014, p. xiii)

Hopkins identifies the need to attend to the policy and political context with moral purpose:

> *Teachers are too often the servants of heads, advisers, researchers, textbooks, curriculum developers, examination boards or the ministry of education among others. By adopting a research stance, teachers are liberating themselves from the control and command situations they often find themselves in. (Hopkins, 2014, p.2)*

But also notes that policy implementation has incorporated forms of practitioner Inquiry in *'a concerted attempt to shift the English education system from informed prescription (...) to informed professionalism* (Hopkins, 2014, p.4).

Hopkins is upbeat: for him inclusion of practitioner inquiry in the mainstream of schooling policy and leadership is progress:

> *One of the most dominant changes observed since then [first edition 1985] is the increase in centralised policy making; this, however, far from undermining the role of 'teacher-researcher' has, in my opinion, made such a professional ethic all the more necessary.* (Hopkins 2014, p. xiii)

McNiff (2013) also traces the development of her own views and notes the changes towards a focus on the practitioner in their specific organisation developmental context. McNiff identifies that the setting of higher education has been particularly favourable for the expansion of practitioner inquiry.

McNiff differs from Hopkins in being doubtful about the relationship of practitioner research and political context. She identifies the potential for colonisation and further speculates that:

> *... official agencies permit action research because it suits their agendas of command and control* (McNiff, 2013, p.9)

and refers to

> *... a high profile UK initiative in which teachers could receive funding to do action research in their classroom on condition that learners achieved dedicated outcomes* (McNiff, 2013, p.10)

What is important is to hold in view and inspect, at the same time, the potential for both good and harm.

Methodological Issues

Conceptual frameworks and justifications form the backbone of practitioner research but flesh needs to be put on these bones. It is not the intention in this chapter to rehearse methodological concerns comprehensively, instead four selected issues will be addressed: methodological limits; paradigms, research questions and lastly knowledge.

Limits

Stenhouse used the phrase *systematic enquiry made public* that left the argument as to broad approaches and detailed methods to be justified by the needs of the inquiry. This eclectic view is broadly taken by most but does not mean that anything goes. Within that overall encapsulation a variety of methodological approaches are open to use and similarly open to being coloured by views of the main purposes and desirable outcomes of practitioner research. Further some shades of practitioner research strongly imply methods of investigation, obvious examples being the phenomenological approach suggested by the action in some versions of action research; classroom observation as a way into exploring theories-in-action and talk of emancipatory outcomes would mean little without using criticality. Studies that are positioned as research, albeit small-scale, call for the standards appropriate to any social research including significant attention to ethics and positionality.

A further limit is the practical constraint of resources –principally time and researcher expertise. In this it is recognised that within the constraints of a project there may be time for only part of what is desirable. Practitioner researchers have to make decisions about where it will be worthwhile to spend that most precious resource --their time.

Paradigms

I remain completely unconvinced by claims that it is necessary or even desirable to identify *oneself with* a research paradigm; this is to build on sand. One may need to be aware of research paradigms but even that puts the cart before the horse. As a practitioner researcher, the significant point here is to be fully aware of what sort of knowledge is sought as well as to be critically self-aware of what approach one is adopting and what sort of knowledge that may or may not support. It is of course important to note one's predispositions and prejudices, along with

noting one's positionality. As in positionality, where, for instance, the inquiry of a principal or other senior leader must take account of the power relationship between leaders and others involved in the inquiry, being aware that one is afraid of arithmetic allows reflection on one's potential for unthinking adoption of non-positivist research approaches.

Raising awareness simultaneously of both what information is sought and of what sorts of questions lead to that is the significantly important matter. The methodological approach follows the questions; it is these that set the context for methods, not starting with a choice of paradigm, or worse, identifying oneself as *an interpretivist*.

Research Questions

Settling on research questions is the threshold to deciding on the research approach and methods. Research questions are correctly identified as fundamental to constructing a useful inquiry but that does not altogether uncover what work it is that a research question is doing. Practical challenges include whether a question can be answered at all or manageable in the context and constraints of this study –usually elapsed time and researcher expertise.

Bearing in mind the short time frame of much practitioner research it may be possible to complete only a segment of a cycle, in which case completing or researching action becomes problematic. Where 'action' is squeezed out it may remain as a goal for the rest of the cycle, part of a general intention to improve some aspect of practice, alternatively it may be completely displaced by a much more pressing need. for instance, to understand. Here 'action' is to some extent becoming optional and therefore problematic for some versions of practitioner research.

Baumfield et al. (2013) tacitly deal with this and specifically link the decisions with tools for investigation:

> *A practitioner needs to decide whether they are investigating an existing phenomenon (what's going on?) or whether they are going to instigate a change and explore the impact (what happens if? (Baumfield et al., 2013, p.39)*

By defining these two main categories, *What's going on* and *What happens if?*, they allow practitioner researchers to be realistic about what can be accomplished in the time frame they have.

Baumfield et al also deal with the taxing challenge of collecting data before the research question is finalised. They note that

> *a general observation or video taken early in the year can be re-analysed to yield specific data and a particular advantage of the early baseline is that you have the maximum gap between your pre-and post-tests (p.112).*

This pragmatic approach is advantageous in that opportunistic data collection can minimise disruption but is not a recommendation to rush to data collection without serious attention to a structured question, more that research questions take time to finalise. Sorting out the questions is worth spending time on.

One test is to ask whether a question *in its current form* can be answered at all. The wording of research questions defines what kind of answer will be produced. Another way of pulling questions into shape comes from revisiting the broader context –*What decisions will be made or at least informed as a result of this work?*

More significantly, and beyond practical challenges, it is important to register that devising the questions is not a neutral or a value free activity. At best research questions are researchable versions of professional concerns but there is a particular tension in this process. Even for experienced researchers, initial questions generally need work to get them to a researchable state; more so for novices. It is paradoxical that authenticity requires staying with the original concern of the practitioners, whereas shaping the concern to be researchable necessarily structures the question. It is easy for concerns to be hijacked deliberately; take for example McNiff's example of a project in which the researchers had to achieve pre-determined achievement outcomes for the learners. Neither does it need outsiders to impose their view to set things off in strange directions, it is astoundingly easy for concerns become distorted as they are cut to fit the constraints of time and resource and it is easy for practitioners to sabotage their own concern by second guessing what counts as research.

Daly, a university lecturer working with teachers, enrolled on an award bearing programme tackled the issue directly by intervening with disruptive dialogue to help teachers revisit their research questions. (Daly, 2016; Table 2)

One example is:

The concern	The research proposal as expressed originally	Daly's intervention	Worth asking? Proposal after Daly's intervention
Many of my 3-4 year old pupils have very limited language. They are not able to respond to simple questions about something we've talked about on the carpet	Develop a speaking frame with oral sentence starters to help pupils learn how to respond. Observe what happens during teacher-pupil interaction		How can I develop the role-play area of my classroom to make it more supportive of pupil-pupil talk and adult-pupil interaction?

Table 2. An Intervention to Develop a Teacher Inquiry Question (Daly, 2016)

What Wilkinson, principal of a large high school, experienced was the challenge felt by teachers to their agency. One teacher explained to her:

> *"Everything is top down, even if it comes from the Ofsted report and even if it comes from the school development plan, it is not* ***ours****." (Wilkinson, 2016b)*

In response to that concern Wilkinson asked teachers what they wanted to know ***for themselves*** and then, whilst also building the research context, allowed time for questions to emerge, ***waiting as long as it took.***

It is worth spending the time and effort needed to make sure that questions are worthwhile as well as answerable.

Knowledge

It is of the essence that research makes an unequivocal connection with knowledge. Baumfield et al argue that previously *insufficient attention has been given to the need to evaluate the nature of the knowledge created by practitioners* (2013 pix).

Bolster puts things differently *"In other words researchers and school teachers adopt radically different sets of assumptions about how to conceptualise the teaching process. As a result the conclusions of much formal research on teaching appear irrelevant to classroom teachers –not necessarily wrong, just not very sensible or useful".* (Bolster, 1983, p.294)

More than one way of knowing must be accommodated.

Boyd and Bloxham (2014) directly address the relationship of different kinds of knowledge by developing a metaphor for teachers' professional learning as interplay between two interconnected domains of knowledge. Practical wisdom is seen as a horizontal domain which foregrounds situated, socially held, ways of working which varies from one school or even teaching-team to another. Public knowledge is seen as a vertical domain which foregrounds published theory, research, professional guidance and policy and is hierarchically organised through peer review and different status of publication. Interplay between the two domains of knowledge is intended to capture the dynamic learning of teachers and the power relationships involved in interactions between these different kinds of knowledge.

Somewhat oddly, diagrammatic representations of action research cycles can be altogether inexplicit about this matter with no clear view as to what is supposed to be going on in terms of 'knowing', leaving researchers rather wandering in the wilderness. Challengingly Lewin re-enters the debate by recombining in action research the two imperatives of change and understanding and is attributed with summing these up with the pithy remark: *If you want to truly understand something, try to change it* (Lewin *in* Tolman, 1996)

The logic of practitioner research is that it is well suited to exploring practical knowledge; more of a challenge is an authentic relationship with public knowledge (see: Moss, 2015). Joram (2007) calls these *'clashing epistemologies'*.

Conclusion

There we have it then, practitioner research can be: real research, real research but small, a process which emulates research to promote professional development, a means of curriculum development or promoting change and/or a critical stance devoted to equality and justice. All of these are arguable.

What counts as quality lies not in its label, nor in a predefined cycle nor in prescribed or proscribed research approaches but in how well the work fulfils its stated aim. The claim to quality and authenticity has to be made in each and every piece of work. The sharper the blade on the handle of practitioner inquiry the more work it can do and the more effectively but it is as well to remember that, as with any powerful tool, practitioner inquiry can be misused, hijacked and subverted, as well as being used for good.

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2

The Teacher in Teacher-Practitioner Research: Three Principles of Inquiry

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Abstract:

This chapter will distil three underlying principles of teacher practitioner research: autonomy; disturbance; and dialogue. These principles have emerged from a range of projects we have undertaken in partnership with teachers at all levels of education. This distillation is not so much about the details of the 'how' of teachers' research into learning and teaching in their own contexts - we (and many others) have written about this elsewhere – but rather about where the questions come from and how meaning is created and communicated. It is about the robust voices of teachers, and the diversity and richness of their research as harnessed through the process of practitioner enquiry. We will therefore explore how meaning is created and communicated by teachers involved and use the principles as a lynch-pin through which we explore their professional learning. The chapter will include some background to explain how we have worked with teachers, as well as narrative, case examples and analysis to illustrate important aspects of an inquiry approach. Most importantly, we'll include as many voices from our partnerships as possible to reflect the collaboration that made this learning possible.

Keywords:

Inquiry, learning, autonomy, dialogue, disturbance

Introduction

In 1904 Dewey first discussed the importance of teachers engaging in pedagogic enquiry to fully engage with processes and outcomes in their classrooms. Since then the concept has been in and out of fashion and more or less tied up with the concept of the research engaged practitioner. Underpinning these debates has often been an assumption that the practitioners' enquiry will lead to an engagement with research as a means to generate answers to questions (Nias & Groundwater-Smith, 1988). This could be research-informed and/or involve research processes on the part of the practitioner (Cordingley 2015, Hall, 2009). For many this position naturally involves the participation of university academics

to facilitate this engagement (Baumfield & Butterworth 2007; McLaughlin & Black-Hawkins, 2004). Models of teacher practitioner research can be largely traced back to the work of Stenhouse (1975) and as a result over recent years there has been sustained interest in the process and impact of developing a research-engaged teaching profession. Completeing a systematic review on the topic, Dagenais et al. (2012) found that practitioners with an inquiry standpoint were more likely to have positive views of research and therefore were more likely to use it to inform their practice. In the same vein, McLaughlin and colleagues (2004) state three overlapping purposes evident in the teacher research tradition: (1) research and enquiry undertaken for primarily personal purposes; (2) research and enquiry undertaken for primarily political purposes; and (3) research and enquiry undertaken for primarily school improvement purposes. Where teachers are involved in these kinds of research engaged practices then the teachers can be seen to generate a more sophisticated and metacognitive (Wall & Hall, 2016) understanding of the ecology of learning, develop cultures of risk taking that move practice forwards, accept challenge and change, facilitate the change processes for others and develop an 'ecological agency' that is catalytic of change (Leat et al., 2014, p.8). But what does the process of facilitating this type of working look like?

This chapter focuses on how these ways of working manifest in real life practitioner inquiry projects. It will draw on what we have learned from working in partnership with teacher-researchers in schools, colleges and universities. As context, we are both teachers by background who started off researching our own practice. Now based in higher education institutions, we have jointly and independently undertaken a myriad of different education research projects over the last 15 to 20 years. Our experience spans a range of different methodologies, but by far our favourite thing to do is work in partnership with teacher-researchers; closing the gap back to our own practice experience, so to speak. We will focus on what we have learned from across this experience, and as such will be a reflection of our underlying principles of teacher practitioner research. These can be summarised as:

1. The Principle of Autonomy: the teacher knows which question to ask
    a. Novice researchers may need assistance with methods but *they* still get to choose how to ask their inquiry question,
    b. Teachers know what impact is and they get to say when/if the question is answered satisfactorily,
    c. Only the enquirer can answer the question 'why did I want to know that?'

2. The Principle of Disturbance: good questions cause extra thinking
    a. Cycles of inquiry are set off by success and failure in research,

b. The complexity and connections in classrooms start to become more obvious,
c. All learners (students, teachers, managers and community) tend to become more metacognitive.

3. The Principle of Dialogue: ethical and robust research is communicated
   a. Especially when it hasn't worked as planned,
   b. Particularly when all participants have a say,
   c. Counter intuitively, communication is *even better* across contexts.

The chapter will begin by providing some background information on key projects exemplifying the process undertaken by the partners in operationalizing a teacher practitioner research methodology. In particular, a focus will be on the balancing act between the roles and responsibilities of practitioners and researchers when undertaking a partnership approach to research about practice. This will allow us to exemplify the principle of autonomy. Building on this, we will move to explore the intent with which projects like this are participated in and undertaken. Asking questions about how this influences the teacher's engagement with the research process. We will show how inquiry breeds further inquiry and, as a result, how participants need to accept feelings of dissonance; therefore enacting the principle of disturbance as a force to strive for improvement. Finally we will explore the principle of dialogue, suggesting that these processes are best not undertaken in isolation and the ways in which operating in dialogue with other inquirers is supportive of professional learning. This will allow us to demonstrate the importance of protected space and time for any of these principles to take effect. Of paramount importance to the discussion will be the voice of the teachers involved in these projects and their voices as represented in their write ups of their inquiries. With this in mind, and as a commitment to true partnership working, all schools and teachers are named throughout

The importance of agreeing how

Co-constructed understandings of pedagogy and what effective learning looks like have emerged from three research projects: (1) the Learning to Learn (L2L) in Schools and (2) Learning to Learn in Further Education (FE) Projects coordinated by the independent UK charity, the Campaign for Learning (Higgins et al. 2007; Wall et al. 2010); and (3) the Equal Acclaim for Teaching Excellence (EQUATE) project funded by the University of Newcastle (Robson et al., 2010). All were run by researchers originally allied to the Research Centre for Learning and Teaching at Newcastle

University. These projects all used practitioner inquiry methodologies (Baumfield et al., 2009) and involved teachers from primary schools; secondary schools; special schools; further education colleges and universities in a model of school-university partnership (McLaughlin et al., 2008). All three comprised one of the only practitioner networks in England to include all sectors of the education system from early years through to postgraduate educators. These projects rested upon an approach to research and knowledge construction which emphasises partnership, trust and complementary role undertaken collaboratively by researchers, local authorities, schools and colleges. As such it represents part of a developing trajectory of a dispersed research-informed practice community (Lieberman & Grolnick, 1996). Full project reports, case studies and posters from the projects are available on the project pages of the Campaign for Learning's website: https://goo.gl/p6D8Th).

The structure of the projects was specifically designed to privilege opportunities for teachers to learn from each other through dialogue (Baumfield, et al., 2008; 2012). The traditional research model of central control by the University, of topic, research questions and methods, was dispensed with for two reasons: the motivation of teachers to keep engaged in cycles of inquiry requires them to have some ownership of the process (Day, et al., 2006) and (more crucially) teachers themselves have the most intimate knowledge of the pressing questions (Lieberman et al., 1988). This meant that the locus of control was with the teachers to choose a topic area, which was relevant to the project as well as relevant to the learning agendas important in their context. The University team retained a role in framing the structure and outcomes (Bernstein, 1990) of the project through choosing activities and inputs, organising meetings and taking the lead on the publications of the project. However, throughout we privileged the teachers' voice in case studies and prioritised joint publications (for example, Hall et al., 2005; Wall et al., 2009) thus representing the authentic partnership that underpinned the process. Indeed, within this chapter schools and practitioners are named to represent the fundamental role they played in the success and outcomes of this project. It would be unethical to anonymise them and take the full credit for ourselves.

The model of practitioner inquiry adopted in these projects involved cycles of practitioner research (running across an academic year), with case studies completed and written up by the teachers using an approach based on Stenhouse's (1981) model of *'systematic enquiry made public'*. In each project, the teachers involved were encouraged to undertake research relevant to their context and to their interests:

> *"The research process was beneficial in that it primarily gave us a platform for the development and implementation of the above strategies, whilst sparking the ideas and the motivations of the staff involved". (Jane Dale and Ann Saunders, Weaverham Forest Primary School)*

They also had to collect evidence. To prevent action research feeling like too much of an extra burden we located it alongside a reflective professional cycle, drawing on the model of plan, do and review which most teachers are familiar with. The additional provisos were firstly the need to collect systematic evidence: however, teachers were encouraged to think about what evidence was 'good' evidence rather than to conform to University or policy-maker norms. In asking them to conduct inquiry, we knew that teachers would have to become conscious of the many decisions that they make on a daily basis, so the quality criteria for each teacher's research was personal and the key question became 'What would be good enough evidence to convince you to continue/ change your practice?'. Teachers set themselves very high standards for this 'warrant' (Dewey, 1938) which meant that they were well prepared for the second proviso – 'to make their findings public, to gain feedback and codify their process and outcome against others'. In the first instance this constituted an effort within their school '*to convince a sceptical colleague*' (Baumfield et al., 2008) of the value of their approach, then in the local and national project communities in face to face meetings, and then to the world beyond, through the published case studies on the internet.

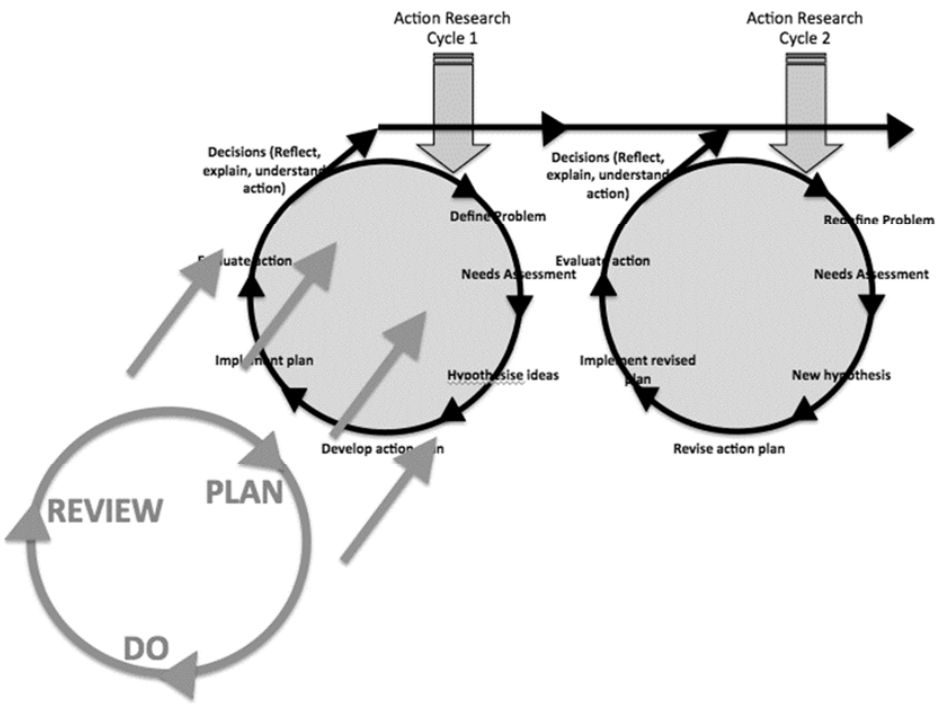


Figure 1. Alignment of action research and a reflective professional cycle (adapted from Baumfield et al., 2008)

The University team therefore took a coaching role to support the identification of success criteria and formulating or refining specific research questions as part of a dialogue with the teachers – this was often done as an element of a face-to-face meetings, but a range of electronic support was also available. An important element of this was checking that the project was realistic. In particular, with regard to the research question they wanted to answer, but also realistic in terms of the data they wanted to collect to answer it and realistic in the time commitment that the research tools needed for administration and analysis. The University team had good knowledge and experience of these aspects of the project, but each teacher needed to balance this with the individual pressures of the context in which they worked. The support was advisory and the practice that resulted was negotiated, with the principle of autonomy being upheld and the teacher always having the final say.

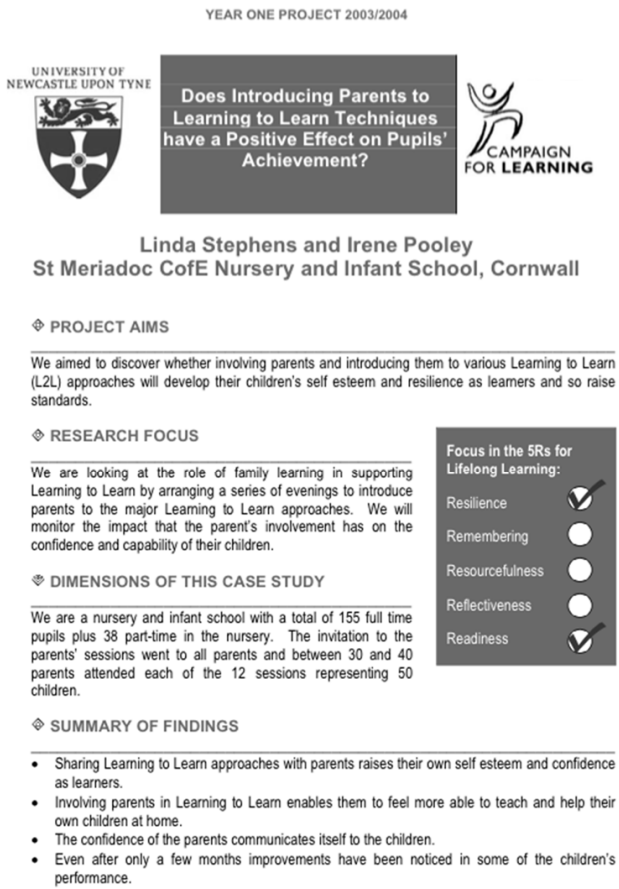
This was complemented by a commitment from the University team, through a 'buddying' system, to be available with assistance and answers to their questions via email or telephone: the project manager was available for teachers via email and telephone to provide support or to act as a conduit to other colleagues for specialist advice. Face-to-face support occurred once a term. In the autumn and summer the teachers gathered together in their local groups for a training day, the content of which provided a mixture of new ideas, research methods and opportunities to share problems and successes and to set their work in a wider context. Each January a two-day residential conference took place, with invited speakers, including those from other major research projects like the Teaching and Learning Research Programme (TLRP - for example, James & Brown, 2005). On all these occasions the University team took a lead role in providing input on different aspects of the project, as well as supporting dialogue between schools about Learning to Learn and the research process, although as the project progressed this became less direct and the emphasis became more about facilitating conversation. Through these systems systems, the University team gave guidance and opinion which may have had impact on the action research process in schools, however at no point was there any intention to wrest the locus of control away from the teachers and the context of the schools.

'L2L gave this research project and the three year study a sound framework in terms of methodology. The principle of exploring the potential of different strategies by measuring impact has been established throughout the school. The L2L aims and objective have given clarity to the projects outcomes. The sharing of information through the Newcastle University web site, emails and lead learner workshops also enabled'. (Martin Fleetwood, Woodford Lodge High School)

Practical support in the development of questionnaires or other tools and in the analysis of data was offered to those schools who wanted it, with a commitment to swift response being a crucial component of the network. The input of the University team evolved as the practitioner inquiry process unfolded: the definition of the problem was wholly 'owned' by individual teachers or teams within schools and the University team scaffolded the development of hypotheses by encouraging close focus on *what will change* and *what change will look like*. The input on research methods informed the action plan and shaped it to the extent that schools were required to triangulate their data through the use of multiple evaluation tools. In this way, though we were imposing our values from the academic community on the teacher-researchers, we were simultaneously sharing the language and culture of research, giving procedural autonomy to teachers through a shared understanding of the expectations of this 'craft' (Ecclestone 2004; Lave & Wenger, 1991). This was achieved using common mediating tools which facilitated the research process and aided communication and learning (for example, Baumfield et al., 2009).

Each year the teachers wrote up their research as a case study. These reports followed a defined structure, based around a series of headings given to the teachers as a guide, with some prompts as to what should be included in each section. The teachers completed the write up with an open invitation for formative feedback on drafts from the university team (Higgins et al. 2007). Take up of this was variable depending on the individuals and their circumstances. The emphasis was on the teachers' version of the events and so a commitment was made not to change the 'voice' although suggestions might be made on, for example, where greater detail would add clarity. The final drafts were formatted by the university team into a pre-agreed template (see for example figure 2) that provided uniformity across the project outputs, enabling an overarching analysis across schools. In latter stages posters were also generated, in the style of an academic poster presentation, to facilitate sharing of process and findings across the project (at the annual residential attended by all teachers, from across sectors) and beyond (figure 4). The teachers were consulted throughout the process and their approval sought over any actions taken or changes made, before all of the attributed case studies were made freely available on the Campaign for Learning's website: www.campaign-for-learning.org.uk.

It is important to note that the schools' and teachers' involvement was not explicitly funded by the research project and as such predominantly relied on volunteers and good will. The teachers needed time out to attend project events as well as space to undertake the practitioner inquiry process, including making changes to pedagogy and writing up their case study reports. There was



YEAR ONE PROJECT 2003/2004

UNIVERSITY OF NEWCASTLE UPON TYNE

Does Introducing Parents to Learning to Learn Techniques have a Positive Effect on Pupils' Achievement?

CAMPAIGN FOR LEARNING

Linda Stephens and Irene Pooley
St Meriadoc CofE Nursery and Infant School, Cornwall

PROJECT AIMS

We aimed to discover whether involving parents and introducing them to various Learning to Learn (L2L) approaches will develop their children's self esteem and resilience as learners and so raise standards.

RESEARCH FOCUS

We are looking at the role of family learning in supporting Learning to Learn by arranging a series of evenings to introduce parents to the major Learning to Learn approaches. We will monitor the impact that the parent's involvement has on the confidence and capability of their children.

Focus in the 5Rs for Lifelong Learning:

- Resilience ✓
- Remembering
- Resourcefulness
- Reflectiveness
- Readiness ✓

DIMENSIONS OF THIS CASE STUDY

We are a nursery and infant school with a total of 155 full time pupils plus 38 part-time in the nursery. The invitation to the parents' sessions went to all parents and between 30 and 40 parents attended each of the 12 sessions representing 50 children.

SUMMARY OF FINDINGS

- Sharing Learning to Learn approaches with parents raises their own self esteem and confidence as learners.
- Involving parents in Learning to Learn enables them to feel more able to teach and help their own children at home.
- The confidence of the parents communicates itself to the children.
- Even after only a few months improvements have been noticed in some of the children's performance.

Figure 2. Example of a case study front page giving the summary of their research project, (available from the Campaign for Learning website)

consensus about the inherent value of the project and its outcomes and most teacher researcher participants justified their involvement through the critical engagement with the learning and teaching process (Hall et al., 2006):

> *'I have thoroughly enjoyed the opportunities that L2L has offered me. It has allowed me to research aspects of my career that I feel passionate about and has helped me map out a better understanding of myself not only as a teacher but also as a researcher.' (Lucy Fisher, Carterhatch Primary School)*

Despite the explicit focus on autonomy and clear contracts between partners about who would do what and when, there was still risk involved and professional courage (Alexander, 2010) was required to support the action needed to complete the practitioner inquiry process and particularly to make the findings public. We will return to this later.

Teacher intent and research design

There was great variation in the research focus as put in place by each of the teachers. Each teacher implemented interventions under the umbrella term of *Learning to Learn* (L2L); a term that drew on ideas of metacognition, thinking skills, self-regulation, self-efficacy and self-esteem in relation to learning. But in that the project teachers were invited to explore the different approaches they understood as being encapsulated by this heading, the common aim was just a starting point:

> *'The role of Learning to Learn and the Learning to Learn project has been the umbrella that has drawn together all our various initiatives, ensuring that we are all moving in one direction. The regular meetings and conferences have helped us to remain focused and on track with our research and helped keep Learning to Learn at the forefront of our School Improvement Plan.' (Ann Webb and Pat Williams, Treloweth Primary School)*

Due to teachers' instinct to innovate and, by the nature of their jobs, to be problem solvers, the project brief was interpreted and understood in diverse ways. This introduced a level of unpredictability for the university researcher; however this transfer of the locus of control regarding the focus and direction of the research to the teachers was paramount in achieving the project aims (Higgins & Leat, 2000). It was also, overtly linked to a model in which teachers adopt cultural tools (Boreham & Morgan, 2004) linked to research and embed them within their practice of learning and teaching. Thus the developmental process of action research; which for most teachers involved several research cycles; is much more than the acquisition of a research 'skill set', encompassing personal perspective transformation, cultural change within schools and the broadening of external networks of collaboration, communication and critical challenge.

In Timperley's (2008) robust review of the professional learning field she showed that the association of top down models of professional development with improvement is weak and often variable with little sustained impact, but with bottom up (teacher led) approaches a close association to student need that engages with practitioners' theories of practice (Argyris & Schön, 1974) increases

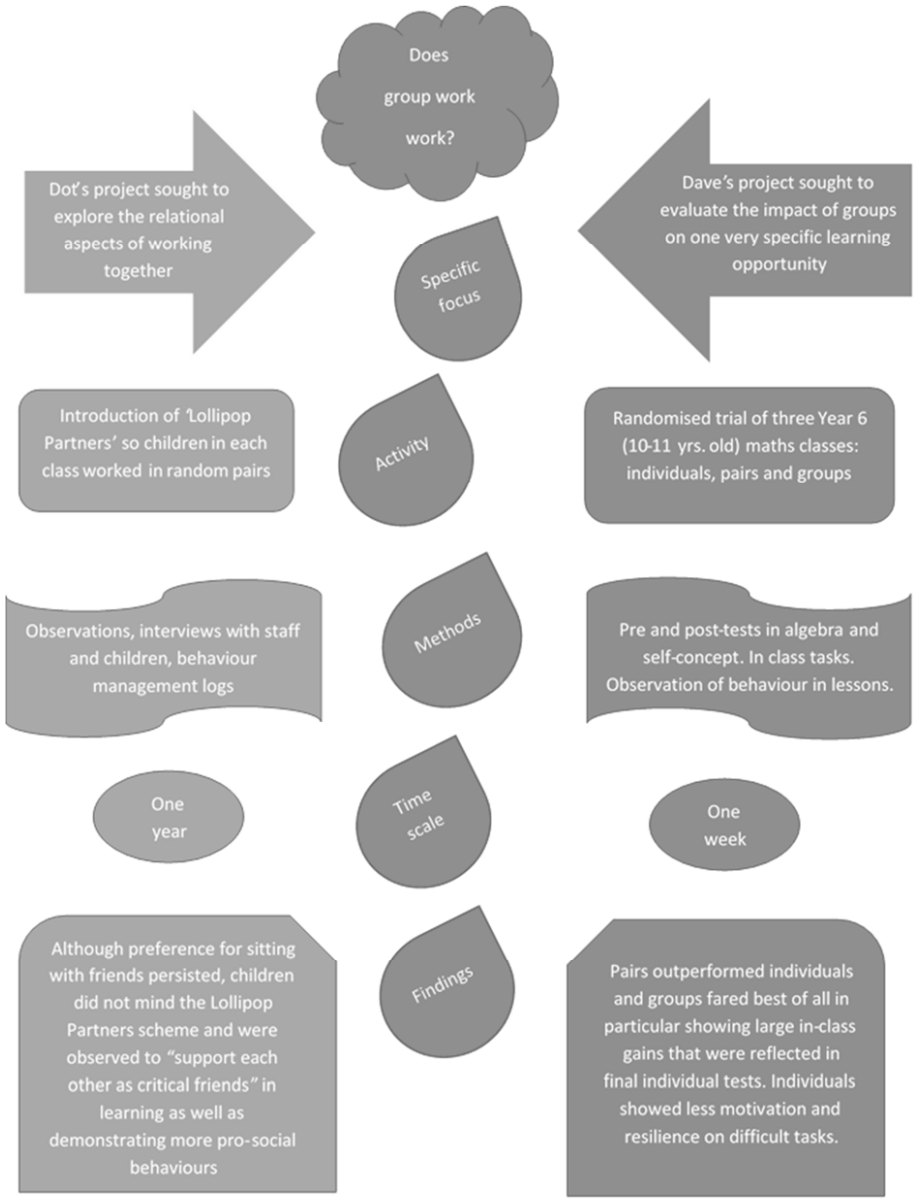


Figure 3. Comparison of research approaches

the likelihood of sustained impact on student outcomes. Indeed, in 2009 Timperley and colleagues showed what this could look like, using a 'teacher inquiry and knowledge building cycle' and produced student gains that were four times the national expectation in New Zealand. They concluded that there were crucial links between the teachers' active engagement in their own learning journey and the way in which this is associated to their students learning needs. In addition, Hattie (2009) has shown that teachers make a significant difference in learners' outcomes and provides some guidance on 'good bets' and areas for teachers to focus their energies on. However, we have already emphasised that we don't think telling teachers what to do or how to do it is either effective or defensible and that it is better (from both a pragmatic and ethical position) to have a dialogue in which different kinds of expertise can be shared. We are convinced that in practitioner inquiry the stimulus from the practitioner's own classroom is central and that the focus on particular content areas is a distraction from developing professional autonomy and research skills. This was christened the 'Bananarama Theory' by Professor Steve Higgins: *"it ain't what you do, it's the* **why** *that you do it"*.

This is best exemplified by two case studies where the same 'problem area' was attacked in completely different ways by teachers with differing intent. Group work contains complex relational skills, variation in cognitive challenge and differentiation in knowledge or skill outcomes, even before one considers the problems of assessment. A traditional research project about group work might attempt to disaggregate one or more of these elements and study them systematically in several contexts. Teachers in these contexts would volunteer because of their interest in group work but they would not get to set the questions, choose the research methods or evaluate the results. They would undoubtedly learn something from the experience but perhaps not what they really wanted to know – indeed, they might not know exactly what they wanted to know until some way into the process. Two teachers in primary schools produced case studies that looked at group work and they were both in response to a similar experience of negative feedback. Dot Charlton's 4-9 year old pupils (Hipsburn First School, Northumberland) and Dave Archer's teaching colleagues (at Carterhatch Junior School, Enfield) had both questioned the value of students working together – it seemed to be problematic for the learners and not particularly productive of quality learning. Their responses to this feedback represent common pedagogical beliefs – both had a hunch that group work was a valuable experience- and very different research approaches.

In exploring these examples in detail, the principle of disturbance can be seen in action at multiple levels: for example, in the individual schools at the point where the teachers' hunches were in conflict with the beliefs of colleagues or students; or at the project level, around how best to explore the impact of group work, with two projects exploring the same technique but in different

ways. In both examples it is possible to see the dissonance created between ideal and real life teaching and learning, and the impetus for inquiry that was created, as well as the way different approaches can facilitate productive talk about what works and how we know it did. Dot's whole-school intervention of Lollipop Partners – in which children's names are written on lollipop sticks and partners drawn at random – was initially devised as both a short-term and long-term solution to the relational problems of group work. Random assignment and short periods working on defined tasks minimised immediate 'fuss' and also sent a signal about expectations – everyone has something to offer. Children and adults began to experience new groups and to challenge their assumptions both about what they liked and what was useful for their learning. The year-long study used a range of observational and qualitative interview data, triangulated with the school's existing behaviour management logs to track incidents of conflict, bullying or social isolation. Meanwhile Dave conducted a classic experiment, using pre- and post-tests of algebra to track the knowledge and skills gained by individuals compared to the completion of the in-class tasks, test of self-concept to exclude the possibility that one class had a stronger or weaker 'maths identity' and observations of the classes. One study produced rich qualitative data, the other a significant effect size, both shed light on the value and process of group work and highlight the complementarity of practitioner research case studies.

Each teacher was encouraged to use at least three different data collection tools. These tools ideally included both qualitative and quantitative data sources and also ideally encompassed different 'stakeholders' within the proposed area of inquiry, for example, teachers, pupils and parents. This may appear to be excessive and potentially overwhelming but teachers *were also* encouraged to look at sources of information which were routinely collected within the school as sources of research evidence (for example, attainment data or attendance records) and also to look at more traditional research tools as useful for teaching and learning, by for example, making the learning explicit to the pupils. In this way, research methods and teaching approaches were transformed into pragmatic tools for teaching, learning and inquiry (Baumfield et al., 2009). The rationale for this approach was to avoid some of the possible problems that have been identified with action research, particularly in terms of the influence of the individual practitioner (Somekh, 1995).

> *'By achieving these aims, we aim to increase the Readiness, Resilience and Resourcefulness for learning of both pupils and staff. We hope a whole school approach to developing … an active repertoire of approaches to learning, will enable pupils, staff and parents to engage more fully with their learning, thus improving attainment and motivation in school and in life.' (Helen Hughes, Alverton Primary School)*

The research process was therefore constructive in that the act of researching itself impacted upon the wider environment and culture and not limited to the research 'results' and student outcomes. While such results and the impact on learners were an essential component of the research process and provided useful answers to practical questions, they seem no more significant than the impacts of the processes or the *acts* of undertaking research and the sustainable implications of this. When the action research process was developed effectively throughout the school, research and inquiry becomes integrated with a focus on learning. This suggests that metacognition becomes a more explicit part of the talk between teachers and students and between the teachers themselves. As an individual example of the 'virtuous cycle' on the part of a teacher-researcher, we see a larger-scale iteration extending this process outwards to create a research and metacognitive culture in classrooms (Wall & Hall, 2016). The capability to develop reflection about learning at teacher and student levels was empowering for teachers, schools and students. This appears to be a key component of how the Learning to Learn and Equate programmes supported metacognition across schools through design and focus. Perhaps an important component lay in the combination of teacher's research and practice reflected and modelled through learning that was being explicitly developed with the students.

The experience teachers underwent and the positive impact of these on their own professional development seems to have motivated them to share this with students. They came to perceive this development through the language, frameworks and learning experiences they were themselves using to support their students. This suggests an iterative process of learning at teacher and student levels, supported by the inquiry process. As well as the deliberate sharing of these ideas, the research process produced a natural 'modelling' of metacognition from teacher to student and then from student to teacher. Within our networks we have encouraged teachers to engage with the needs of their students (and what would improve their learning) and have facilitated a process of participatory inquiry at all levels.

In a diverse network of practitioners, however, working in a range of contexts then this essential focus on what your students need adds to the complexity and could arguably ensure that different silos would emerge within the wider group – primary teachers over here, geography teachers over there etc. – but this hasn't happened. We believe that there is something powerful about the focus on learning, through the inquiry into pedagogies that develop metacognition, that has helped maintain coherence to the group while revelling in the difference, another aspect to our principle of disturbance. Learning to learn as an umbrella term was sufficiently inclusive and fundamental to teaching and learning practices that participants regardless of background had sufficient commonality in their

shared values and beliefs about the objectives of the project and education to talk effectively about practice. Indeed the difference inherent in the network was essential in taking the teachers away from the contextual detail and facilitating a move to think about what was happening at a more theoretical level, with the teachers working together to create theories of practice as envisioned by Argyris and Schön (1974).

Learning from others and with others

Vocabulary and how we talk about teaching and learning should by now be obvious as fundamental to our understanding of the inquiry process at all levels, but how the principle of dialogue emerges is something more nuanced than simply talk. The way opportunities for dialogue were approached by participants was highly influenced by the interaction between the principles of autonomy and disturbance. Teachers needed to have ownership and confidence in their project while also being open to challenge and the disturbance created through dialogue with others' inquiries. Understanding the way that the network supported this dialogue and helped the process of making it relevant to the teachers' day-to-day existence in the classroom was paramount. It has to be useful.

Networks to support innovative pedagogy are traditionally organised by bringing together teachers from particular subject disciplines or from specific phases of education. These networks are strengthened by the similarities of context and the common language that participants share. However, they may also be weakened by the inability of participants to access broader perspectives or to recognise the role of accustomed and unexamined practice in limiting their pedagogic options– to be challenged. Cordingley and colleagues (2005) point to the value of studying learning across boundaries when researching how educational networks operate and evolve. Central to our understanding of how definitions and agendas for Learning to Learn emerge and evolve was the extent to which learning takes place across professional as well as organisational boundaries (Hall, 2009). Of importance to us was gaining an understanding as to the nature of boundary spanning relationships within the network- as Little (2005) puts it, knowing 'What's in the arrow?' that links nodes together. Specifically, we were interested in the potential for projects based on teacher and learner inquiry to stimulate innovative pedagogy and ideas about pedagogy that could cut across primary, secondary and further education contexts, as well as the ability of teachers to recognise the research implications as well as the pedagogic potential presented in the case studies of colleagues. At the heart of this problem is the means by which practitioner inquiry, supported by the university, might

move from being that of personal interest, to one that was acknowledged and owned by the community of practice (McLaughlin & Black-Hawkins, 2004).

We tested this by analysing the data collected when we re-framed our annual residential conferences. Starting in 2009, we placed much more emphasis on teachers sharing their work and much less on presentations from academics. We were rather pleased with ourselves about this; fortunately we had formative feedback from one of our teachers – "Oh, a conference where we get to confer!" which helped us to realise that the teachers had been ready to be autonomous dialogic researchers for some time. Our contribution was to convert each teacher's case study document (typically 12-30 pages long) in to an A2 poster (an example in Figure 4). In this way, teachers could make presentations without the need for time-consuming additional preparation. Participants in residential gatherings could access each other's work outside of the presentation times and those teachers unable to attend could both have their work represented and access the posters via the website.

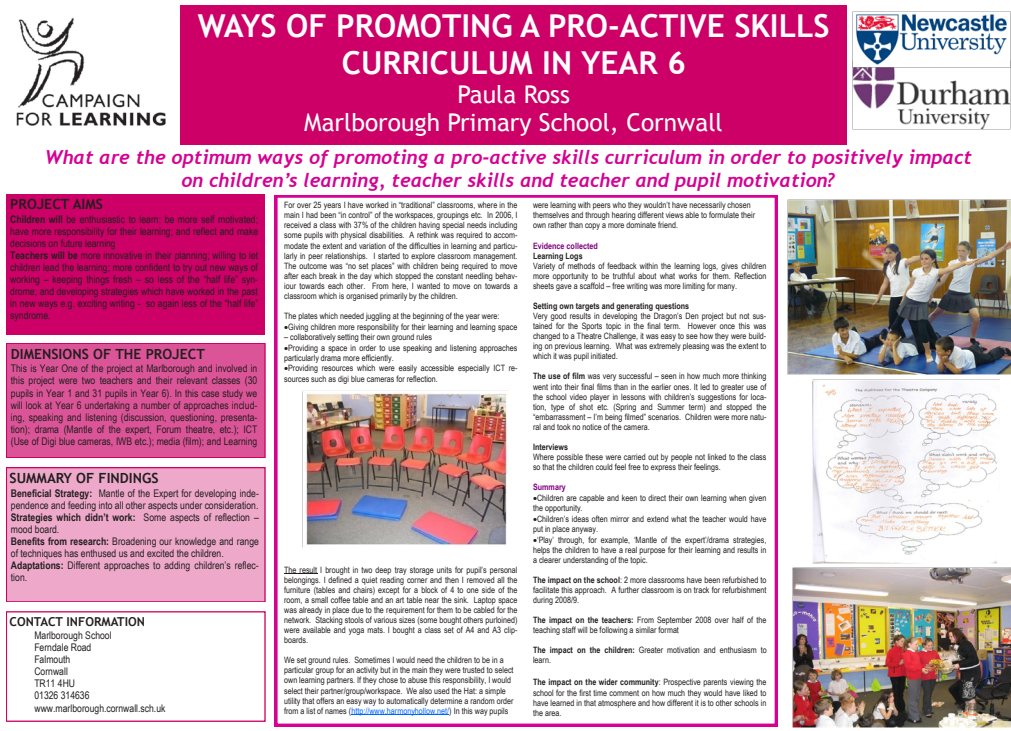


Figure 4. An example of a poster generated from a case study

Although the participants could identify a poster's sector of education by colour, there were no other differentiations made: presentation groups were organised to include all sectors and the main display was randomly generated. With the case studies as the stars, we were able to focus on what participants were drawn to and what they might use. Analysis of the data would reveal whether this was enough to produce sufficient 'identity congruence' to enable collaborative learning to take place (Hughes, 2010).

Data collection tools were identical in 2009 and 2010, consisting of a simple survey with seven categories (Figure 5.).

Name	From
The case study that	*Came from*
Had the best Learning to Learn idea	
Broadened my horizons	
Had the L2L idea I'm most likely to use in my own teaching	
Entertained me the most	
I will use/ adapt the data collection methods	
Application for a range of curriculum areas and ages	
I would recommend to other teachers	

Figure 5. Data collection instrument with categories

There were two key findings that emerged from the 2009 data that were confirmed in 2010:

- Influence was not mediated by sector
- Influence was not mediated by time in the project

Although the most popular posters were from primary schools, there was an overall even distribution of popularity by sector in both 2009 and 2010. Being new to the project was also not a disadvantage.

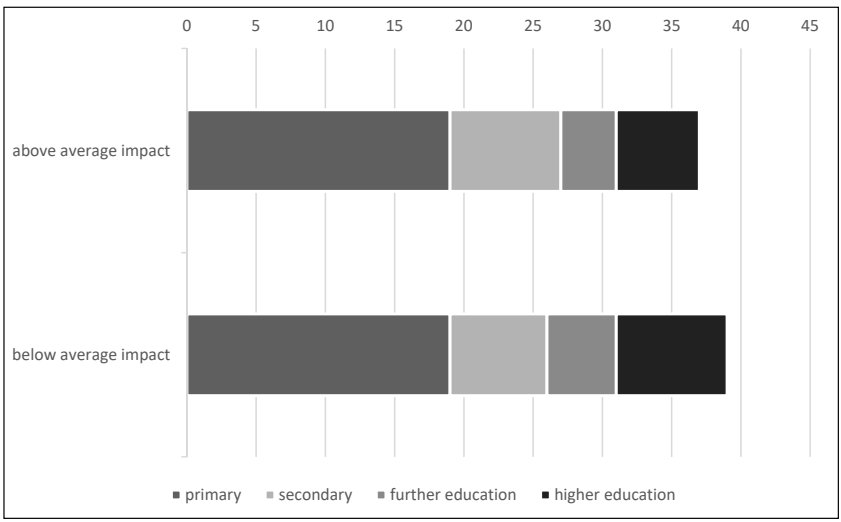


Figure 6. Impact by sector 2009 and 2010

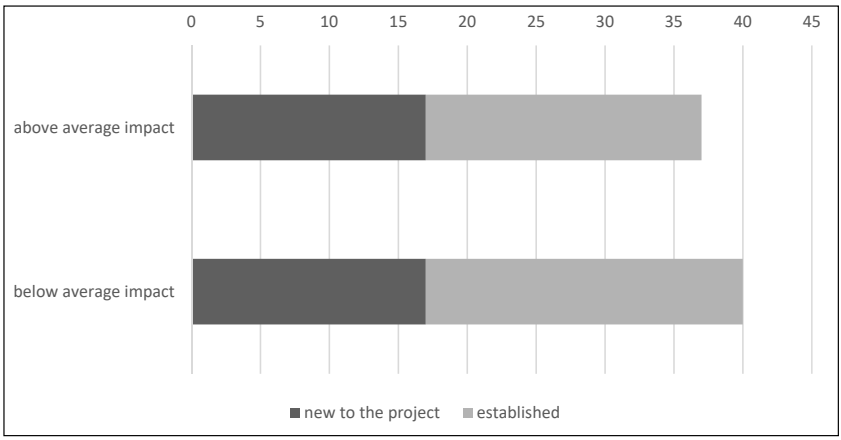


Figure 7. Impact of length of time in the project 2009 and 2010

Nvivo software was used to map the connections between presentations, posters and participants. The individual participants, their votes in the different categories and the relationships between them were mapped, as the diagrams below show. The network diagrams again show that the reasons people were drawn to a piece of work were quite diverse and that both the very popular and the more moderately attractive presentations and posters elicited a range of responses (original data colour versions are available in Towler, et al., 2009).

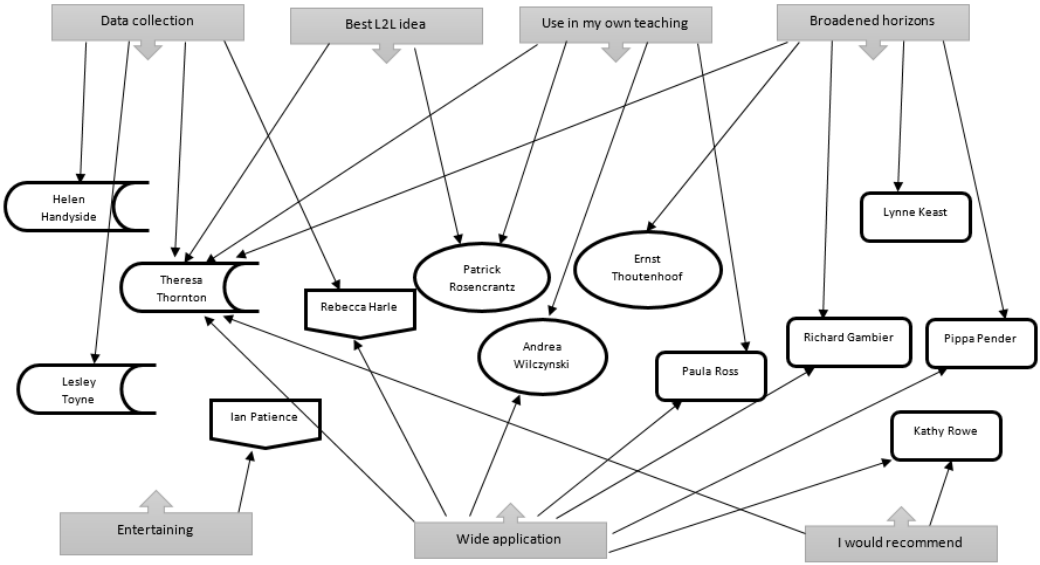


Figure 8. Jarka Glassey (EQUATE) influence

In Figure 8 the impact of a presentation given by a University participant can be seen. Colleagues from EQUATE (ovals) plan *to use the ideas in my own teaching* but so does a teacher from a primary school (rectangles). The *data collection methods* used find particular favour with colleagues from the FE sector (cylinders) and also from a secondary teacher (envelopes). Jarka's presentation attracted votes in every category, unsurprisingly getting multiple 'hits' for *broadening horizons* and *application for a range of curricula and ages*. Her broad appeal could probably be attributed to the important and universal pedagogical problems she addressed in her study: student engagement and the use of feedback. At the level of the project, Jarka was evoking key Learning to Learn themes about the role of student feedback in stimulating teacher interest and action. As we have discussed elsewhere, (Hall, 2009; Baumfield et al., 2009), the work of the network, focusing on tools and inquiry was the catalytic element, rather than its' components.

In Figure 9, we have an example of a presentation from FE, which attracted a mainly older crowd: only one of the respondents worked with primary aged children (rectangle). However, although (as a traditional homogeneity model might predict) the University, FE and secondary teachers were attracted to this presentation, they were drawn to different aspects, so whilst it might be possible to predict for some presentations *who* might be interested, it would be very hard to predict *why*.

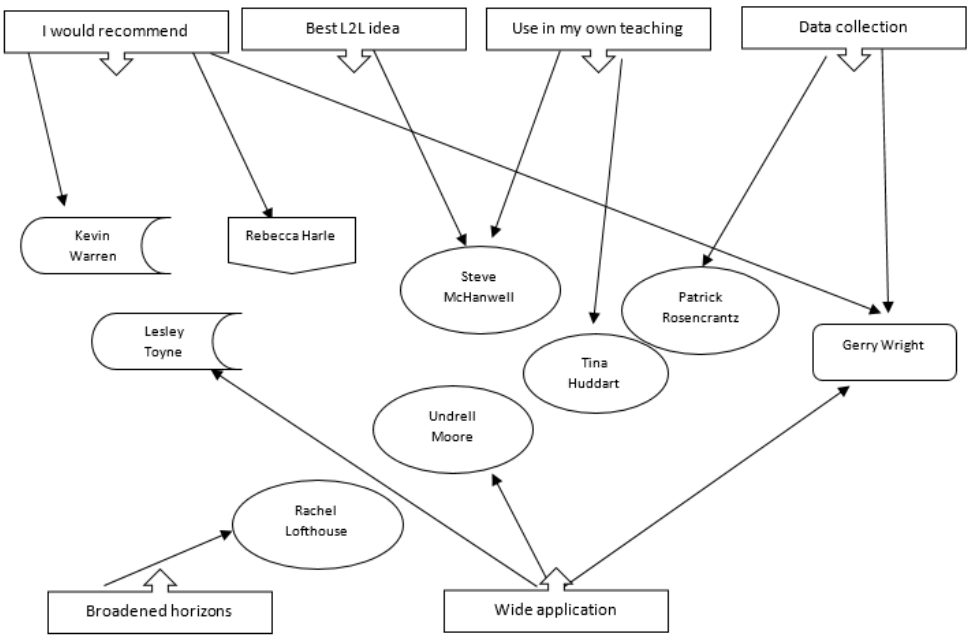


Figure 9. Tanya Paget and Mark Young (L2L in FE) influence

Overall, only a small number of participants (n=6/ 51) voted for presentations only from their own sector of education. This data does seem to support our belief that teachers can see beyond the details of context to grasp ideas about pedagogy to take away with them. However, this raised a further question – once they have got the ideas home, do they use them?

Is there evidence of influence in this heterogeneous network?

30 posters from 2009	36 respondents in 2009	31 2010 posters produced by 2009 respondents

Figure 10. Tracking influence: the data set over two successive years

In order to explore this, we looked at the ten most popular presentations from the 2009 residential and at the people who said they had been impressed by this work. With seven categories in play, this quickly became quite complex and so,

for the first level analysis, we decided to focus on those categories which might leave a more obvious trace in a future case study: *Had the L2L idea I'm most likely to use in my own teaching* and *I will use/adapt one of the data collection methods for my own research*. We have looked for evidence in the 2010 case studies that elements have crossed over. Of course, these elements could have been inspired elsewhere and their presence in the case study may have pre-dated the Residential. However, these categories on the questionnaire were explicitly about intent, so we feel justified in suggesting a potential influence.

Presentation from	Respondent n=	Trace of influence?		
		Yes	No	No case study
Archbishop Benson Primary	3	2	1	0
Carterhatch Primary	2	1	0	1
Hazelbury Infants	1	0	1	0
Kathy (Marlborough Primary)	0	0	0	0
King Edward VI High	5	2	2	1
Learning Space	3	2	1	0
Paula (Marlborough Primary)	2	0	0	2
St Meriadoc Nursery and Infants	1	1	0	0
Tytherington High	2	1	1	0
Wooler First	4	2	1	1
Total	23	11	7	5

Table 1. Links between responses to presentations at 2009 Residential and content of 2010 case studies (use the idea in my own teaching)

Where respondents in 2009 (n=23) liked the notion of using an L2L idea for their own teaching, we felt we could detect influence in almost two thirds of the 2010 case studies (n=11 from 18, since 5 did not produce a case study). Arguably, since we were looking within the case studies we were only glimpsing those aspects of teaching which immediately pertained to the activity of Learning to Learn: exploring, data collection, analysing and reporting. We have extensive interview data about the extent to which Learning to Learn transfers into practice but this is beyond the scope of this current chapter. We are sufficiently confident, however, to regard the data presented here as an *under-representation* of impact. Given these caveats, it is not surprising that in terms of data collection, the pattern was more distinct, with seven out of ten respondents making use of the method they had liked (details in Table 2).

Presentation from	Respondent n=	Trace of influence?	
		Yes	No
Archbishop Benson Primary	1	1	0
Carterhatch Primary	2	1	1
Hazelbury Infants	0	0	0
Kathy (Marlborough Primary)	0	0	0
King Edward VI High	1	1	0
Learning Space	1	1	0
Paula (Marlborough Primary)	0	0	0
St Meriadoc Nursery and Infants	0	0	0
Tytherington High	4	2	2
Wooler First	1	1	0
Total	10	7	3

Table 2. Links between responses to presentations at 2009 Residential and content of 2010 case studies (a data collection method I'll use)

As we have observed earlier, the range of influence transcends contextual background and it was very difficult to predict just what a participant would take from a poster: Michelle from Northumberland FE college took from the Archbishop Benson Primary poster the idea and practical process of using learners as researchers, whilst Victoria from Wooler took the 'primary- friendly' idea of using animals to represent dispositional concepts into her classroom of eight year olds. Meanwhile, her colleague Deborah from the same school chose to focus on the interviews used in the project.

What clearly emerged from these maps and webs of influence was a picture of our 'network about pedagogy' as a complex organism. As Meirink and colleagues (2010) have found, simple models of interdependence and mutuality in teacher learning are not an accurate reflection of the way in which teachers use and share their knowledge. We can state with confidence that teachers of undergraduates are provoked and informed by teachers of five year olds and that methods of engaging reluctant vocational learners have been enthusiastically greeted by teachers of ten year olds. Teachers from all sectors value the opportunity to explore the common underpinning ideas of pedagogy, which in homogenous networks can become obscured by 'shop talk' of the details of curriculum or assessment procedure.

Conclusion

Teachers are busy people; to engage in research then they have to be interested and see relevance in the process and outcomes for improving teaching and learning for their students. The Principle of Autonomy is fundamental to our model of practitioner inquiry; everything else flows from this ownership. By giving control of their research intent to the participants then we were demonstrating a trust in their knowledge of their students needs and the best way for them to be addressed. This did mean that on occasion teachers explored pedagogic innovations that we might not agree with, such as learning styles (a particular challenge for one of us in particular), but we had to trust them and also the process of inquiry to ensure a quality process of improvement (Groundwater-Smith & Mochler, 2007). The research process mostly proved us right, but not always, and as with any tool based on the Bananarama theory, the 'why' that you are using it might overtake any original assumptions about impact.

The impact of this approach was to tap into teachers' potential as innovators and so the project brief was interpreted and understood in a number of ways, producing a complex map of innovation approaches with the connecting theme of improving pedagogy in order to support learners to become resilient, independent

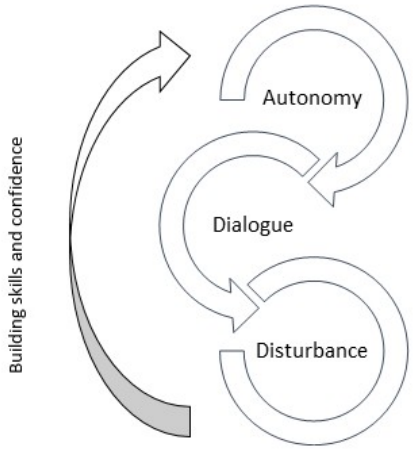


Figure 11. The interaction of our practitioner inquiry principles

and metacognitively aware. As detailed elsewhere (Baumfield et al., 2008; 2012; Lofthouse, Hall & Wall, 2012) we do not consider that this diversity was a threat to the project's overall validity, since the quality of each individual project was judged on its particular methodological merits rather than competing with others. Rather, it led to a dynamic of friendly challenge and dissonance, the Principle of Disturbance, that we now see as fundamental to effective inquiry and the development and evaluation of teachers' theories of practice (Argyris & Schön, 1974).

Within the case studies we see parallel learning processes in operation: the students' learning and thinking, as represented by the teachers' developing insight, understanding and confidence in their ability to meet the students' learning needs, alongside the teachers' learning and thinking, with a developing proactive perspective on their own professional learning journey and a belief in their agency to make change happen (Priestley et al., 2015). The former was always our initial target; the latter naturally emerged over time as it became more and more apparent to the project community that for students to become more metacognitively aware then the teachers needed to undergo a similar learning transformation. Arguably by combining these parallel pathways within the same project 'ecology' (Dewey, 1938) then we have started to close the gap noted by Vermunt and Endedijk (2011), certainly this was the case within the teachers' thinking and in some cases in the students' (Wall 2012; Wall & Hall 2016). This has been supported by genuine and risky conversations, as set out in the Principle of Dialogue.

The action research process allowed the practitioners not only to be reflective about their classrooms, but also to be strategic about changes that they felt appropriate, to be metacognitive about their practice (Wall & Hall, 2016). The collection of data, to inform whether the action worked, helped to legitimize the process and the codification of their thinking with their peers validated the findings and their associated thinking. This was particularly the case because these were not simple 'good news' stories – the Principle of Disturbance meant that evidence was inconclusive or contradictory and fundamental ideas had to be re-examined. The close feedback loops created by the action research process helped the teachers to be reflective and strategic thinkers: to be effective practitioner enquirers. It meant that they were being metacognitive about their teaching and learning practices and about their own professional learning, building skills and confidence to generate new autonomous questions. This in turn meant they were more likely to be metacognitive about their own learning lifelong and life-wide.

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3

Lesson Study: an Opportunity for Collaborative Teacher Inquiry

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Abstract

Lesson Study is a form of teacher inquiry which relies on collaboration and focuses teachers' attention to specific pupils that they are currently teaching. It uses a cumulative and cyclical plan, do, review structure and draws teachers into conversations through which they consider plans for teaching, develop hypotheses about pupil learning and engagement, participate in inquiry-based lesson observations and experience meaningful reflection and evaluation. In this chapter the characteristic features and qualities of Lesson Study are outlined. Two case studies are shared, one from a primary school and one a secondary school. Evidence from the Lesson Study groups illustrates the significance of the focus on case pupils, and reinforces how engagement in Lesson Study can actively change professional learning cultures. We hope to demonstrate that it is a means through which individual professional learning and whole school development might come together by paying close attention to the mechanisms through which teaching practices and teacher leaning can realistically be developed. We conclude with a consideration of the advantages of Lesson Study in supporting teacher inquiry, but also caveats about its possible limitations.

Key words

Lesson Study, Practice Development, Collaboration

Introduction

Almost all forms of inquiry rest on the practical elements of 'plan, do and review', and any teacher's working day has these components woven in. Teachers plan and resource lessons; they teach and they review the learning which their

students demonstrate. On good days these activities form a restless cycle, with teachers making sense of the progress and attainment of students to inform their planning, and being able to adapt their teaching as they review the dynamics and patterns of learning that emerge during and after lessons. Teaching and learning are not streamlined activities, and they do not exist in clinical environments. Some lessons go to plan, others do not. Some learners engage and learn in ways that are relatively predictable, but only on some days. Nothing is straightforward and teaching and learning can only really be understood as complex challenges. When teacher inquiry works well it is because it acknowledges and unpacks this complexity, addressing the realities of the classroom, the needs and expectations of the student cohort and the skills and knowledge of the teacher. Each aspect is a unique contributor to the ecology of learning. Productive teacher inquiry also allows for uncertainty, curiosity and confidence which all fluctuate; it allows for the creation of tentative propositions and deliberate plans, and it provides tools for understanding impact. Teacher inquiry is possible as a solitary activity, undertaken as a form of professional development and scholarship, but professional collaboration can add momentum and enhance its efficacy.

In this chapter we consider how Lesson Study can afford teachers this opportunity for collaborative inquiry. We first provide an outline of Lesson Study as teacher inquiry, we then offer illustrative insights and evidence of its practice from two settings. The first example is a secondary school, and in this we focus on how the model allowed a triad of teachers to focus their pedagogical thinking on a small group of shared pupils for whom collaborative learning in class seemed to present a significant challenge. The second example is from a primary school, and here our focus is on how Lesson Study was developed as part of a deliberate whole school change process designed to shift teachers' experiences from being accountable to senior leaders to embracing greater shared professional responsibility. Finally, we consider Lesson Study as a theorized practice, as a means to draw critical conclusions about its potential for teacher learning and development.

Understanding Lesson Study

In their report 'What Makes Great Teaching?' Coe et al., (2014) offer Lesson Study as an example of a school-based support system for which there is some evidence of positive impact on student progress. They classify it as such because it provides teachers with a chance to 'respond positively to the challenge of improving their effectiveness' (p.48). While Lesson Study has its roots in Japan and originated over a century ago, it is becoming a fashionable form of Continuing

Professional Development (CPD) in the UK, Europe and parts of the US. This growth has been demonstrated by the creation of 'Lesson Study UK' (Dudley, 2014), a professional learning network dedicated to its use and development. Although, like all educational practices, Lesson Study is subject to adaptation, in its ideal form the following are critical elements:

- Teachers work collaboratively in small groups (threes are common);
- They pool their knowledge around the chosen aspect of practice and jointly plan lessons which one of them then teaches as a 'research lesson';
- The collaborating teachers observe the lesson as a form of inquiry, analyzing learning and typically focusing on 'case students' who are often discuss their learning with the observers following the lesson;
- The group jointly review the lesson, with a focus on the learning and how the teacher supported it;
- This cycle is repeated by turn-taking the roles, with cycles being linked as teachers learn from one to the next, often teaching amended versions of the same lesson;
- Additional expertise is offered by an external agent (not part of the teacher group) who acts as a critical friend with relevant expert knowledge.

These elements can combine to enable lesson study to function as a means of collaborative teacher inquiry. They rest on the foundations of 'plan, do, review', but add particular emphasis to this as a shared experience of exploring and developing practices, with the scrutiny being at the level of individual student's participation in and outcomes of learning. While Coe et al. (2014) focused on improving teacher effectiveness in its advocacy of Lesson Study, it should not be seen as simply a means to an end, but as having the potential to transform individual teacher's knowledge and practices, and to alter the learning environments and cultures of schools.

Lesson Study in action: case study 1, *George Stephenson High School*

The starting point:

Stefan McElwee, was working as a senior leader at George Stephenson High School, a Teaching School in Killingworth in the North-East of England when he introduced a small-scale Lesson Study pilot at the school. He was also studying at Newcastle University where he was completing the 'Improving Coaching and Mentoring for Teacher Development' module, during which Lesson Study

is introduced to students as a potential vehicle through which co-coaching practices might be employed. Stefan drew inspiration from Robinson et al. (2009) who identify that school leaders being actively involved in professional learning has a positive effect size on improving student outcomes due to their ability to develop a 'deeper appreciation of the conditions required to achieve and sustain improvements in student learning' (p.42). He was hopeful that his personal engagement in study would give him a more informed edge when it came to talking with teachers about how they might make changes to practice.

The remainder of this case study is written by Stef, and also quotes teachers participating in the pilot.

Planning for collaborative professional development

Based on the thinking I had undertaken in my Masters level studies I was developing a clearer insight into how to achieve some of my ambitions as a senior leader. I wished to establish further mechanisms that emphasised and stimulated ongoing teacher learning which were situated in our own work place. We as a school had had great success in stimulating professional learning through action research models but much of this learning was individual and offered limited potential for peer support. The next logical step for the school was to plan a more collaborative model of teacher learning. I wanted to instigate a model of learning that allowed colleagues to work together on rich discussion and evaluation of practice within their own classroom environment. Lesson study appeared ideal for this purpose. We aimed for it to become a platform for workplace learning, creating a process where learning is continual, something which grows and evolves through interaction as teachers reflect on and evaluate their practice together.

A strong argument for the development of Lesson Study at the school was a prior foundation we had of action research. I consider that Lesson Study is a highly specific form of action research focusing on the development of teacher practice knowledge. The concept of 'research lessons' (Dudley, 2014), was particularly attractive as a stimulus for inquiry and pedagogical refinement which I see as crucial to improving teacher learning. Lesson study acts as an epistemic tool (Lofthouse & Hall, 2014) as it can be seen to be an efficient scaffold to enable teachers to get together in a zone of proximal development. My hope was that, if we worked across subject contexts, the teachers engaged in lesson study would offer each other new perspectives and in particular support the development of hypotheses regarding the learning behaviours of the case pupils. This structure

for teacher conversation was very different to those traditionally exploited in our school.

The selection of colleagues for the pilot was based on three key factors; that they were informed volunteers, that they taught classes with shared case pupils, and that they would allow me to be involved in the process as a teacher learner. This involvement felt critical to me as a school leader. I wanted to create a teacher learning model which avoided a "troubled identity" (Lofthouse & Leat, 2013) caught between empowerment and managerialism. I wanted an authentic involvement in order to authenticate a space in which we, as colleagues, determined the direction of our professional learning.

Developing practice

As we developed our approach we gave ourselved time to discuss our aims and expectations of Lesson Study. We discussed the climate in which our learning conversations would hopefully thrive and flourish and I noted the importance of creating a support group for one another in improving practice. Some of the key identifiable aspects of the group protocol were:

- The three members of the study group were equal as learners irrespective of standing, experience or expertise
- All contributions were to be viewed with positive regard, no one would be made to feel foolish for venturing any suggestions or challenges within learning conversations
- Each teacher would welcome the observers as reflective, non–judgemental observers
- Comments and feedback would focus on pupil learning outcomes and behaviours in relation to teacher interventions
- We would share what we learned with each other within one week of each aspect of the cycle to ensure our reflections were appropriate and relevant to experience.

These shared protocols allowed us to co-construct a common goal through the sharing of knowledge and collaborative inquiry into specific problems linked to pupil characteristics in our selected teaching group. We were aiming for positive and trusting relationships to create conditions supporting engagement, action, reflection and sense-making (McArdle & Coutts, 2010). In this setting we saw our identities emerging as teacher researchers, and I sensed a propensity for rapid development of learning based on the strength of this identity.

Co-constructing meaning and action by focusing on case pupils

Focusing on the needs of individual case pupils generated engagement in a conversation involving critical and reflective discussion about teaching and the needs of our learners. We developed a shared understanding that one of the major barriers to learning in our selected teaching group was negative group dynamics during collaborative learning, leading us to agree to focus on this area. Our Lesson Study conversations led us to agree shared action to change our pedagogy which then acted as a stimulus for inquiry. It generated a common goal or specific problem to be solved, which was articulated as follows,

> *How could we change the collaborative dynamic of group work in our focus group in order to improve learning outcomes of the pupils within?*

In our initial discussion we constructed a shared understanding of what learning outcomes would look like for the case pupils within our selected group. We began to differentiate pupils according to their engagement during collaborative learning activity, and how we might create opportunities within each of our classrooms to better support the learning needs of these individual pupils. We also drew explicitly on school-based teaching and learning development work related to collaborative learning, including project-based learning and SOLEs (Self-Organised Learning Environments). These initiatives have been supported by The Research Centre for Learning and Teaching (CfLat) and SOLECentral at Newcastle University. Our focus on specific pupil needs and engagement with external and school-based expertise allowed us to engage in more focused lesson planning. We also hypothesised about of how we expected each of the case pupils to behave and learn. We really valued this as we felt it provided a crucial scaffold to allow an assessment of both the effectiveness of the strategy and the impact on pupil behaviour and learning. Developing these hypotheses generated coaching conversations which were had a strong sense of co-inquiry, as explained by the teachers;

> Teacher discussions became more focused upon the individual students rather than content of the lesson, it was more of an inquisitive nature; what would happen if? How should we approach that? This stimulated conversation and discussion, I felt it was easier to take risks in the approach to the lesson.
> [We were] planning for the group dynamics, looking at students and discussing them in more depth than any data can. I feel as though I really know the students in the class now as before I just taught them for 50 minutes a week. I think planning different strategies to use in the classroom was beneficial, especially for me as I would never usually attempt group work so I was completely out of my comfort zone.

The next stage of the cycle was to conduct observations of the first research lesson. We decided to inform the class at this stage that we were conducting a lesson study to examine how pupils learn in collaborative environments. Although we wanted to act ethically we did not outline at the start of the first lesson that we were observing individual "case pupils". As we observed each others' lessons we followed the design in the lesson study UK handbook (Dudley, 2014) and wrote out exactly what each of the case students was able to do in relation to the activities that were planned for them. Our focus on case pupils was shared with them after the first lesson when they were interviewed about their experiences. We were clear at this stage to explain why we were interested in them. It was important that pupils understood they were being observed for reasons leading to potential pedagogical developments as opposed to any negative aspects of their own learning behaviours.

Within a week of the observed lessons and pupil interviews we held our post research lesson discussion, and in each one the observing teachers acted as a moderator to the disucsison. The conversations began with discussion about the outcomes of the case pupils, and this preserved the focus on pupil learning rather than on teacher performance. This took on a distinctive quality, as described by one of the teachers;

> The collaborative inquiry process enabled me to engage in more direct conversations regarding students and how they learn and what environments are effective in promoting learning and progress. Working so closely with colleagues to review the learning in my subject and their respective subjects was initially challenging but very rewarding. Observing students in a different environment was beneficial too and very effective in developing my pedagogical approaches.

It cannot be overstated how useful we found it to share case pupils, and although we recognise that this might not always be possible, we would encourage secondary schools to consider this model. It allowed us to collectively plan interventions and evaluate their success or otherwise based on these case pupils, and as one teacher indicated;

> The case pupils were important as they provided focus for our investigations. Some of their problems were easier to solve than others. I am pleased one of the pupils has become a challenge for us as it has challenged our group in terms of our approach for this student and the collaborative nature of the research really supports this. I was very interested to see if our next approaches worked or failed as I really wanted to know more about this student and how we could best help her achieve.

The creation of co-constructed professional learning opportunity might be seen as one of the main achievements of the lesson study cycle. In undertaking a review of the pilot for my Masters module I recorded and analysed our discussions. It was important to me that I learned *about* the learning that was generated by the process, and what the conversational characteristics were. The benefit of clear goals and questions posed in the planning session supported more structured conversations and acted as a stimulus for pedagogical change. Nothing about the process suffered from simple description of the lesson environment. Instead, because of inquiry based conversations leading to probing questions based on data, our conversations were explicitly linked to evaluative discussions focused on predicted outcomes and pupil behaviours. This in turn generated pedagogical change. Our teaching practice and repertoire definitely changed in response to evaluations of what had gone before, as highlighted by one teacher;

> The opportunity to examine the performance and learning of individual students across a range of subjects and situations and compare their progress in these areas to the progress they make in my subject was impacting on my own teaching.

This feedback is powerful, lending weight to my belief that Lesson Study has potential for professional learning. Ideas were becoming concrete and tested out in a supportive environment. Teaching was being developed a result of teachers working together to re-consider how individual pupils can be helped to make progress.

Lesson study as an alternative professional learning experience

The focus on pupils rather than on teaching *per se* allowed structural changes to our typical experiences of lesson observations and review and became a significant enabler for effective professional conversation. We treated all views as hypotheses, testing their validity through deep inquiry and developing integrative solutions (Timperley, 2015). As such I felt that our pilot lesson study approach offered genuine opportunities for teacher co-coaching. Timperley highlights key enablers for effective professional conversations. It is worth commenting on how I view our own process to have met, or been supported by these enablers. Relationships were integral to the success of the lesson study. Our school culture is one of improvement-focus, where conversations create professional agency needed to make progress towards outcomes. Our lesson study cycle was further evidence of such cultural embrace. Our professional and personal relationships developed over the time of the study and created a 'culture of confidence' in

which trusted and supported conversations led to reflective pedagogical change. By working corroboratively to develop the piloted lesson study approach we were all clear on and committed to applying shared professional learning objectives. New knowledge was generated via our conversations leading to developments in pedagogy.

Lesson Study in action: case study 2, *Rickleton Primary School*

The starting point

Colin Lofthouse is the Headteacher at Rickleton Primary School in Washington in the North-East of England. He also supports other head teachers in development work and his school is part of the Tyne Valley Teaching School Alliance. After a year and a half in post, and as a result of both internal and external evaluations, he felt secure in stating that learning in the school was 'good, but not good enough'. As he had got to know his teachers Colin recognised that they wanted to become more self-determining about their own teaching styles, but they were not confident enough to be so. Although they had hunches about what would work better they seemed to lack a shared professional language to discuss teaching and learning. He was keen that staff did more than just change their teaching approaches, wanting to offer them the chance to develop greater critical analysis of, and reflection on, teaching outcomes. The senior leadership team in school believed that the historic model in the school of lesson observations followed by judgement and feedback had promoted a focus on teacher 'performance' rather than on how learners were learning. This coupled with a heavy-handed performance management focus had made teachers fearful of lesson observation and unable to experiment and develop different pedagogy.

Colin was aware that this would not change without an interruption to the normal routines of teaching, monitoring and CPD. To achieve this interruption he chose Lesson Study as the vehicle for change, which he hoped would give teachers permission and the right 'space' in which to rethink teaching and learning. To establish the new space and practices required the senior leaders adopted what seemed at the time a radical change by removing all formal lesson observation from the school's monitoring programme. This was seen as crucial in establishing a culture of experimentation where performance management did not impinge negatively on the development of teaching. In return, staff were asked to engage with new a CPD programme based around the development of assessment for learning using a Lesson Study model. Colin then commissioned

Claire King, an educational consultant, to work with the school over a year to first develop a CPD package around effective questioning and then to work with two lead teachers to introduce lesson study as a model for a collaborative practitioner inquiry network.

The remainder of this case study is written by Colin and Claire who reflect on how the introduction of lesson study was achieved and what its outcomes were in the first year, and includes direct quotes from teachers participating in lesson study.

Establishing the practice

The Lesson Study process was initiated through CPD events about 'questioning' which each contained research-based information about best practice and included resources and tools to support teachers in carrying out small teacher designed inquiry tasks in their own classrooms. An important aspect of the training was promoting the use of research as part of an effective learning environment. The training was extremely well received, inspired some experimentation within the classroom and to a large extent ignited a new found interest and passion in thinking about pedagogy. We knew however, that much more was required if practice was to change in any meaningful and sustainable way. We needed a significant shift towards making staff responsible rather than accountable. The training was a good starting point but what was really needed to develop a learning culture was the facilitation of reflection, thoughtful discussion and shared problem solving. We hoped that using the CPD as platform for Lesson Study would support the development of skilled active listening habits, a shared language for talking and thinking collaboratively about pedagogy and a way to shift a range of deeply ingrained habits and behaviours which were holding some members of staff back in terms of developing their practice. While wishing to remain as true as possible to the original spirit of Lesson Study we made some adaptations in order to suit our context (Table 1).

Turning points

As Lesson Study was developed and teacher triads worked through their first cycle, changes were immediately apparent. Polite and supportive exchanges about practice were replaced by rich and challenging conversations about learning, which were owned by the teachers themselves. A turning point in the first Lesson Study cycle was when one of the teachers said within the privacy of her triad: *"I'm not sure I can do this on top of everything else"*. Her colleague (who

Focus	Staff chose one area of focus from the questioning training as the basis of their classroom research.
Working group	Staff worked in cross-phase triads so that their focus was not the differences between phases, or subjects but rather the pedagogical similarities and parallels.
Lesson planning	Staff individually planned their lesson but consulted with their peers to help reflect and anticipate critical points where student response would be pivotal to learning.
Lesson observations and pupil interviews	When colleagues from working groups observed the planned lessons three target pupils were identified as the focus for the teacher's peers to observe. This shifted the focus away from the teacher as the pedagogue to the pupil as a learner. The target pupils were interviewed by the observers immediately after the lesson to capture their view of the success of their own learning.
Post-lesson discussion	The teachers then all participated in a post-lesson discussion to analyse the outcomes for the target pupils. Through this collaborative discussion the teacher began to reflect on their own pedagogy and how it had impacted on the pupils learning.
Role of 'expert other'	Claire acted as a 'knowledgeable other' or 'outside expert' role. Having also observed the lesson (focusing on her own target child) Claire played a key role in shaping the impact analysis, making suggestions for improvement, pulling together ideas, and tying the discussion to larger subject-matter, pedagogical issues and good practice literature as well as developing lesson study protocols to ensure deep learning for teachers.

Table 1. The model of Lesson Study adopted at Rickleton Primary School

went on to take the facilitator role in subsequent Lesson Study triads) responded, *"Remember that we're not asking each other to do anything in addition to what we're already doing. We already ask questions all the time in our classrooms. What we're about is sharpening our skills and trying to change some of our habits and norms so that we are clearer in our minds about what we actually want the children to*

think about and to learn." This was noteworthy because in terms of professional learning; the teachers had started to not only challenge each other but also to take ownership of the improvement agenda. Prior to this they had tended to talk in generalities, had failed to make tacit knowledge explicit, and glossed over differences so as not to offend.

The next significant turning point from a whole school point of view came when the first Lesson Study triad to complete their cycle presented their findings and views to their colleagues in a twilight meeting. As the teachers presented their findings the interest, engagement and excitement was palpable. Teachers who had previously never stood up in front of their colleagues to present learning about their practice had the undivided attention of their colleagues and rich and purposeful dialogue permeated their delivery.

Learning together

Teachers started to improve their ability to listen to understand through professional conversation and in turn started to create shared meaning. They were less afraid to challenge each other, as illustrated by this question from one to another, *"When you said that your students can't think at a higher level, do you mean they just aren't capable or is it about them not really being sure what higher order thinking looks like or sounds like?"*. This was the beginning of a very revealing conversation that started to surface some beliefs about low expectations. In effect the dialogue was creating self-awareness in terms of existing assumptions and when they might be helpful or unhelpful.

Teachers became less defensive about their own practice and able to ask questions to clarify their understanding, exemplified by this question from a teacher whose lesson had been observed, *"I think you're right, I hadn't noticed that I do that all the time. How do you think this affected the response I got from the student?"* This led to further discussion about some of the ideas from the previous training on helping students to give a more extended response when questioned. The professional learning conversations were a source of reassurance as well as challenge. They were also a source of laughter and motivation as teachers became more comfortable and built up a sense of trust and reciprocity. In addition, teachers increasingly elaborated on others' ideas; *"I agree with what she said, if we all try to notice what we notice about the choices children are making we can look for some patterns."* This led to the development of a set of shared foci for subsequent Lesson Study cycles.

Gradually the teachers became more committed listeners who were keen to help their colleagues think more clearly, work through sticky issues and to work

out solutions together. By helping particular pupils to learn more successfully, in lessons they created collaboratively, they became much more mindful of the need to give close attention to the ways in which they supported the progression of skills and dispositions throughout the school. As Hargrove (1995) noted this is about listening beyond what people are saying to the deeply held values, beliefs and assumptions that are shaping behaviours and norms. The Lesson Study process provided a frame in which questioning (as both a pedagogical topic of focus and an adult learning tool), helped to build collaborative relationships as the teachers became better listeners.

Moving forward

Senior leaders and teachers in the school firmly believe that Lesson Study offers the potential for high quality and sustained professional development. As a result, Lesson Study will continue to be used to support teachers and students to work together to develop the quality of teaching and learning more broadly and to raise aspirations for both student and adults learning alike. To this end the school has now turned its attention to embedding Lesson Study within a broader approach to teacher effectiveness in which there is teacher led alignment with professional learning, performance management, team development time and the monitoring of teaching and learning. Though still a work in progress, the use of Lesson Study has supported staff to take agency for the continued development of their knowledge and skills through self- and co-regulated learning. By giving teachers greater ownership of the improvement effort the senior leadership team are now seeing teachers display a much stronger commitment to learn from, with and on behalf of each other and their students.

Practice-based professional learning at the heart of Lesson Study

We start to draw this chapter together by reflecting on the extent to which these cases relate to aspects of a 'practice development led model for individual professional learning and institutional growth' (Lofthouse, 2015). This model suggests three key attributes for professional learning and three significant resulting behaviours, and their potential links to Lesson Study are outlined in Table 2.

Attributes enabling professional learning	Creativity	Participants in Lesson Study are invited to solve the practical problems of professional engagement, and to focus on creating original lesson plans supported by colleagues who can bring new knowledge and ideas to their routine practices. Observing each other & focusing on 'case pupils' requires that they step outside traditional lesson observation procedures and open themselves up to range of perspectives.
	Solidarity	Lesson Study participants typically value the working partnership, particularly the experience of planning and reviewing lessons together as peers in a non-judgemental fasion. The focus on case pupils also helps them to develop a deeper understanding of specific learners and the ways that they are able to support them to achieve.
	Authenticity	Lesson Study is situated in teachers' lived experiences. They feel able to share professional narratives and concerns and to seek advice from colleagues who are familiar with the learning environment of the school.
Valuable resulting professional learning behaviours and cultures	Articulation	To engage in Lesson Study participants need to explain their pedagogic practices and dilemmas, explore their own and others' understanding and express their objectives. Lesson Study is often followed by presentations to wider groups of colleagues, giving teachers a formal platform to contribute to professional knowledge.
	Critique	Lesson Study encourages supportive critique through the co-planning of lessons, consideration of evidence and assumptions, shared observation and peer review. As such the Lesson Study sequence can open up a space for iterative and informed decision-making.
	Expansion	When working well Lesson Study challenges participants' understanding of subject pedagogy, of pupil learning and of their own teaching routines. It can thus support participants to develop new pedagogic approaches with the potential for practices to become more transferable.

Table 2. Enablers of Lesson Study and potential resulting professional outcomes

The two school examples illustrate well how Lesson Study can encourage teachers to talk about, work on and co-construct new practices. These become deeply contextualised by focusing on pupils in the real-life setting of lessons. It is through this context that teachers start to draw on prior experience, interrogate relevant information and data, hypothesise and consider pupils' needs and explore pedagogic principles. In these cases there is evidence that lesson study encouraged the teachers to probe and extend their thinking. In the first school this was probably aided by the fact that the participating teachers were 'early adopters' who continually look to extend their professional experience and commit to the demands of that. In the second example this was supported by the links made between lesson study and school-wide CPD. In both cases there is evidence of success, but it cannot be assumed that Lesson Study is inevitably productive and beneficial, at either individual or school level. As individual teachers engage and learn there is a potential for institutional growth, but this is not automatic. It is most likely to result from a conscious integration of the individual's growth with the organisation's supporting infrastructure.

Conclusions

One of the interesting aspects of the first school case study was the concern that the existing use of action research had not substantially encouraged collaboration between teachers, and the decision to pilot Lesson Study as a way to add this element to the experience of teacher-directed CPD. There is no practical way that Lesson Study can be adopted by teachers as individuals, although there is no guarantee that co-locating teachers in shared time and space directed for Lesson Study will create genuine collaboration. Prior research, which included a focus on student teachers using Lesson Study (Lofthouse & Thomas, 2015) drew on a definition of collaboration as an experience of united labour from which something of value is created or enabled by combined effort. This might be considered as distinct from co-operation, in which it is possible for a group of people to decide how to carve up tasks to complete a whole, only coming together to check individual progress towards the end point and to collate individually achieved outcomes. Of course teachers working in Lesson Study groups could pay it lip service, failing to take significant advantage of it as an opportunity for co-enquiry and co-construction. A study of teachers engaging in Lesson Study in the the Philippines indicated that improvements to teaching were 'sustained through the constant collegial and constructive interactions of the Lesson Study team and the knowledegable others' (Gutierez, 2016, p.813). In the two case studies presented here this interaction seems to have been

achieved. Another quality of the two case schools is that Stef, Colin and Claire all have a background in coaching; having developed and/or studied coaching for a range of professional purposes. As senior leaders, participants and expert others this background may have sustained a focus on quality and characteristics of the professional conversations in the Lesson Study triads.

That does not mean that there are no challenges ahead. In the secondary school a concern would be scaleability. How easy will it be to take the pilot, in which the Stef as senior leader and with the momentum of his Masters module acting as a press, and scale it up to include more colleagues while maintaining focus and quality? Will Stef's recent departure to a promoted post in a new school interupt the progress of Lesson Study as a key form of CPD, or has the pilot created enough legacy to ensure continuity of development? In the primary school the concern might be the sustainabilty of the external faciliation and expertise provided by Claire. In a time of tightening budgets will her role as 'expert other' be maintained, and if it is can her time be used to ensure that there is a sustainable future which secures a succession plan to build on the growing expertise of teachers to support Lesson Study internally?

What is clear is that given the right conditions and senior leader support teachers can gain significantly from working collaboratively through Lesson Study. Their combined effort can be effectively orientated towards the aspects of practice that they experience as creating relevant opportunities for teacher inquiry. The structure seems to help to focus minds and guarantee ideas get taken into practice and collectively reviewed. Lesson Study can create professional conversations and relationships that open classroom doors, infect staffrooms and build confidence and capacity for the changes that teachers themselves want to make.

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4

Professional Learning Communities: Possibilities and Challenges

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Abstract

A Professional Learning Community (PLC) may be defined as a group or network of teachers collaboratively investigating and developing their practice in order to enhance student learning. As a form of collaborative practitioner inquiry, Professional Learning Communities have the potential to professionalise teaching through the development of shared practice, produce context sensitive evidence-based practice, drive systemic improvement, and enable teachers to be knowledge producers and leaders of curriculum development. However, before they can be successful PLCs face a number of challenges. These can include avoiding groupthink, unlearning existing cultural habits and practices, learning how to develop effective relationships, considering how to move beyond individual learning to systemic learning and having a clear view of what the PLC is supposed to achieve. In order to address these challenges, the developmental stages of PLCs should not be neglected nor should the need for the PLC to evaluate itself at the same time as it is inquiring into educational practice.

Key words:

Professional Learning Communities**;** Instructional Rounds; Teacher Rounds

Introduction

Recent decades have seen a rise in the popularity of collaborative approaches to professional development and school improvement that emphasise teachers working collectively in schools to scrutinise practice and data in their own context in order to learn from this. This popularity can be seen both in terms of a proliferation of published research and books intended as guides to developing these practices and also in terms of the popular uptake of approaches in schools and educational jurisdictions (e.g. Welsh Government, 2011). Among the most popular of these approaches have been Professional Learning Communities (PLCs) (Bolam et al., 2005) and various forms of Rounds such as Instructional Rounds (City et al., 2009) and Teacher Rounds (Del Prete, 2013).

Despite the proliferation in publications and practice, PLCs are quite loosely defined. Both the publications and the practice reveal a variety of different approaches within existing PLCs and to the development of PLCs. In part this variety could be attributed to a recurrent educational phenomenon in which terms that become educationally fashionable become appropriated for a diversity of practices, some of which are just the rebranding of older ways of working. Concern has been expressed that the term has become so ubiquitous that it is in danger of losing its meaning (DuFour, 2004, 2007; Owen, 2014; Watson, 2014). In an attempt to restore clarity to this 'confusion about the fundamental concepts' (Dufour, 2004, p.6) Dufour offers three 'big ideas' that define PLCs:

1. Ensuring that students learn; a shift from a focus on teaching to a focus on learning;
2. A culture of collaboration; "a systematic process in which teachers work together to improve their classroom practice" (ibid, p. 9).
3. A focus on results through the analysis of student performance data

Placing more emphasis on teachers and teaching, Stoll et al., based on their comprehensive literature review of PLCs, acknowledge that 'there is no universal definition of a professional learning community' (2006, p. 222) but suggest five key characteristics that define PLCs:

1. Shared values and vision
2. Collective responsibility
3. Reflective professional inquiry
4. Collaboration
5. Group as well as individual learning is promoted.

Instructional Rounds or Teacher Rounds have been closely associated with the development of professional learning communities. Initially, Rounds approaches to professional development were tightly defined by protocols. This tight definition is apparent both in the literature relating to Rounds (City et al., 2009) and in early implementations of the approach in practice (Roberts, 2012). In part, the Rounds approach styled itself as a solution to the limitations of a number of other forms of school-based collaborative professional development, such as learning walks. However, even early on there were signs that the growing popularity of the term and the practice was leading to it being appropriated for practices that were not always consistent with the original rationale for Rounds (e.g. Marzano, 2011; Guild, 2012) and that duplicated some of the problems of collaborative school-based professional development that the Rounds approach was supposed to overcome (City et al., 2009). This tendency to appropriation has become even more apparent recently. The varied content of a special edition

of the *International Journal of Educational Research* on Rounds (Volume 73, 2015) suggests it is becoming a label attached to a diversity of practices some of which are contrary to the initial design(s) of Rounds and some of which relabel long standing practices with the intention of catching the zeitgeist.

In an attempt to restore clarity to the idea of Rounds that Dufour wanted to restore to PLCs, Rounds can be defined as

- Focused on student learning (and its relation to changes in teaching and lesson content)
- Concerned with the generation and analysis of empirical data about student learning
- Promoting systematic collaboration between educators
- Seeking to promote shared culture and knowledge among educators
- Concerned with group or systemic professional learning not just individual professional learning.

Because of the strong similarities between PLCs and Rounds, and because of the relatively loosely defined nature of PLCs, it is reasonable to view Rounds as a particular approach to creating and conducting PLCs. For this reason this chapter will draw on arguments and evidence relating to practices that style themselves as PLCs and those that style themselves as Rounds. It will use PLCs as a generic term that includes Rounds.

The rest of this chapter will consider the potential of PLCs as a method of teacher learning through inquiry, some of the challenges they face in realising that potential and what the responses to those challenges might be. Part of the challenge for Professional Learning Communities is the wider high accountability policy framework in which so many schools are working (Ball, 2013). The section on challenges is longer than the one on potential. This should not be taken as a negative judgment on PLCs. It is more a response to the fact that the current popularity of PLCs suggests their potential might already be more apparent than their challenges.

The Potential of PLCs

The popularity of PLCs can be linked to the ways that they potentially address some of the perceived and actual shortcomings of traditional forms of educational practice and professional learning.

One of the identified shortcomings of teaching practice and professional development has been the relative isolation in which teachers have traditionally worked within their own classrooms (Palincsar, 1999). The imperative of PLCs is to 'de-privatise' practice so that reflection on, and improvement of, teaching

can become a collective endeavour and can contribute to the development of collective knowledge. Proponents of Rounds approaches have seen this historical tendency to individualised practice as undermining the very status of teaching as a profession because it results in teaching lacking a commonly agreed language and set of practices that other professions are believed to have (City et al., 2009). One result of this is an unhelpful diversity and fragmentation in classroom practice and the absence of the conditions and shared conceptual resources necessary to enable collective improvement. Within PLCs collective language and practice is developed through the generation and close scrutiny of shared empirical evidence. This process addresses another perceived shortcoming of teaching practice, that it is too often based on habit, tradition, personal preference and fads and not sufficiently based on robust evidence.

This concern with generating and carefully scrutinising evidence links PLCs to the broader development of interest in evidence-based teaching and to attempts to model teaching practice and professional development on medical models. Rounds approaches, in particular, explicitly claim to be based on doctor's medical rounds. Rounds approaches have also played a part in clinical practice models of professional learning (Conroy, Hulme & Menter, 2013).

This is another potential advantage of PLCs. Debates about evidence-based teaching, often styled as the 'what works' agenda, have argued that what is intended in practice by the deceptively unexceptionable term 'evidence-based teaching' is unclear. Some have argued that it could mean that teaching practices are centrally prescribed, possibly on the basis of large scale quantitative studies. This approach, its critics say, runs the risk of prescribing uniform practice across diverse settings and could also be used as a way of holding teachers to account; teacher practice will have to conform to central mandates or be labelled as wilfully substandard (Clegg, 2005). PLCs have the potential advantage of generating evidence for evidence-based teaching in a more context sensitive way. They also position teachers as knowledge producers rather than just implementers of other people's knowledge. The link with clinical practice models also gives PLCs the potential to be a locus for managing the traditionally problematic relationship between theory and practice in teaching. In clinical practice models research knowledge is brought to bear on, and tested in dialogue with, specific problems of practice in particular locations to the mutual benefit of both.

Another possible benefit of PLCs, related to the theory/practice divide, can be found in the belief that teachers are the best providers of professional development for other teachers. This belief arises in part from the difficulty of implementing in practice the relative abstractions of much educational theorising. Teachers participating in professional development though universities may find it difficult to translate the content of such courses into practice that they find

credible in their own context. Learning about practice from other colleagues and schools, therefore, has more credibility and is seen as more readily transferrable and applicable.

So in summary, PLCs potentially professionalise teaching through generating collective knowledge, concepts and language, base teaching on robust, but contextually sensitive, evidence, give teachers a role as knowledge producers and address the theory/practice gap. They also share the characteristics of forms of professional development that have been identified having the most beneficial impact on practice. These are that is sustained and intensive; that it focuses on specific curriculum subject matter; that it is integrated into the daily practices of the school; that it is consistent with wider goals (for example, the school or district); that it involves active learning and that it is collective (Garet et al., 2001; Boyle, While & Boyle, 2004; Penuel et al., 2007).

Given all these potential benefits it is not surprising that PLCs have grown in popularity with teachers, academics and governments. However they are not without their problems and without their critics. The next section of this chapter will explore some of the challenges that PLCs face.

Challenges for PLCs

In the last section one of the suggested potential benefits of PLCs was that they can empower teachers to be knowledge producers and to avoid central prescription for practice. However, some have argued that this is an illusion. In practice, critics argue, PLCs are a process through which teachers are co-opted into implementing teaching practices over which they have no control. The illusion of collegial co-operation and involvement obscures the reality that the most important decisions about educational practice are taken elsewhere and all that PLCs are required to do is find the most efficient way of implementing them. In the process teachers apparently willingly engage in, and therefore subscribe to, educational reforms over which they have no control. They become complicit as collaborators while imagining increased professionalization and respect (Bottery, 2003; Codd, 2005; Fendler, 2006; O'Keefe, 2012; Stickney, 2015; Ellis at al., 2015)

This criticism has been linked to the distinction between transforming and reforming educational practice (Servage, 2008). Transforming educational practice involves questioning, and possibly changing, its most fundamental characteristics. For example, what is our underpinning philosophy? What are our values? What are we trying to achieve? What are the identities and relationships of participants in the process? How are outcomes best appraised? Reforming educational practice is limited to finding more effective ways of delivering

outcomes (with their related philosophy, values and identities) which are not themselves called into question. Nor are the criteria for measuring them. In practice, it is argued, PLCs are limited to reformation, diverting attention away from the fundamental questions and encouraging adoption and use of concepts, discourse and values that have been centrally prescribed (Bottery, 2003; Codd, 2005; Servage, 2008, 2009; Roegman & Riehl, 2015)

This criticism is connected to a view that PLCs tend to subscribe (perhaps inadvertently) to a positivist, 'what works' view of educational enquiry. By focusing on empirical data, often limited to attainment data, PLCs ignore or obscure the importance of more fundamental ontological and epistemological frameworks and questions about those. Put simply, they do not engage in fundamental questions about what educational phenomena are important and meaningful or how we best find out about educational processes. They limit themselves to technical questions about effective implementation and pursuit of mandated goals. This might be more than just a matter of choice. Some have seen a tension, or perhaps an outright contradiction, between the emphasis on improvement and the emphasis on learning evidence-based practice, which can include PLCs (Hammersley, 1997). Improvement is focused on short term pragmatic, measurable gains in outcome and, therefore, may not be inclined to ask fundamental questions about the assumptions and implicit theories that underpin existing practices or methods of assessment. However, learning requires that we seek to build more comprehensive theories about, or models of, how the world works. This requires a longer time scale and a different relationship between empirical data and theoretical frames. It might not result in immediate improvements in practice or outcome. It might require a more thoroughgoing change in how we conceptualise and in what we do rather than just pragmatic adjustments within a largely unchanged practice context.

Recognising the role of explicitly articulated theories or models in educational practice is also connected to the emphasis in PLCs on collective and systemic learning not just on individual learning. Many traditional approaches to professional development focus on developing the knowledge of individual teachers. They have also often been limited to disseminating existing knowledge. PLCs have the possibility of generating new knowledge and they have the intention of increasing knowledge in the system not just in the heads of individuals. This raises the question of how knew knowledge is captured and disseminated systemically. Instructional Rounds (City et al., 2009) emphasise the importance of a 'theory of action' as an explicit statement of our assumptions about causality in the classroom that can be tested against observations in the classroom. A revised theory of action can be a vehicle for capturing and disseminating knowledge through a system. A similar point is made by Ellis

et al. (2015) in relation to Rounds about the importance of educational theory for making new knowledge portable, not just useable where it was generated. However, it is not always the case that theories are made explicit in PLCs. This is a point that relates to the earlier one about PLCs adopting (at least implicitly) a positivist what works approach that may take implicit (and therefore normalised) theories or models as a given. So a question we need to ask is, are PLCs engaged in localised modifications of practice, the generation of tips for teachers or are they contributing to the collective sum of knowledge the profession has?

Stoll et al's (2006) literature review identified shared values and vision as one of the defining features of PLCs. However, shared values and vision can also be an obstacle to some forms of learning. They can lead to 'group think' through the lack of alternative voices and viewpoints. It can be the shared values and vision that lead to the acceptance, rather than the questioning, of already dominant ways of conceptualising practice and problems. This can contribute to the short term pragmatic problem solving aspect of PLCs rather than to them fostering deeper learning. In medicine, some researchers have argued that Doctors' rounds, the claimed model for Rounds in education, conceptualise patients' needs in unhelpfully narrow ways when they only involve doctors (Weinholtz, 1991; Birtwistle, Houghton & Rostill, 2000). Similarly, research on working groups in commerce and industry has argued that constructing deliberately diverse groups is important if you want them to produce innovation (Bowers, Pharmer & Salas, 2000; Horwitz & Horwitz, 2007). The need for diversity, as well as some shared perspectives, has also been stressed by some researchers into PLCs.

In addition, some research into developing evidence-based practice in public health suggests that evidence-based practice is mostly successfully developed where networks of institutions work together rather than work being carried out within just one institution. Furthermore, the diversity of those networks seems to contribute to their success. So the more diverse the group of institutions involved, the more likely evidence-based practice will be successfully developed. In fact those networks that involved universities as well as professional practitioners were found to be the most effective in developing and implementing evidence-based practice (Hunt et al., 2012; Mays et al., 2013; Mercken et al., 2015).

The contribution of universities to the successful development of evidence-based practice in public health highlights another aspect of the importance of diverse voices and explicit consideration of educational theories or models. One of the values of teacher inquiry, including the kind of collaborative inquiry envisaged by PLCs, is the development and exercise of teacher agency. Teacher agency can be defined as "the power of teachers (both individually and collectively) to actively and purposefully direct their own working lives within structurally determined limits" (Hilferty, 2008, p.167). Hilferty's reference to structurally

determined limits is important as it highlights the way in which agency arises out of the interaction between people and the practices and structures with which they work. We might ask, where are the opportunities and the resources for agency in our practices? Some academics have seen PLCs as a possible resource or affordance for teacher agency (Masuda, 2010; Lipponen & Kumpalainen, 2011; Riveros, Newton & Burgess, 2012); a practice in which teachers can generate knowledge and direct their practice. However, as indicated earlier in this chapter, others have argued that PLCs are a way of co-opting teachers to an agenda over which they have no control while creating the appearance of agency. This difference of opinion rests on the extent to which PLCs can enquire beyond technical solutions to given problems and can play a role in reconceptualising practice; the distinction between reforming and transforming practice made earlier in this chapter.

Among the affordances that have been suggested as enabling teacher agency is the ability to move among different conceptual or discursive repertoires (Reeves & I'Anson, 2014; Biesta et al., 2015; Bridewell-Mitchell, 2015). These differing repertoires can be provided by published educational research and theory or they can be provided by the participation of colleagues for whom they are a more familiar part of their professional knowledge. These can be colleagues from partner universities or they could be colleagues within schools who are pursuing or have completed further academic study with partner universities. The use of diverse academic repertoires not only provides room for manoeuvre for different ways of conceptualising it can also lend authority to different ways of thinking about practice to counterbalance that apparently authoritative account of policy discourse (Philpott & Oates, 2016a). The developers of Learning Rounds, for example, identified the importance of using published research as part of the work of PLCs to help conceptualise data arising from observations. However, this seems largely underemphasised in both the literature and practice of PLCs. For example, Stoll et al. (2006) feel it necessary to add "looking beyond the school for sources of learning and ideas" (227) to the list of features that they identify as frequently being cited as necessary for effective PLCs, which suggests it was not that commonly recognised in existing PLCs.

So, perhaps counterintuitively, whereas part of the appeal of PLCs might be the idea that teachers working independently empowers them, it could be that teachers working alone are more susceptible to being constrained by the dominant discourses of their professional context. Of course, this is not unique to teachers and could be true of any profession. Consider, for example the observations about medical doctors earlier in this chapter and those about working groups on commerce and industry. In terms of teacher enquiry, the practice of PLCs can be seen to exemplify a recurring concern in learning theories with the necessity

of moving beyond closed systems or loops in thinking. For example Argyris and Schön's double loop learning (1978), Engeström's expansive learning (1987) and the idea of boundary crossing in communities of practice (Wenger, 1998) all share a concern with the necessity of finding ways out of bounded systems of thinking for the most effective professional learning to take place. In relation to teacher communities as a resource for professional learning, a number of researchers question whether the internal resources of the community are considered sufficient for learning or whether, external input is needed for thinking and practice to move forward. Little (2003; Horn & Little, 2010) asks whether teacher communities reify or interrupt the language of practice; do they give existing ways of conceptualising practice the appearance of objective reality through constant repetition, or do they call them into question with alternatives. This takes us back to the earlier point about teachers being co-opted as collaborators in an agenda they do not set. The collective repetition of the concepts and categories of the dominant discourse of mandated practice might give them a reality that they do not merit. With each repetition they become more entrenched and normalised.

A further challenge for PLCs is presented by researchers who suggest that teachers involved in them are often more interested in collaborating as an end in itself than they are in identifying a specific outcome for the community beyond collaboration (Allen, 2013). City at al. (2009), in relation to Learning Rounds, emphasise the importance of developing a 'problem of practice' as the focus for enquiry. Considerable work needs to be put into articulating what the PLC will be looking at. Like any research question this needs to be clear, focused and manageable. It also needs to be based on existing evidence of what is important, not just plucked from the air.

Challenges have also been identified in the nature of observations of practice that take place as part of PLCs. In some respects the observations that are required for PLCs to learn run counter to what might be established habits of observation in the classroom. City et al. comment that the hardest thing is to get teachers to look at what pupils are doing rather than what teachers are doing. The practice of observing teachers teaching seems to be more well-established than the one of looking, in detail, at evidence of pupils' learning. The challenge is to attend equally to all three parts of the instructional triangle (Horn & Little, 2010) or core (City et al., 2009) of teaching and learning (what the teacher does, what pupils do and the material of the lesson) and how they are related to one another. Another challenge is to get observers to move beyond seeing molar units (Philpott & Oates, 2016b) of classroom behaviour in order to see more fine grained actions (City et al., 2009). For example, not to see pupils participating in 'peer assessment' but to be able to notice the smaller constituent parts of what happens during peer assessment. Similarly, in her work on teacher

community, Little comments on the importance of transparency for teacher talk within communities to be an affordance for learning. Little (2003, p.920) defines transparency as "the degree of specificity, completeness, depth and nuance of practice apparent in the talk". In contrast, many teachers' accounts of practice "rely heavily on a certain shorthand terminology and on condensed narratives that convey something of the press of classroom life without fully elaborating its circumstances or dynamics" (2003, p.936). The final challenge identified for observation is not to move prematurely to evaluating what is seen. Evaluations need to be based on clear and robust evidence, so the first task is to make sure that the empirical evidence is clear before judgements are made on the value of what is seen. Evaluating is another well-established habit when observing classrooms rather than deferring evaluation until clear evidence has been generated.

The ways in which the requirements of observation might be a challenge to some well-established ways of doing things draws attention to the nature of PLCs as possibly countercultural practices (City et al., 2009; Roberts, 2012). In relation to Rounds particularly, claims have been made that the countercultural nature of their practices make them difficult and sometimes even uncomfortable. In fact it is claimed that it is precisely the most difficult and uncomfortable aspects of Rounds that make them effective. Similar claims have been made about the countercultural nature of PLCs more generally (e.g. Nehring & Fitzsimmons, 2011). The effect of this countercultural nature on PLCs is that they can be difficult to develop effectively and to sustain because the habits and relationships of the surrounding cultural context may be pulling in a different direction. City at al. write about the "pull to the black hole" which is the tendency of PLCs (Rounds in their case) to revert to the practices of the dominant culture if we are not vigilant. The goal of these approaches is sometimes to rebuild the existing culture not function within it. One particular aspect of this cultural challenge can be the ways in which teachers' well-established social community is mistaken for a well-established professional community (Maloney & Konza, 2011). This results in underestimating the challenges of being able to speak openly about disagreements in practice, which might be perceived as doing damage to social relationships, and therefore abandoned. One paradox is that the closer we work together the more we might find to disagree about in one another's practice (Dooner, Mandzuk & Clifton, 2008; Nehring & Fitsimmons, 2011; O'Keeffe, 2012; Allen, 2013; Owen, 2014).

However, claims about the countercultural nature of PLCs need to be treated with some caution as it can be debateable which culture they are counter to. In some of the literature it appears that PLCs are considered counter to (what is perceived as) teachers' culture but not necessarily counter to a managerialist culture of accountability. Concerns have also been raised about why attempts

are often made to reconstruct teachers' culture from outside (Joyce, 2004) and the effects of giving teachers regular 'makeovers' (Vongalis-Macrow, 2007). It is interesting to note those cases in the academic literature where PLCs are 'imposed' on teachers by managers rather than being developed from the grassroots. Adverse comments have been made about the enforced collegiality of this approach and the consequences for, or perceptions of, those not wishing to participate (Riveros, Newton & Burgess, 2012; Stickney, 2015).

The challenge of participating in PLCs as an end in itself and the challenge of the 'pull to the black hole' can both be exacerbated by 'pedagogisation' (Watson, 2014). This is a process through which PLC participants learn how to carry out the surface procedures of being in a PLC without necessarily having a deep enough understanding of what those procedures are supposed to achieve. This risk of pedagogisation might be particularly prevalent where PLCs have been mandated by management rather than being developed from the grass roots. Pedagogisation can result in PLC participants being less aware that the PLC practices are not resulting in the outcomes that were intended. Some researchers have commented that many PLCs would benefit from carefully evaluating their own functioning periodically as well as scrutinising phenomena external to them (Joyce, 2004; Thessin & Starr, 2011). There is also considerable scope for acknowledging where PLCs have failed to deliver their potential and trying to learn why this was the case (Riveros, Newton & Burgess, 2012; Sims & Penny, 2014).

Responding to challenges

PLCs clearly have much potential as vehicles for teacher enquiry. However, the message of the preceding section is that the challenges of establishing effective PLCs should not be underestimated if they are to realise that potential. They are not a quick fix. They are about culture change and that can take longer.

One of the key responses to the challenges outlined above is to try to ensure a diversity of perspectives in the PLC to avoid the risks of 'groupthink'. People from within one work team or with existing shared perspectives on practice run the risk of becoming mutually reinforcing. In addition to striving for individual diversity, it can also be important to try to ensure institutional diversity. For this reason, it is useful to use a network of institutions as the source for a PLC, particularly institutions that might bring different expertise or perspective to the same practices. This is why institutional networks that include universities as well as frontline practitioners have been effective in developing evidence-based practice in public health. An important question is whether there are

sufficient resources within the PLC to move practice forward. Where will new practice come from or will the PLC just become a pooling of existing knowledge and practice? As well as individuals and institutions, external perspectives can also be brought in through the consideration of published research and through members of the PLC who are engaging with other communities, such as those who are studying for higher or research degrees.

The deliberate incorporation of diversity can bring with it challenges in terms of learning how to articulate and negotiate disagreements honestly and productively. Much research on PLCs, and other kinds of professional community, has identified that existing social relationships within the professional community can make it difficult to disagree professionally on fundamental issues. One of the particular challenges can be detaching practices from individuals, so that questioning one is not criticising the other. This challenge needs to be acknowledged and worked with. This means that PLCs should not underestimate the work they might need to put into the developmental stage and the importance of monitoring this carefully and honestly.

The importance of acknowledging the time and work needed in the developmental stage also relates to the challenges of observing what is happening in classrooms in useful ways. Some of these can be counter to well-established practices in classroom observation such as watching what teachers do more than what learners do and moving quickly to evaluative statements about practice on the basis of unclear or insufficient evidence. It can also be a challenge to notice things in the classroom in a sufficiently detailed and fine grained way for these observations to provide useful data. Once again, this takes time and careful monitoring to develop observational practice as effectively as possible.

The need to pay explicit attention to the developmental stages of a PLC can be hindered by pedagogisation, in this case an insufficient understanding of why particular ways of working within the PLC might be important. Therefore, it is important that PLC members do not see PLC processes as a prescribed and fixed recipe but understand the principles that underpin them. This will allow them to monitor how effective they are being and to modify them if necessary. It is important that PLC participants feel that that have ownership of the process and not that they have to obey its apparent rules. However it is also important to be vigilant that this ownership does not result in the 'pull to the black hole' of reverting to old and unproductive ways of working. This is where being clear about why PLC practices are supposed to be beneficial is important, so that ownership results in PLC practice moving forwards rather than backwards.

Being clear about the purposes of PLC activity, rather than reifying them as an end in themselves is also related to how clear PLCs participants are about what the PLC is trying to achieve, beyond just meeting as a PLC. This requires that

participants have a clearly articulated focus for learning about and improving practice. Like any research focus this needs to be manageable and possible within the data that can be generated within the PLC. It also helps if it has grown out of existing data about practice that shows that something needs to be addressed, rather than being based on fads or personal preferences.

As well as resulting from 'group think', narrowness of scope can also result from too limited a conception of what counts as data for PLCs. Data should not be limited to assessment outcomes but should also include other forms of data such as qualitative data about, for example pupil language, interactions, behaviours and attitudes. It also helps to recognise that PLCs can scrutinise and discuss issues of values and underlying philosophies in pedagogical practices as well as issues of attainment.

Broadening the scope of PLC observations beyond a pragmatic focus on improved efficiency in implementing prescribed pedagogy can also be enhanced by explicit articulation of assumptions about cause and effect in classrooms. What are our existing assumptions about the relationship between popular or common pedagogical practices and the effects we think they are going to achieve? Explicitly articulating these helps us to test them and also to consider alternatives.

Conclusion

PLCs are potentially powerful vehicles for teacher enquiry that promise to increase collective knowledge and move practice forward across the profession. However, to realise their full potential it is necessary to do more than just gather a group of people together and get started. It is necessary for teachers and school leaders to determine through collaborative work:

- What is the purpose and focus of our PLC's work?
- How will we support the development stages of the PLC?
- How will the PLC provide new insights into practice for members?
- How will the PLC enable teachers to share practice and pursue critical inquiry within the current professional culture in the school and the wider policy framework?
- How will we capture and disseminate new knowledge created within the PLC?
- How will we monitor and develop the practices, culture and outcomes of the PLC?

It is only through recognising that PLCs are not a quick fix and that they require sustained work, critical reflection, monitoring and time to develop that their potential will be realised.

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5

Enhancing Professionalism in Education Through Inquiry Learning: a Living Theory Research Approach.

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Abstract

Here we present a rationale for enhancing professionalism through Living Theory research drawing on the accounts of practicing teachers to provide examples of evidence-based explanations of educational influences in learning. This rationale has emerged in the course of researching and answering questions of the kind 'How do I improve what I am doing in my professional practice?' and generating living-educational-theories (Whitehead, 1989) as valid explanations of our educational influences in our own learning, in the learning of others and in the learning of others with values that carry hope for the flourishing of humanity. We show how teachers are able to realize in practice two responsibilities they have as professional educational practitioners. The first is to continually inquire into their practice to understand, explain and improve it. The second is to create and make public valid accounts of their educational influences in learning as contributions to the development of an educational knowledge-base.

Key words

Professionalism, teacher inquiry, Living Theory research, inquiry-learning.

Introduction

This chapter is based on a critical analysis of the nature of educational inquiry, its role in the generation of educational theory and its contribution to enhancing professionalism in education, locally, nationally and internationally. It includes an analysis of Masters and Doctoral accounts produced by teachers inquiring into their professional practice to improve it. These inquiries are shown to make original contributions to educational knowledge, as teachers, using a Living Theory research approach, develop their professional educational practice through inquiry learning, by asking, researching and answering questions of the form 'How do I improve what I am doing?' Living Theory researchers integrate

insights from the most advanced social theories of the day in the generation of their living-educational-theories.

We begin with discussing teachers as professional educators asking and researching questions concerning their practice. Our thinking owes much to the ideas of Peters (1966), Gadamer (1975) and Collingwood (1939). Peters and his colleague, Hirst, focused their professional development programmes with teachers on promoting the 'disciplines approach' to educational theory. In the 'disciplines approach', the philosophy, sociology, history and psychology of education constitute educational theory. Teachers were expected to take these education theories created by education researchers and apply them in their practice.

Whitehead started his career teaching science in an inner city comprehensive school and continued to study in the evening. A team of philosophers of education, including Peters, tutored The Academic Diploma course (1968-70). At the end of the course Whitehead accepted the disciplines approach and went on to study for his Masters in the psychology of education (1970-72) during which he recognised a limitation in the disciplines approach. The limitation Whitehead recognised was that the disciplines approach could not produce a valid explanation for his educational influences in his own learning or in his pupils' learning. He also recognised the mistake in the disciplines approach, later explicated by Hirst (1983, p.18):

> In many characterisations of educational theory, my own included, principles justified in this way have until recently been regarded as at best pragmatic maxims having a first crude and superficial justification in practice that in any rationally developed theory would be replaced by principles with more fundamental, theoretical justification. That now seems to me to be a mistake.

Whitehead (2016a) now sees this kind of intentional replacement as a form of 'epistemicide' (de Sousa Santos, 2014). Whitehead went on to distinguish between education and educational research. Education research is focused on developing conceptual frameworks and methods of validation within the disciplines of education, and theory generation is in the form of abstract, conceptual, generalisations. Educational research is focused on making public valid knowledge generated by educational practitioners inquiring into their practice to explain and improve their educational influences in learning, and theory generation is in the form of the valid values-based explanations of the educational practitioner for their educational influences in learning, which are relatable rather than generalisable. In education research researchers attempt to generate explanations for the educational influences of individuals 'derived' from the abstract conceptual frameworks of the disciplines of education. In educational

research the explanations for educational influences in learning (living-theories) are generated by individuals researching their educational practice, in the course of which they engage critically and creatively with theories and knowledge in other fields and disciplines.

As a result of recognising the mistake of trying to apply the 'disciplines approach' to educational research Whitehead began on his journey that lead to the creation of a Living Theory research approach for developing educational knowledge and theory. In Living Theory research, teachers, and other professional educational practitioners, recognize and inquire critically and creatively into their embodied knowledge, in order to improve their practice and contribute to the development of a professional educational knowledge base. What distinguishes living-theories (Whitehead, 1989) are the embodied ontological and relational values of the researcher that carry hope for the flourishing of humanity and give their lives and work meaning and purpose. The meanings of an educational practitioner's values are clarified as they emerge in the course of their Living Theory research and form their explanatory principles and standards of judgment. The phrase 'flourishing of humanity' is used to communicate at least two meanings; the flourishing of 'humanity' as a species and of the flourishing of each person's humanity as well as that of communities.

We wish to emphasise that in the generation of a living-educational-theory educational researchers use insights developed through critical and creative engagement with theories from the disciplines of education. However, we are claiming that no theory from the disciplines, either individually or collectively can produce a valid explanation of an individual's educational influence in their own learning, in the learning of others and in the learning of the social formations that influence practice and understanding.

We are also claiming that each Living Theory researcher generates their own living-theory methodology in the course of generating their living-theory. Later in the chapter we show how a researcher's living-theory methodology can be distinguished from other methodologies, such as Case Study, Action Research, Autoethnography, Narrative Research, Grounded Theory and Phenomenology whilst drawing insights from them, (see: Whitehead, 2016b and Huxtable, 2016, for further details).

As the chapter progresses we detail the place of inquiry learning and Living Theory research within teacher education and development, beginning with a '*Schools Council*' funded project on inquiry learning in 1976. This project marked Whitehead's learning from teachers on their use of action-reflection cycles in improving inquiry learning. We provide a critical analysis of this and other Living Theory research conducted by teachers to show the contribution of their inquiries to the professional learning of teachers in the context of political,

socio-economic and cultural national changes in contributing to the growth of educational knowledge in the educational knowledge-base.

An analysis of empirical evidence of a Living Theory research approach, to the professional development of teachers, reveals an educational epistemology for educational inquiry based on explanatory principles that include values that carry hope for the flourishing of humanity. The explanatory principles are those of a 'substantive theory' (Punch & Oanacea, 2014) in that they explain the educational influences of an individual in their own learning, in the learning of others and in the learning of the social formations that influence practice and understandings.

We conclude this chapter by showing how teachers engaging in Living Theory research and progressing through Masters and Doctoral inquiries are able to realize in practice two responsibilities they have as *professional* educational practitioners.

Teachers as professional educational practitioners

'Teacher' and 'professional educational practitioner' are often taken to be synonymous but this is not necessarily the case. This can be seen in Winch's (2013) paper where he answers his question, *What Kind of Occupation is Teaching*? He distinguishes between teacher as craftworker, executive technician and professional, but makes no reference to teachers' roles and responsibilities to realize the educational purpose of education or the form or value of their contribution to the evolution of an educational knowledge base. Winch's writing, like so much of researchers in education, loses touch with what education is about. Ginott (1972) graphically illustrates the importance of teachers keeping focussed on the core meaning of education as they also seek to be effective instructors:

> Dear Teachers:
> I am a survivor of a concentration camp. My eyes saw what no person should witness. Gas chambers built by learned engineers. Children poisoned by educated physicians. Infants killed by trained nurses. Women and babies shot and burned by high school and college graduates.
> So I am suspicious of education. My request is: help your students become more human. Your efforts must never produce learned monsters, skilled psychopaths, or educated Eichmanns. Reading, writing, and arithmetic are important only if they serve to make our children more human. (p. 137)

In addition education is concerned with learning to recognise and value self and others and their contributions to the flourishing of humanity. Fukuyama says it eloquently:

> Human beings seek recognition of their own worth, or of the people, things, or principles that they invest with worth. The desire for recognition, and the accompanying emotions of anger, shame and pride, are parts of the human personality critical to political life. According to Hegel, they are what drives the whole historical process. (Fukuyama, 1992, p. xvii)

Educational practice is a values-based activity. These are values Crompton (2010) refers to as intrinsic and are those that include, "the value placed on a sense of community, affiliation to friends and family, and self-development." (p.9). That is what makes Living Theory research particularly appropriate for educational practitioners. In the course of their research the Living Theory researcher clarifies the values that give their life and work meaning and purpose and which form their explanatory principles and standards of judgment. These standards are 'living' (Laidlaw, 1996) as the researcher's values are 'living' that is 'evolving' as the researcher inquires into their practice to understand, explain and improve it.

Trying to develop practice that expresses our own values-based standards while, at the same time, meeting other externally imposed standards, may at times create tension for the educational practitioner. A Living Theory researcher, rather than ignoring or waiting for 'better times', will focus on how they may work to resolve such tensions while living their embodied values as fully as they can.

There are different ways to understand the teacher as a professional educational practitioner in education. One responsibility of a professional educational practitioner is to continually inquire into their practice to learn how improve it. Another of their responsibilities is to contribute to, and draw on, an educational knowledge-base and other related knowledge-bases, such as those of the disciplines of education. An example is offered by Huxtable's doctoral thesis (Huxtable, 2012) in which, amongst other things, she draws on, and hopes to contribute to, the evolution of psychological theories of 'gifted and talented education', while contributing to the evolution of Living Theory research as an educational knowledge-base and social movement. We think that it is worth emphasising our distinction between the education knowledge-base that is constituted by the theories of the disciplines of education and the educational knowledge-base that is constituted by living-educational theories. Living Theory researchers engage critically and creatively with the theories in the education knowledge-base created using a 'disciplines approach' to draw insights from

these theories to enrich and challenge their thinking and practice and enhance the rigour and validity of the educational knowledge they create in the form of accounts of their living-theories.

The examples below illustrate how a teacher can realise their responsibility to enhance their professionalism in education by adopting a Living Theory research approach.

Inquiry learning

We believe that at the heart of inquiry learning is the art of questioning and imaginative, generative dialogues. Whilst our understanding of inquiry learning is not restricted to scientific inquiry we agree with Medawar, a Nobel Prize winner, when he writes:

> The purpose of scientific enquiry is not to compile an inventory of factual information, nor to build up a totalitarian world picture of natural Laws in which every event that is not compulsory is forbidden. We should think of it rather as a logically articulated structure of justifiable beliefs about nature. It begins as a story about a Possible World – a story which we invent and criticize and modify as we go along, so that it ends by being, as nearly as we can make it, a story about real life. (Medawar, 1969, p. 59)

Collingwood reinforced our focus on the question, 'How do I improve my practice?':

> Whether a given proposition is true or false, significant or meaningless, depends on what question it was meant to answer; and anyone who wishes to know whether a given proposition is true or false, significant or meaningless, must first find out what question it was meant to answer (Collingwood, 1991, p. 39)

Gadamer expresses the quality of conversation we aspire to:

> To conduct a dialogue requires first of all that the partners do not talk at cross purposes. Hence it necessarily has the structure of question and answer. The first condition of the art of conversation is ensuring that the other person is with us. ... To conduct a conversation means to allow oneself to be conducted by the subject matter to which the partners in the dialogue are oriented. It requires that one does not try to argue the other person down but that one really considers the weight of the other's opinion. Hence it is an art of testing. But the art of testing is the art of questioning. For we have seen that to question means to lay open, to place in the open. (Gadamer, 1975, p. 367)

We include these insights in our meaning of inquiry learning and Living Theory research in the sense that we see such a theory as 'a story which we invent and criticize and modify as we go along, so that it ends by being, as nearly as we can make it, a story about real life' (ibid). We are careful to be as precise as we can as to the question(s) our inquiries are intended to answer, such as 'How do I improve what I am doing?', 'How do I explain my educational influences in learning?' and that emerge through our research. We also recognise the importance of making explicit the living logics (Whitehead, 2013) in explanations that are grounded in the dialogues and dialectics of question and answer.

A Living Theory research approach to enhancing professionalism

There are many different forms of practitioner-research, each distinguished by the nature of the practice the person wants to enquire into and the questions they want to ask. Living Theory research is a form of educational practitioner-research to answer questions of the form, 'How do I improve what I am doing and live my values as fully as I can?' Researchers' practice is commonly, but not limited to, that concerned with generating knowledge of a field or discipline. 'Educational' practice is concerned with learning and with living human qualities and values, such as love, that contribute to the flourishing of humanity.

We have found that the meanings communicated through printed text are too limited to communicate the meanings of the energy-flowing, and relationally dynamic (Whitehead, 2013, p.1) ontological values that can be clarified in the course of their embodied expressions in educational practice. This recognition led to the development of a method of empathetic resonance (Huxtable, 2013), using visual data of practice to communicate their meanings. Such visual data has been included as evidence in multimedia narratives such as those of Jones (2009) and Mounter (2008b) in their Masters dissertations and Huxtable (2012) in her doctoral thesis.

Living Theory research is also a form of self-study in that the 'I' of the researcher is at the heart of an enquiry, 'How do I improve what I am doing?' Whilst each living-theory is a self-study, not all self-studies are living-theories. This is because a researcher can engage in a self-study, as demonstrated by the work of Tidwell, Heston & Fitzgerald, (2008), without producing a validated explanation of their educational influences in learning. The self in Living Theory research is not considered to be an isolated, self-serving one but rather one that is both an expression of their unique individuality and their relational self in the Ubuntu sense (as described by Charles, 2007) of 'i am because we are'

together with 'we are because i am' and together this can be represented by i~we~i (Huxtable, 2016).

Implicit in the question, 'How do I improve my practice?' is the assumption that you know what your practice is. A Living Theory researcher continually questions such an assumption to better understand what they are doing and reveal unintended, often unnoticed, consequences. Whitehead (1989) learned that what you think you are doing and what you are actually doing is not necessarily the same thing when teaching. In 1970, when teaching science, Whitehead was given a video camera by the Inspectorate to explore its potential for improving science education. He turned it on himself and found that while he thought he had inquiry learning going in the classroom he was unwittingly giving his pupils the questions. His imagination immediately started to create ways in which he could realize his value of inquiry learning more fully and the video-data showed that he was doing this.

A second point concerning self-study is the explicit acknowledgement that a person's presence always has an influence and it beholds an educational practitioner to learn more what that is and how to enhance the educational influence they want to have. If you doubt that a person's presence (and that is not always in the form of a physical presence) has an influence, think about a person you know who brings sunshine or storm clouds with them when they enter or leave a room or organisation; a person who seems to do little or nothing yet has a recognisable influence, for better or worse. Educational practitioners are seeking to improve what they are doing within a social context that is subject to networks of sociohistorical and sociocultural influences. Education is a complex business that involves many, forever evolving, relationships. Hence, Living Theory researchers need make clear the relationships and sociocultural and sociohistorical contexts that influence their lives and practice and the generation of their explanations of their educational influence in their own learning as well as the learning of others and the learning of the social formations they are part of. The need to collect data by educational researchers, which helps them see and communicate the meanings of their educational influences, which are multidimensional and relationally dynamic, has led us to the developing use of video and digital technology (Huxtable, 2012).

While Living Theory researchers locate their research with reference to the growing body of educational research literature, they also draw on such literature, together with that of other fields and disciplines in developing their praxis. A Living Theory researcher's account can be recognised as a contribution to educational knowledge as it will include:

- a validated, values-based explanation of their educational influence in their own learning, the learning of others and the learning of social formations

(such explanations draw insights from the most advanced social theories of the day).
- a communication of their embodied, life-affirming and life-enhancing values that form their explanatory principles and standards of judgment of educational practice. These values are clarified as they emerge in the course of the research.
- an analysis, interrogation and critique by the researcher of their embodied educational practice that they are giving meaning to as they live it, to reveal how and where they can improve. It includes revealing where they experience themselves as a living contradiction and where they experience their values contradicted, and how they seek to resolve the tensions created.
- evidence to support their claims to know their educational practice and be improving it.
- an explanation to show how insights drawn from sociohistorical and sociocultural theories have influenced the educational practitioner-researcher's practice and understanding.

Enhancing Professionalism with Inquiry Learning in Teacher Education.

In 1975 the Schools Council began to fund local curriculum development projects as they questioned the efficacy of national projects in helping to improve practice within schools. One of the first grants was given to the inquiry learning project, *Improving Learning with 11-14 year olds in Mixed Ability Groups* (Whitehead, 1976a & b). Two evaluation reports were produced. We believe that there is a lesson from these two reports that continues to be relevant to teachers and teacher educators today.

In his first evaluation report of March 1976, Whitehead explained the teachers' educational influences in terms of existing models of innovation, change in the teaching learning process, and evaluation. The responses of academic colleagues in the School of Education showed that they comprehended the analysis and thought it appropriate. However, the responses of the six teachers in the project showed that whilst they comprehended the models used to explain what they had been doing, they "could not see themselves in it".

When Whitehead heard this criticism he could see that it was justified. He had eliminated the teachers' knowledge in explaining what they had been doing by applying existing models and theories from the academic literature. He had done to the explanations of the teachers what he had done to his explanations of his own educational practices, under the influence of the philosophers of education in 1968-70, when he replaced his practical principles by principles from the disciplines of education (Hirst 1983, p. 18).

Whitehead went back to the data, as requested by the teachers, and with their help constructed a second evaluation report (Whitehead, 1976b). In his analysis of the data Whitehead was shown by the teachers that they used action-reflection cycles in improving inquiry learning with their students. These cycles involved sharing concerns where the teacher felt they were not living their values as fully as possible; imagining ways of improving practice and choosing an action plan to act on; acting and gathering data to make a judgement on the effectiveness of the actions; evaluating the effectiveness of the actions in realising the values; modifying concerns, ideas and actions in the light of the evaluations; and sharing an explanation of educational influences in learning. The form of this report uses these cycles whilst the content, includes visual representations to help to communicate meanings. The teachers all agreed that this report now offered a valid explanation of their practice and learning. These two reports are available from the web:
1st from http://www.actionresearch.net/writings/jack/jwmaemarch1976all.pdf;
2nd from http://www.actionresearch.net/writings/ilmagall.pdf.

We know academics feel under pressure to replace the practical principles used by practitioners, to explain what they are doing with principles from the disciplines of education and educational studies, for many reasons. One reason in England comes from the Research Excellence Framework. Through this framework, English universities receive financial rewards, largely for contributions to traditional forms of theory (although there is now a growing recognition of impact on practice), research and the knowledge that is valued. We all live and work within political, socioeconomic, sociohistorical and sociocultural contexts, which influence what we think and do. It is important to recognise these influences and draw insights from these theories about these contexts in the course of Living Theory research as well as drawing on the knowledge generated using the disciplines approach in education.

Enhancing professionalism: Contributing to an educational epistemology

Our understanding of an epistemology as a theory of knowledge is focused on the unit of appraisal, the standards of judgment and logic of a claim to knowledge. The epistemology of living-educational-theories has the following unit, standards and logic.

The unit of appraisal is what is being judged. In Living Theory research the unit is the individual's explanation of their educational influence in their own learning, in the learning of others and in the learning of the social formations that influence practice and understanding.

The standards of judgment are living (Laidlaw, 1996) in the sense they can evolve, and are the standards that are used to evaluate the validity of the claim to knowledge. Such claims in Living Theory research are the explanations of educational influence. The explanatory principles are focused on the ontological and relational values used by the individual to give meaning and purpose to their life. They include insights from existing theories that the individual uses to make sense of their experience and learning. The meanings of these values are clarified and communicated in the course of their emergence in practice. This is done with processes of empathetic resonance and validity used with digital visual data from practice, as illustrated by Huxtable (2009).

The logic of a living-educational-theory follows Marcuse's (1964, p.104) notion of logic as the mode of thought that is appropriate for comprehending the real as rational. The logic of Living Theory research is a living logic (Whitehead, 2013) that is appropriate for explaining an individual's educational influences.

We now want to show you how teachers have enhanced professionalism in education through inquiring into their practice to improve it employing a Living Theory research approach and bringing their knowledge into the Academy, the world of the academics.

Enhancing professionalism through Masters' programmes.

The first example we want to draw your attention to is Sally Cartwright's accredited Masters modules (see below). These were created as Sally researched with secondary school students. The second is that of Joy Mounter's Masters (see below), created as Joy worked with primary school pupils.

Sally Cartwright was posthumously awarded her Diploma of Education by the University of Bath. You can access the 8:20 minute video of Jack's eulogy at the award ceremony from https://www.youtube.com/watch?v=Yvg_9_S4boM. This recognises Sally as a Master Educator because she continually researched her practice to improve it and to contribute to the professional knowledge-base of education.

Sally was concerned not only with helping her students achieve grades and develop skills but with an educational process that was humanising and social. Sally helped her students to value themselves and others for who they are, to enjoy and respond to their intellectual curiosity, their emotional and personal journey as well as their intellectual one. Evidence to support this claim can be seen in video of her students presenting to a group of strategy managers, which you can access starting with
https://www.youtube.com/watch?v=tMpaItNH7kg (Huxtable, 2009).

In the time we knew her, Sally helped us recognise and appreciate how an educator might both respond to the demands of the establishment, both school and the university, and stay true to the values that are at the heart of education - that is to enable her students to grow as educated, and not simply well trained, people. Because she was both generous and professional she researched her practice and offered the knowledge she created as a gift that continues to be influential. For instance, she offered her assignments for open access on the web (http://www.actionresearch.net/writings/mastermod.shtml) and her writings are in two issues of an international journal, Gifted Education International (GEI) (Cartwright, 2008c, 2016).

- In a Living Theory approach to enhancing professionalism in education through inquiry learning we stress the importance of presenting sufficient evidence to justify any claims being made. Sally provided this evidence:
- In the learning and lives of her students. This can be heard in the videos that are included in the notes you can access from http://www.actionresearch.net/writings/jack/sallycartwrightmastereducatorjw140415.pdf
- In the learning of others. This can be found in Gifted Education International (Cartwright, 2016) and in her students' Extended Projects (Cartwright, 2008b)
- In the learning of the social formations. This can be seen in the legitimisation of her educational knowledge by the academy and in the dedication to Sally of the June 2015 issue of the Educational Journal of Living Theories (see: http://ejolts.net/node/245).

Forming a good quality question that includes the 'I' of the inquirer and is focused on improving professional practice is important. Here are the questions and critical reflection from Sally's Master's assignment that show her meeting these criteria for good quality questions.

1. How can I help my students understand and develop the skills of independent learning? (Cartwright, 2008a)
2. How can I enable the gifts and talents of my students to be in the driving seat of their own learning? (Cartwright, 2008b)
3. How can leadership qualities improve my practice as a teacher? (Cartwright, 2009)
4. How can I research my own practice? (Cartwright, 2010a)
5. A critical reflection on my learning and its integration into my professional practice. (Cartwright, 2010b)

In writings 5 above Sally demonstrates how Living Theory research enabled her to recognise and live more fully her values and to make a valuable contribution of

the knowledge, she created through her Masters research, to both the academic world and the world of professional practice.

Sally's strength as an educator and as a contributor to the knowledge-base of education, through her educational research, was in her capacity to clarify, share, deepen, extend and transform the educational knowledge she expressed in her educational relationships with her students.

We had the privilege of videoing many of Sally's classes with Year 11, Extended Project Students, which she analysed in her Masters programme. You can access video at http://www.actionresearch.net/writings/jack/sallycartwrightmastereducatorjw140415.pdf of Sally talking about her values and addressing her students, parents and colleagues following presentations at the University of Bath by her Extended Project Students, as well as all of Sally's writings for her Masters units.

Joy Mounter is another teacher who enhanced professionalism in education through inquiry learning in the course of her Masters as a Living Theory researcher, by inquiring into her practice, to learn how to improve it, as well as contributing to, and drawing on, an educational knowledge base. Joy's contribution is in the form of her Masters, can be accessed from http://actionresearch.net/writings/mastermod.shtml. This is also evidence of her practice as that of a Master Educator (Whitehead & Huxtable, 2016).

In Joy's successful doctoral proposal of June 2015, *How can I contribute to the creation and enhancement of the educational influences of a community of learners, supporting each other and their own development?* Joy Mounter recognises herself as a Master Educator:

> As part of the expression and development of my professional responsibility as an educator I research my own professional learning as I ask, research and answer questions of the kind, 'How do I improve what I am doing in my professional practice?' I recognise myself as a Master Educator through the successful completion of my MA in Education with the following enquiries and dissertation:
>
> *How can I live my personal theory of education in the classroom to promote self reflection as a learner?* First Educational Enquiry Unit, 2006.
>
> *Language of learning to the language of educational responsibility.* Second Educational Enquiry Unit, 2006.
>
> *If I want the children in my class to extend their thinking and develop their own values and learning theories, how can I show the development of their learning? How do I research this in my classroom?* Research Methods Unit, 2007.

How can I work within the government's perspective of 'gifted and talented' but still remain true to my own living values? Gifted and Talented Unit, 2008.

Can children carry out action research about learning, creating their own learning theory? Understanding Learning and Learners Unit, 2008.

How can I enhance the educational influence of my pupils in their own learning, that of other pupils, myself and the school? Third Educational Enquiry, 2008.

As A Headteacher Researcher How Can I Demonstrate The Impact And Self-Understandings Drawn From Living Theory Action Research, As A Form Of Continual Professional Development In Education? MA Dissertation, 2012.

Access Joy's writings, *Can Children Carry Out Action Research About Learning, Creating Their Own Learning Theory?*
at: http://www.actionresearch.net/writings/tuesdayma/joymounterull.pdf

They show her 6-year-old pupils not only using the action research cycle of 'Thinking Actively in a Social Context' (TASC) but also offering critical and creative evaluations on how the TASC model of inquiry (Wallace & Adams, 1993) is too limited to describe their learning because it is two-dimensional. They explain on video how the model should be three dimensional and dynamic to describe their learning. Joy's writings show how she researched collaboratively with the 6-year-olds to answer her question.

You can see the children critiquing it in the videos Joy has in the appendix to her Master's unit, *Understanding Learning and Learners assignment, Can children carry out action research about learning, creating their own learning theory?*

You can access the clip: 'What use is the TASC Wheel?'
at: http://www.youtube.com/watch?v=hH2-5xexbAQ
and you can access the clips:
'What do you think of the TASC Wheel?' at:
http://www.youtube.com/watch?v=ti4syOrIDdY
http://www.youtube.com/watch?v=LSqg1phEEaM

We hope that you will see the children and Joy engaging in inquiry learning collaboratively in an i~we~i relationship. Joy and the three children each have a unique contribution to make to the development of their learning in the respectful, trustworthy creative space between them. Each values their own contribution and that of each other, not just the words they use but the embodied, tacit knowledge they bring into the space and work with co-creatively. They each take from what is created to inform their future learning.

Figure 1. TASC wheel (Wallace, Maker, Cave, & Chandler, 2004)

The children later told Belle Wallace (who originated TASC, shown in Figure 1) that TASC does not communicate the multidimensional, interrelated flow that is the actuality of their learning. The children built a model (Figure 2) to communicate such a flow of energy. They used colour to show the flow, and represented the learning and knowledge created, erupting up through the centre, the heart of the enterprise, as a shower of sparks on what is in the present and future.

Figure 2. Joy Mounter's pupils' model of their learning (Mounter, 2007)

A synthesis of Living Theory (Whitehead, 1989) and TASC (Wallace & Adams, 1993) creates Living Theory TASC (Huxtable, 2012). This represents one approach to Living Theory research. It shows Living Theory research constitutes far more than just systematic enquiry, as is implied by representations of the research process as linear, spiral or circle. There is also an organic phase when the researcher may, at various times, or at the same time, be gathering and organising what is known in the field, implementing a plan of action, or clarifying their concerns. There is a multidimensional and dynamic relationship within phases and between phases. Qualitative and quantitative methods may be used, and theories and insights, derived from knowledge developed by academics and practitioners in various fields and disciplines, may be drawn on. What is used and drawn on is influenced by whether it helps the researcher to understand and improve their practice and create a valid account of their living-theory.

Living Theory research

Living Theory research incorporates 'writerly' and 'readerly' processes of creating a valid living-theory account. (The researcher clarifies their understandings for themselves in the 'writerly' phase and creates an account that communicates to others through the 'readerly' phase). Having completed and tested the validity of their account, asking questions derived from Habermas (1976, pp. 2-3): does it communicate; is there sufficient evidence to support the claims made; is there

sufficient detail for the context of the research to be understood; and is there sufficient evidence to support the researcher's claim the values clarified in the course of the research are those that give the researcher's work and life meaning and purpose and form the researcher's explanatory principles and standards of judgment.

We want to stress the relational-dynamic and multidimensional inter- and intra- connections between the organic and systematic phases and the researcher having the confidence to recognise, value and work with their own creativity as they evolve their research methodology using their methodological inventiveness (Dadds & Hart, 2001):

Perhaps the most important new insight for both of us has been awareness that, for some practitioner researchers, creating their own unique way through their research may be as important as their self-chosen research focus. (p. 166)

There is no simple, formulaic way of engaging in Living Theory research. Researching educational practice does not stand apart from the creation of knowledge of the world. The researcher integrates their research to create knowledge of the world with their research to create knowledge of themselves and themselves in and of the world. In the process they learn what it might be for them to live a satisfying, productive and worthwhile life for themselves and others. The researcher also explicitly recognises the collaborative nature of knowledge creation in living-boundaries between themselves and others as communicated by i~we~i .

Navigating obstacles and where to now?

In offering a Living Theory approach for enhancing professionalism in education through inquiry learning we are aware of obstacles. While some obstacles require a long term, strategic and collective effort to deal with, others can, and have been, navigated by individual professional educational practitioners with determination and creativity.

We have made elsewhere the case for enhancing professionalism in education through the accreditation of the knowledge of Master and Doctor Educators (Whitehead & Huxtable, 2016). However universities and professional bodies in the UK have yet to form a partnership for recognising and legitimating the public expressions of the evolving embodied knowledges and praxis of professional educational practitioners as Master and Doctor educators. The procedures for overcoming this obstacle are simple. All that is needed for a university and a professional body to agree to recognise Master and Doctor educators in accrediting the knowledge generated through inquiry learning of their living-educational-theories. In the meantime determined and creative professional

educational practitioners are using degrees already available to have their living-theories recognised at Masters and Doctoral degree level, as can be seen by some made public on http://actionresearch.net.

Another obstacle to recognising the academic legitimacy of an educational epistemology can be understood in terms of 'Epistemicide' (de Sousa Santos, 2014). This refers to the "killing off of knowledges" that do not conform to the dominant epistemology of the Western Academy. The epistemological transformation that is required to give academic legitimacy to the embodied knowledges of professional educational practitioners in different universities has already begun (http://www.actionresearch.net/living/living.shtml). This offers an exciting opportunity for individual teachers willing to make public accounts of their living-theories to make a significant contribution to the global growth and spread of the influence of an epistemology comprising the knowledge of professional educational practitioners. The internet makes this opportunity accessible to increasing numbers, including those who are in the early stages of developing their educational practice as well as those who are developing as doctor educator as can be seen by visiting the evolving homepage of the living-posters of educational practitioners,
http://www.actionresearch.net/writings/posters/homepage061115.pdf.

Living Theory research stresses the importance of recognising the creativity of each practitioner-researcher in generating their own living-theory methodology as they produce their living-theory. 'Training' programmes in research methods and methodologies tend to 'transmit' existing knowledge in the Academy, rather than facilitate the emergence of the individual's living-theory methodology. In supervising Living Theory research we emphasise the importance of engaging reflexively with traditional research evidence and theory in gaining academic legitimacy for the expression of the embodied knowledges of practitioners.

Engaging in any research requires access to resources. Some have a financial cost, such as access to many journals and academic libraries, tutoring, supervision and legitimation of masters and doctoral programmes of continuing professional development. However many learning resources are freely available on the internet, as is support through web-based research groups. As the cost of technology and connection falls this offers opportunities for individuals to contribute to, as well as benefit from, the growth of knowledge in a living global i~we~i relationship.

There are many other obstacles to teachers enhancing their professionalism in education but universities, academics, governments or access to resources does not create the major obstacle. People create the main obstacle from their fears and lack of confidence in themselves as knowledge-creators, which also means they have the power to deal with it. Frankl so beautifully expressed a resolution, "Between stimulus and response there is a space. In that space is

our power to choose our response. In our response lies our growth and our freedom." We would add that in sharing the knowledge we create we contribute to the flourishing of humanity, of which we are part.

Through this chapter we have sought to communicate:

- An understanding about the roles and responsibilities of a teacher in education as a professional educational practitioner.
- The meaning and contribution of 'inquiry learning' in the context of enhancing professionalism of educational practitioners.
- Understanding and practice of a 'Living Theory research approach'.
- Living Theory research as a form of practice for teachers in education as professional educational practitioners who want to realise their educational roles and responsibilities in all they do.
- Making a contribution to the educational knowlege-base through making public an individual's living-educational theory and living-theory methodology.

We hope we have stimulated your imagination and inspired you to want to experience yourself, the pleasures and challenges of employing a Living Theory research approach to enhancing your professionalism in education. By creating and making public your accounts of your living-theory you will be enhancing not only your own practice you will also be contributing to the evolution of an educational knowledge-base through which humanity can flourish.

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6

Teacher Educator Professional Inquiry in an Age of Accountability

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Abstract

'Teacher Educators' are teachers of teachers and may typically be based within schools or within university departments. In this chapter we argue that all teacher educators should adopt 'inquiry as stance' and should be actively engaged in ongoing professional inquiry or practitioner research. Within a team delivering initial teacher education programmes we argue that there needs to be a range of expertise but with all teacher educators active in professional inquiry. We define professional inquiry as distinct from pragmatic evaluation which is everyday quality assurance procedures. Beyond that we propose that at least some members of a teacher educator team should be engaged in ongoing classroom practice whilst others need to be engaged in practitioner research. The content of teacher education programmes needs to include critical engagement with cutting edge research evidence and with learning theory as well as enactment, experimentation and evaluation of core practices in classrooms. Teacher education, both initial and advanced, needs to equip teachers with the essential skills and knowledge of educational research literacy so that they have the professional tools required to contribute to curriculum development and develop research-informed practice. Teacher educators based in schools and universities need to model professional inquiry and practitioner research.

Key words

professional inquiry, practitioner research, pragmatic evaluation, modelling, inquiry-based learning, school-based teacher educator, university-based teacher educator

Teacher educators

An inclusive definition of teacher educator has been adopted by the European Commission (2013, p.8):

> 'Teacher educators are all those who actively facilitate the (formal) learning of student teachers and teachers.'

This seemingly common-sense definition is practicable but requires at least two further comments:

Firstly, the European Commission definition is helpful because it cuts through the plethora of labels applied to different professionals contributing to teacher education and professional learning activity. Experienced teachers might contribute to teacher education through a range of activities along a continuum from informal to formal, for example: informal staff-room advice, co-teaching, classroom coaching, observation of teaching with feedback, mentoring within a formal programme, classroom observation with high stakes assessment and facilitating workshop sessions for student teachers. We would probably want to distinguish between an expert teacher who has a deliberative and defined teacher educator role in supporting teacher's learning and one who has a less 'formal' role as a peer who is contributing but within the normal routines of a collaborative workplace.

Secondly, the reference to formal learning, and implicitly to informal learning, is problematic because it suggests a separation, for example, between a formal taught session for beginning teachers and their practical experiential learning in classrooms and schools. We argue that such a separation between two kinds of learning leads to a false distinction between two kinds of knowledge and that this is reinforced by the misleading but widespread metaphor of the 'theory-practice gap'. We prefer a metaphor for teacher learning as 'interplay' between the horizontal domain of teachers' situated practical wisdom and the vertical domain of public (published) knowledge (Boyd & Bloxham, 2014; Boyd, 2014; Boyd, Hymer & Lockney, 2015). The interplay metaphor acknowledges the social, situated, dynamic and contested expertise of teaching teams in particular settings and the possibility of teacher inquiry leading to knowledge creation. Interplay captures the need for critical engagement with published knowledge and the power play involved in professional learning and change in practice.

We have therefore slightly revised the European Commission definition and will use the following definition in this chapter:

> 'Teacher educators are all those who have a formal active role in the facilitation of professional learning by student teachers and teachers.'

This definition specifically includes teacher educators who are based in contrasting settings, especially distinguishing between school-based teacher educators and university-based teacher educators. It is important to note that there are some 'teacher educators' who are based in boundary-crossing units

or organisations so that they might not be clearly identified as school-based but neither are they clearly university-based. A key issue highlighted by these different settings is that their contexts will vary in the value they place on different kinds of knowledge and learning. Consequently, this will place different expectations on teacher educators, especially for scholarship and research activity and outputs (Boyd & Harris, 2010; White, 2014; White et al., 2015). This variation in the value placed on practical wisdom rather than public (published) knowledge is connected to the boundary and distance between the setting of the formal teacher education and the setting of the workplace learning element.

Using England as an initial example, because the position of teacher educators varies internationally, there are at least two distinctive groups of teacher educators who deserve particular mention at this point. Firstly, there are teacher educators working in further education colleges, which are educational institutions providing mainly vocational education from 14 years old to adult. These colleges offer programmes, including teacher education for the further education sector, at a range of academic levels including higher education. This means that the teacher educators in further education colleges are teaching on higher education programmes but are based outside the university. A key point is that these teacher educators are training new teachers and providing professional learning for experienced teachers within their own workplace and sector. These teacher educators based in further education colleges are therefore similar to school-based teacher educators and may be usefully distinguished as 'workplace-based teacher educators'. A second distinctive group of teacher educators in England who should be considered at this point are academic developers based in higher education institutions but providing teacher education programmes and professional development for their own academic or academic-related colleagues. Sometimes these teacher educators are based in an academic department, for example in an Education department, but they may also be based within the human resources service of a corporate university. In line with college and school-based teacher educators these academic developers may be captured by the term 'workplace-based teacher educators'. It is important to note that although the workplace setting of a teacher educator will no doubt be a significant influence, for example in terms of culture and the value placed on practical wisdom or public knowledge, there exists within the different workplace settings considerable variation in contracts, expectations for research activity and pathways for promotion. Considering the range of teacher educators internationally there is another dimension of being a teacher educator that should be included in our discussion and that is related to the curriculum subject specialism. Some teacher educators are defined by their area of specialism which may be focused on pedagogy or on an area of curriculum specialist knowledge.

For example, students following a programme for Primary school teachers might have some courses tutored by specialists in the curriculum subjects such as mathematics, languages, science, humanities, and the arts.

Our working definition of a teacher educator must be expanded to encompass these variations in position and therefore becomes:

> 'Teacher educators are all those who have a formal active role in the facilitation of professional learning by student teachers and teachers. They may be workplace-based or university-based. In some cases they may specialise in pedagogy or in the teaching of a specific curriculum subject.'

It is important to note that all teacher educators, based in schools, colleges or universities, have multiple professional identities. Identity may be viewed as the multiple inter-related narrative trajectories that we maintain about ourselves and that are in negotiation with our practice (Wenger ,1998). We like to think of a traditional climbing rope with our different identities represented by the strands, which may include school teacher, higher education teacher, researcher, consultant and leader. These strands intertwine and perhaps vary in their thickness over time. Some of the strands have bits of grit between caught them and these undoubtedly create tensions, but may also provoke professional learning. There is a negotiation between these identities and perhaps a kind of knowledge exchange activity going on between them.

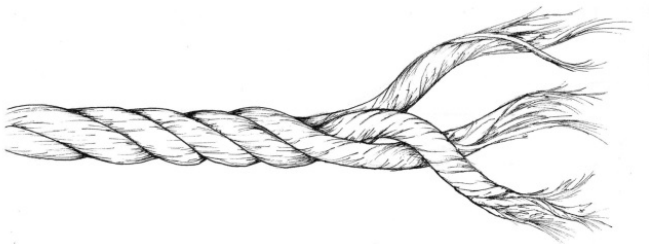

Figure 1. The multiple professional identity trajectories of a teacher educator

Some evidence suggests that workplace-based teacher educators may try to foreground their identities as school or college teachers, rather than develop new identities as teacher educators, because this gives them credibility with their student teachers (White, 2013). In a mirror of this situation some university-based teacher educators might foreground their identity as researchers, gaining credibility as academics because of the primacy given to research work and researcher identity in the higher education sector. However, things are more

complicated than this and studies have shown that professional educators based in a university do not necessarily so easily abandon their identity as practitioners and that these decisions are influenced by high accountability workplace contexts (Boyd & Harris, 2010; Boyd & Smith, 2016).

We have identified the teacher educators in their various educational settings. Now we should briefly consider their wider context within the education system before focusing on professional inquiry.

The Age of Accountability

In England since the 1980s, and internationally, perhaps especially in the USA, education has been subjected to a wave of Neoliberal policy. The Education Reform Act in 1988 under the Thatcher government began the development of a free market, or at least a quasi-market in schooling in England: parental choice of school as a driver; a national curriculum; a high stakes inspection process; and subsequently school league tables based on text and exam results; and increasing performativity pressures on teachers. This legislation signalled the official start to the 'age of accountability' and subsequent governments in England have tended to continue and even reinforce the policy direction (Ball, 2013). Meanwhile, beyond the education system, Neoliberal social and economic policy has been associated with increasing inequality, particularly in England and the USA (Dorling, 2015). In England three political promises made during the 1980s have a particularly hollow ring: of a property-owning society - following the sale of social housing with no continuing re-investment; of a share-owning society - following the sale of publicly owned essential services such as power and water, often to overseas interests; and finally of 'trickle down' as a way to share wealth across society when in fact inequality has massively increased (Piketty, 2014). In this Neoliberal context young people are positioned as entrepreneurs, finding their way through life in an apparently meritocratic society and free market economy. An important contradiction within Neoliberalism is that in order for the 'free' market to operate effectively there is often increasing state intervention. This means that as schools in England are seemingly given increasing autonomy, for example from local government intervention and control, they may in fact be controlled financially by central government and by new forms of less publicly accountable governance such as 'Academy Chains' and 'Multi-Academy Trusts'. In this context teachers may seem to be increasingly positioned as 'technicians' who must employ an 'evidence-based' pedagogy to 'deliver' the curriculum. It is important to consider this high accountability wider context if we are to understand the potential of teacher inquiry to empower teachers and teacher educators to enable them to contribute to the development

of research-informed practice and to collective leadership of schools through curriculum development. We might expect that in the age of accountability school and college teachers may be distracted from the wider purposes of education and be led to 'teach to the test'. In a similar way we might expect that university-based teacher educators in the age of accountability will be concerned with the measures of success that affect personal standing such as student evaluative feedback and the scoring of their research outputs as well as measures of student employability and other measures affecting programme and institutional 'league tables'. The age of accountability foregrounds pragmatic evaluation in education, the everyday attempts to measure quality particularly through student evaluative feedback and basic consideration of test and examination results. We would argue that teacher educators need to move beyond this kind of evaluation and engage in professional inquiry; and some teacher educators will extend their inquiry approach to become practitioner researchers.

Teachers and teacher educators are located within a challenging policy and workplace context that we refer to as an 'age of accountability'. If we are to argue that they should be involved in 'professional inquiry' then we will need to define the concept and that is the purpose of the next section.

Professional Inquiry

What do we mean by the term professional inquiry? In education this term is applied to a wide range of investigations, most often involving at least some of the characteristics of practitioner research. However, the term professional inquiry also encompasses more pragmatic forms of evaluation, especially quality assurance procedures and forms of reflective learning, which do not demonstrate many of the characteristics of research. For example, such inquiry may include basic analysis of quantitative or qualitative data such as student grades or teacher written reports but not question the meaning or reliability of such measures and not include critical engagement with public, published knowledge including theory and research evidence.

The approach to professional inquiry by teachers has developed through different traditions and might be broadly classified into four styles:

- Pragmatic evaluation of practice – often associated with quality assurance or school development and top down management, including lesson observation, but also with some teaching team initiatives that have greater professional ownership.
- Reflective learning – often positioned as individual and everyday professional development but in some cases developed into more collaborative forms such

as action learning sets. Reflective learning for teachers was heavily influenced by the work of Donald Schön (1987).

- Lesson study – a group of teachers collaborate to plan, teach, observe and evaluate a lesson then develop it further and re-teach it. Developed from the Japanese tradition and applied in reconstructed forms in western countries to adapt to different cultural contexts.
- Action research – based on Kurt Lewin's (1946) development of action research. Shaped through early work by Stephen Corey in the USA (1953) and Lawrence Stenhouse (1975) in the UK on the teacher researcher leading curriculum development. Influenced by a wider idea of 'inquiry as stance' in pursuit of social justice and community action especially in the USA (Cochran-Smith & Lytle, 2009).

There is a wide literature on teacher inquiry and action research including practical guides for teacher researchers. In their action research guide Baumfield, Hall & Wall (2013) suggest two types of question for teacher action researchers to consider: 'what is going on?' and 'what if?' The second of their suggested questions is to allow for an intervention, a change in practice by the teacher that will be investigated in terms of impact. John Hattie proposes that a teacher should ask the question every day 'what is my impact on learning?' A more ambitious question explicitly addressing the wider purposes of education, including learning to learn, might be phrased as: what is my impact on learning and on learners? (Boyd, Hymer & Lockney, 2015).

A pragmatic evaluation, a professional inquiry or a practitioner research project may follow some or all of the following ten steps:

1. Identify a focus and develop questions (What is going on? What if?)
2. Collaborate with other stakeholders
3. Engage with public (published) knowledge
4. Develop an approach and inquiry design
5. Establish an ethical framework
6. Collect data systematically
7. Analyse data systematically
8. Disseminate findings and gain peer review
9. Take action – change practice in line with the conclusions of the inquiry
10. Review the process and identify the next cycle

In developing any kind of inquiry a teacher or teacher educator may consider the relevance and significance of each of these ten steps in relation to the

purposes of the project and the context in which they are working. Even a thorough pragmatic evaluation project would need to at least note each of these steps. In table 1. we set out these ten steps of inquiry and describe how each may be developed along a dimension from pragmatic evaluation through professional inquiry to practitioner research. This table is proposed as a practical tool for practitioners, in a wide range of educational workplace settings, with which they might review and aim to strengthen their inquiry activity.

Ten Inquiry Steps	**Pragmatic evaluation**	**Professional inquiry**	**Practitioner research**
1. Identify a focus and develop questions	The issue for inquiry or at least the quality assurance framework is identified top down	Even a top down issue is shaped by teachers who frame questions and come to own them	The issue may be top down but the focus and questions are developed through engagement with literature
2. Collaborate with other stakeholders	Collaboration is defined largely within formal teams and structures	Engagement by teachers is to some degree voluntary and others, especially learners, are invited	Research ethics and seeking co-construction of knowledge lead researchers towards collaboration
3. Engagement with public (published) knowledge	Some engagement with policy and professional guidance; increasingly may refer to research meta-review evidence	Critical engagement with professional guidance and research evidence	Informed by critical literature review and more likely to include a well-developed theoretical framework
4. Develop an approach and inquiry design	Quality assurance processes provide or strongly shape the approach and design for evaluation of the techniques of schooling	A critical inquiry stance begins to question purposes of education, social justice issues and/or leadership	Systematic literature review and a formal research methodology underpin the inquiry design
5. Establish an ethical framework	Workplace organisation ethics and codes dominate and may generate contrived collegiality	Professional codes and ethics, as well as a supportive workplace culture may create good levels of trust	Gaining formal ethical clearance and working to research ethics guidelines create a strong framework

Ten Inquiry Steps	Pragmatic evaluation	Professional inquiry	Practitioner research
6. Collect data systematically	Often use existing sources and methods of data collection already designed for quality assurance	Selected sampling, may include student voice. Use existing evidence of learning and data collection tools	May use secondary data and a range of data collection tools
7. Analyse data systematically	Some statistical analysis, for example of test results, but often a 'common sense' interpretation rather than critical analysis	Some use of systematic data analysis based on researcher methods	Sophisticated approach to quantitative and qualitative data analysis
8. Disseminate findings and gain peer review	Local dissemination and may be included in institutional quality assurance reports	Local and wider teacher network dissemination, seeking some level of peer review	Aiming for national / international dissemination and often peer reviewed research journal publication
9. Take action	Local action is likely and may inform practice across the organisation	Local action is likely and institutional action possible, depending on level of support from managers	Local action is likely. Wider influence needs support from managers and on publication of accessible guidance
10. Review the process and identify the next cycle	Evaluation systems are frequently revised but usually in a pragmatic way. Evaluation is usually part of a regular annual cycle	Sustained cycles of inquiry will depend on the development of a learning community and manager support	May depend on learning community, partnership with a research mentor, funding and support from managers

Table 1. Tens steps of inquiry across pragmatic evaluation, professional inquiry and practitioner research

Table 1. represents our attempt to define professional inquiry and to position it between pragmatic evaluation and practitioner research. It may be possible to strengthen an evaluation or inquiry by moving to the right on one or more of these steps. For example, if a focus for inquiry is very much top down from external inspectors and management then you might adopt strict research ethical

procedures, more akin to practitioner research, in order to balance the design to help achieve the required levels of trust and collaboration. For another example, as educational research meta-review evidence becomes more accessible (Higgins et al., 2013) then even pragmatic evaluations may be informed by this kind of public knowledge. In this way an evaluation might to some degree be shifted across to the level of professional inquiry, although it is important that members of the inquiry team have sufficient research literacy to understand the limitations of this kind of research meta-review evidence. This question of the research capacity of the teacher educators, teachers and other school leaders involved is important. One of the important differences as the approach moves from left to right in the table is that professional inquiry and practitioner research build capacity for curriculum development and collective leadership.

Having broadly defined professional inquiry, the next stage of our argument is to provide a rationale for the integration of inquiry into the work of teacher educators in different ways according to their work context in schools or other educational institutions.

Why teacher educator professional inquiry?

The complex and layered nature of teacher education might be helpfully considered as a cake such as that illustrated in Figure 2:

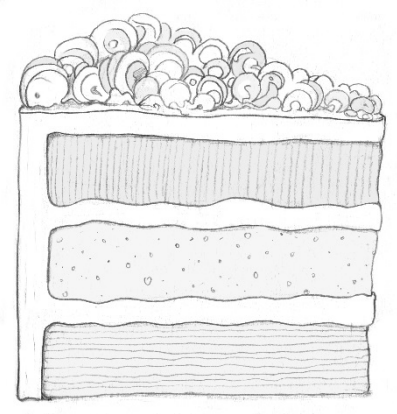

Figure 2. The layered nature of teacher education

Supporting the pupils or students, and providing for their educational needs, provides a strong foundational driver for an educational system. In the cake such

learners form the base layer because they are the main focus and their education, in its widest sense, is the fundamental purpose. However, we know that high quality teaching is a key ingredient for a successful education system. Teachers therefore form the second layer of our cake. Teacher educators make a crucial contribution to the sustainability of the education system and may be seen as the third layer of our cake. Given the significance of the professional learning and development of teachers, and the continuous policy-driven changes to teacher education worldwide, it is surprising how little attention is given to teacher educators, who put policies into practice.

The layers of our cake: teacher educator, teachers, and learners, require some connection between them and this may be represented by the icing in Figure 2. We like to emphasise 'modelling' as the icing that adds coherence to the layers of teacher education and gives the whole cake integrity (Boyd, 2014b). Teacher educators use modelling (by explicitly being an inquiry-based teacher themselves) and provide their student teachers with experiences of values and strategies that they might consider reconstructing in their own classrooms. Teachers use modelling (by explicitly being a self-regulating learner themselves) to demonstrate the learning power of struggle, mistakes and self-regulated learner strategies that their students may adopt.

We believe teacher educators should be modelling professional inquiry to their student-teachers, and that teachers should be modelling inquiry-based learning to their pupils. In this way teaching professionals can 'walk-the-walk' as well as 'talk-the-talk'. Argyris & Schön (1974) recognised the intellectual challenge of developing interplay between public knowledge and practical wisdom. As professionals we hold an 'espoused theory' of action for a situation, which is what we believe is important, however, when this is compared with our 'theory-in-use' we may not find these theories to be congruent (White, 2011). We can choose to make some of our modelling explicit to help us to overcome this challenge. Explicit modelling is a key pedagogical approach in teacher education to facilitate the 'interplay' between the horizontal domain of teachers' situated practical wisdom and the vertical domain of public (published) knowledge (Boyd, 2014b).

The texture of our cake, the fundamental characteristic running through all three layers, is learning. In this chapter we argue that you should think of this texture as inquiry-based learning. We hope you have found our little confection of some assistance in grasping our layered view on teacher education and introducing our rationale for the importance of teacher educator inquiry. The idea of texture as inquiry-based learning introduces the possibility of co-creation of knowledge, between teacher educators, teachers and students.

Co-creation of knowledge

Teacher educators need to be experts in professional inquiry and practitioner research if they are to effectively support experienced teachers in advanced professional education or professional learning. The aim of collaborative practitioner research at this level might include the co-creation of knowledge. The production of knowledge in boundary-crossing collaboration between university based teacher educator researchers and school-based expert teacher researchers aligns with 'Mode 2' knowledge (Nowotny et al., 2003). Mode 2 knowledge is socially and contextually robust knowledge whose creation is likely to involve varied stakeholders in different sites and knowledge generation occurring within a context of application. It is mutually beneficial for the stakeholders in teacher education partnerships to collaborate in inquiry leading to co-creation of knowledge (Nelson et al., 2015). Researchers may lead or convene collaborative research projects and some are repositioning themselves as invited collaborators in projects initiated by professional learning communities of teachers. In the field of technology Shneiderman argues for the creative power of such combined forms of research through collaboration between scientists, engineers and designers (2016). Dimmock (2016, p.42) asserts that 'combining tacit knowledge with research-based knowledge and theory is a compelling mix and needs to be endorsed as a principle of future professional development and practice'.

A further important reason for teacher educators to engage in professional inquiry and practitioner research is to continue to develop their own research literacy, and that of students and teachers.

Research literacy

Inquiry provides a way for teacher educators to learn new knowledge, question practices and unlearn some long-held beliefs and behaviours. 'Unlearning' is a significant part of the development of teachers and teacher educators (Cochran-Smith, 2003). There is a growing body of literature on inquiry by university-based teacher educators including self-study (Vanassche & Kelchtermans, 2015). Some studies suggest that becoming research active enhances teacher educators' research knowledge and skills but also improves the quality of the teacher education curriculum (Willemse & Boei, 2013). Mainly based on findings from small-scale in-depth studies it has been argued that practitioner research is useful 'to build general research capacity in education, to ensure thriving teacher education communities, to maintain research-informed teaching in pre- and in-service courses and to support the intellectual development of teacher educators and the teachers they teach' (Murray, 2010, p.96). Research literacy is an indication of the extent to which teachers and teacher educators are able to use a range of research methods, critically engage with the latest research

findings (including those relating to content, pedagogy and programme design) and identify the implications of this research for policy and practice (BERA-RSA, 2014). Practitioner inquiry is a powerful way to learn about the research process, providing an opportunity for teacher educators to model and teach research approaches and to publish their own findings. Teacher educators guide the development of teachers' and student-teachers' classroom practice and their research activity. This makes clear the need for teacher educators to develop research skills and a researcher identity (Roberts, 2014). There is a growing body of evidence demonstrating that when teachers adopt an 'inquiry stance', pupils' achievement can be raised (Cochran-Smith & Lytle, 2009; Timperley et al., 2007). Student-teachers may also experience an enhanced learning environment when teacher educators adopt an inquiry stance. Learning about teaching is enhanced by student-teachers researching their own practice (Korthagen, Loughran & Russell, 2006) but this requires teacher educators to understand professional inquiry sufficiently to be able to support effective student-teacher inquiry.

In OECD countries there are a growing number of teachers who are also school-based teacher educators, taking responsibility for facilitating professional development sessions for student, novice and experienced teachers within the workplace, going beyond the traditional role of a mentor, or co-operating teacher (Musset, 2010). High-quality initial teacher education is expected to support student-teachers in employing an inquiry stance towards their practice and to respond to the most recent educational research (Tatto, 2015). This is a challenge for many school-based teacher educators. A case study of a school-based teacher educator reveals how facilitating sequences of work-based learning for student teachers provides powerful learning for the teacher educator but also involves practical challenges (Boyd & Tibke, 2012). The complexity of developing appropriate pedagogy and practice for school-based teacher educators is further illustrated by van Velzen & Volman (2009) in the Netherlands. Their evidence suggested that school-based teacher educators used the tools developed by the university-based teacher educators but relied on their own professional knowledge as teachers, limiting the student-teachers ability to interpret and elaborate their experiences from a theoretical perspective. Workplace-based teacher educators have a number of professional development needs which may be partly due to being situated geographically outside of a community of research-active teacher educators (White, 2013; White 2014; White et al., 2015). This issue of professional learning and capacity building of school-based teacher educators deserves more attention from researchers and policy makers, especially given the significance of teacher education and teaching quality (European Commission, 2013). We believe that the development of scholarship through professional inquiry is just

as important for school-based teacher educators just as it is for new university-based teacher educators (Boyd & Harris, 2010; Boyd, Harris, & Murray, 2011). Being part of a collaborative community of research-active teacher educators could provide the support needed to enable teacher educators in all workplace contexts to be active researchers, engaged with the literature and able to support good quality (student) teacher inquiry.

In his classic and still useful and relevant text on curriculum development Lawrence Stenhouse presented the 'teacher researcher' and helped to initiate a long-standing, internationally important, but arguably fragmented tradition of teacher inquiry which still persists even in the age of accountability (1975). It has been noted however, that many of the teacher investigations over the years have merely evaluated the techniques of schooling rather than daring to ask tough educational questions that might uncover uncomfortable findings (Kemmis, 2006). Cochran-Smith & Lytle argue that including a social justice element within teacher inquiry, and even extending this by collaborating in the inquiry with community groups, would help teacher researchers to maintain a critical stance (2009). In addition to a social justice focus we would propose that questioning the wider purposes of education, or the organisation and management of education systems and institutions, are additional ways by which teacher inquiry might avoid being tamed or domesticated within the age of accountability.

Workplace influences on teacher educators

The challenge of developing the professional inquiry and/ or practitioner research elements of being a teacher educator vary between school and university workplaces. The expectations for levels of research activity for university-based teacher educators varies widely depending on the research aspirations of the education department (Murray & Male, 2005). Difficulties arise for teacher educators in becoming research-active when they come into a university role without sustained experience of research and publication and they may often only receive fragmented induction support towards becoming research-active. Constraints may also exist where practitioner research is not aligned with institutional priorities because of concerns that such research will not be valued by the national framework for research audit. The focus of a university department of education on teaching quality, high stakes external inspection and student evaluative feedback may create tensions so that university-based teacher educators continue to seek credibility as school teachers rather than as academics (Boyd & Harris, 2010). The induction and mentoring into research processes suitable for professional inquiry may support new teacher educators

to become research-active and assist the more effective development of an academic identity (Murray, 2010).

School-based teacher educators may also face constraints in terms of the value placed on practitioner research within their setting. They too may have a lack of sustained research experience but additionally face difficulties in accessing the expertise of a research mentor and induction into research processes especially where this is external to the institution (White, 2013; White, 2014). Another difficulty can be access to the resources needed for engagement with external public knowledge. The process of developing an academic identity may not seem realistic or be readily embraced. However, with appropriate support to become part of a community of inquiry-based practitioners it is possible to begin the process of constructing a researcher identity (Roberts, 2014; White et al., 2015). Sustained inquiry into practice, including associated experimentation and evaluation, takes dedicated time. Teacher educators, in any setting, engaged in initial teacher education programmes which are subject to intensive regulation, are likely to find carrying out research practically insurmountable in terms of the time, energy and skills required. Rather than positioning research as an individual pursuit, being part of a collaborative research project may enable teacher educators to have realistic goals for research-engagement as well as a supportive learning community to help sustain their researcher activity.

Stretching its bottom-up roots and association with participatory and even emancipatory ideals, teacher inquiry in various forms, including action research and lesson study, has been adopted as a form of professional development and 'change management' within schools as 'learning organisations'. The learning organisation may be defined as an institution in which working, learning and innovating are inter-related in a complementary way (Brown & Duguid, 1991). This element of New Public Management, the supposed adoption of private sector management practices within the public sector, has influenced the development of 'professional learning communities' in schools. A study in the UK combined survey and case study methods to identify eight characteristics of effective professional learning communities in schools including 'collaboration focused on learning' and 'reflective professional inquiry' (Bolam et al., 2005). Empirical work from the organisational literature, but with a workplace learning perspective, also offers ideas about the characteristics of 'expansive' workplace learning environments and has applied these to schools (Hodkinson & Hodkinson, 2005). There is a risk that a learning community might be appropriated by the senior management so that seemingly autonomous teacher inquiries tend to focus on instrumental knowledge valued by the organisation and apparently open dialogue does not take into account the power held by managers (Fenwick, 2001; Watson, 2014).

Despite the challenges, we argue that teacher educators need to be inquiry-based or research active wherever they are located because inquiry and research improves the quality of the teaching profession and the quality of student teachers' learning experiences. This is through research-informed content and design of teacher education programmes: being equipped to engage with and be discerning consumers *of* research; and having the skills to conduct individual and collaborative research to explore the impact of educational interventions and practices (BERA-RSA, 2014). The hard message is that there is not room in teacher education for those who are not engaged in professional inquiry or practitioner research.

Conclusion

The purpose of this chapter is to argue for all teacher educators to employ professional inquiry or practitioner research as part of their everyday practice and professional identity. We consider that would need to encompass variation from a small number of university-based teacher educators being professional researchers involved in large-scale projects through to the majority of university-based or school-based teacher educators adopting inquiry as a stance and being involved in good quality professional inquiry or practitioner research. We believe this is important for empowering teacher educators to contribute to the development of research-informed practice and to the collective leadership of educational practices. There is a need to go beyond personal inquiry into our own practice, to modelling, collaborating and sharing inquiry findings with the wider community of teacher educators. This needs to lead to publication of our findings more widely and to building a body of professional knowledge that informs teacher education policy and practice. In this way we can build the underpinning knowledge to give us a credible voice in this age of accountability so that, as practitioners, we can more effectively influence policy. We propose that the realistic and relevant investigation of practice by educators in their own workplaces has an essential place in the teaching profession and this applies to school teachers but also, perhaps even more importantly, to school and university based teacher educators.

There are currently some signs of hope in the wider political sphere that the dominance of Neoliberalism is beginning to break down. Within the field of education we would argue that such an opportunity requires teachers and teacher educators to adopt critical inquiry as stance. They should lead change in schools through the development of research-informed practice.

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7

Developing a Researcher Identity as Teacher Educator

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Abstract

In this paper we examine the development of the professional identity of teacher educators who combine studying for a doctoral degree with working as teacher educators. While working on their doctoral thesis, teacher educators move temporarily from the semi-academic world of teacher education into the academic world of universities. Semi-structured interviews were held with fifteen teacher educators. Although the research topics, their experiences in conducting research and their professional life after obtaining the doctoral research degree differ in many ways, they all stated that they have developed a researcher identity as part of their former identity. Nevertheless none of the teacher educators, except one temporarily, made a job shift towards the academic world or wished to do so, after finishing the doctoral thesis. They preferred the semi-academic world of teacher education where the focus is on education. In this world, practice-based research – if they are engaged in research at all - is a minor part of the work of teacher educators.

Keywords

Introduction

In this paper we examine the development of the professional identity of teacher educators who work in institutes for primary or secondary teacher education and combine their practical work with conducting academic research. The Netherlands has a binary system of Higher Education with traditional research university and Institutions of Higher Vocational Education that are called *Hogescholen*, which can be compared with *Högskoler* in Norway or *Hochschuler* in Germany. The core business of the traditional universities is to conduct academic research and to be responsible for the education of academic students. Hogescholen are large institutions and members of staff are first

and foremost responsible for high level professional education in economical, technical, agricultural, health and educational sectors. The teacher educators in our study work at primary and secondary teacher education institutes which are situated within these Hogescholen.

Until recently, as their colleagues in other sectors of the higher vocational institutes, teacher educators working in Hogescholen, were not expected to engage in research and seldom did so. Since 2000, however – stimulated by social and economic changes - these vocational institutes are expanding their ambition as so called 'knowledge centers' (Geerdink, Boei, Willemse, Kools, Q., & Van Vlokhoven, 2016; Weert & Leijnse, 2010). With (only little) financial support of the Dutch government they develop as Universities of Applied Sciences (UAS's) which involves a (practice-based) research task. The research task is limited in scale compared to the core business which remains educating future professionals.

To enhance the quality of these UAS's in general and teacher education in particular, the Dutch government has expressed the ambition to improve the quality of teacher education by raising the formal education level of teacher educators and developing teacher educators' research capacities. By 2020 all lecturers working at the Universities of Applied Sciences - and this includes the teacher educators - need to have a masters level degree and at least ten percent of teacher educators must have a doctoral degree (Ministerie van Onderwijs, Cultuur en Wetenschap, 2011). Several measures have been taken by the Dutch government and the UAS to reach these goals in teacher education, such as providing grants for individual teacher educators to study for a master or doctoral degree and support for teacher education institutes to enhance the research capacity of teacher educators. As a results of these developments, teacher educators are increasingly engaged either in practice based academic research conducted in the 'knowledge centres' of the UAS's or in doctoral research that can currently only be obtained from traditional universities.

As in other European countries, there are in the Netherlands two ways to obtain a doctoral degree. The most common way, mostly for young researchers is as a regular PhD-student. These young researchers receive a low salary at the university as junior member of a scientific staff or research group, under the guidance of a full professor and his or her team. The subject of their PhD-research fits within a research program of an established research group and is financed by grants from the Dutch National Research Institute or other sponsors. These PhD-students can therefore work full-time on their research and participate in national and international PhD-courses. The findings of the doctoral research are jointly published by the PhD-students and their supervisors in international scientific journals and as such PhD-students are important for full professors. Their research project is seen as a first step of a scientific career.

The second avenue to obtain a doctoral degree is more often chosen by mature persons from outside the university, who need to combine their regular work with a doctoral research. They often have a job outside the university. They may have a grant from the government or financial support from their boss or other sponsors but that is not regular and mostly not enough for the whole project. These doctoral researchers choose their own research subject, mostly related to their daily work and ask a full professor from a university as supervisor for their research. The thesis of these mature students is often published as a monograph in Dutch.

The teacher educators, we followed for our research are members of the second group. They all started and combined their PhD research while they were working as teacher educator. Most of them had a combination of grants and also invested their own time and money.

While a doctoral degree only can be obtained at a traditional research university, the teacher educators who study for a doctoral degree constantly move, both physically and mentally, between their familiar world in which the focus is mostly on teaching (and all connected tasks), to the academic world of the traditional university where the focus is on research, publishing and intellectual and academic discussion. We wonder what this means for their professional identity.

Crossing borders between academic and semi-academic worlds

Within cultural-historical views, the development of a professional identity is not an isolated and idiosyncratic process but a concept that "combines the personal world with the collective space of cultural form and social relations" (Holland, Lachicotte Jr., Skinner, & Cain, 1998). Holland et al. refer to these collective spaces as cultural worlds. The professional identity of teacher educators is shaped by their participation in the professional cultural world of teacher education. Teacher educators develop a professional identity that reflects the tasks they perform such as teaching about teaching, supervising student teachers, curriculum development and organizational tasks (Swennen, Jones, & Volman, 2010). Teacher educators who study for a doctoral degree not only gain new knowledge and develop new skills, but they also need to develop a new professional identity as researcher (Murray & Male, 2005). The development of a professional identity as researcher is initiated and intensified when role transition takes place from being a teacher educator to being a researcher (Ibarra & Barbulescu, 2010).

Teacher educators who want to obtain a doctoral degree have to learn what it means to be a researcher, to experience what a researcher does, and they learn to act upon their understanding of what it means to be a researcher. To do this,

they have to learn to relate to the existing traditions, customs, and the written and unwritten rules of the academic world (Pennuel & Wertsch, 1995). In order for this role transition to occur, teacher educators cross the metaphorical boundary between the semi-academic or practical world of teacher education and the academic world of the traditional university. Akkerman and Bakker (2011, p. 133) define boundaries between cultural worlds as "socio-cultural differences that cause discontinuity in action or interaction". Crossing borders leads to broadening horizons and to learning (Wenger, 2000) which in turn affects the professional identity. However, border-crossers do not have an easy task as they enter unknown territory where knowledge and skills are expected which they do not yet possess.

Akkerman and Bakker (2011) distinguish four mechanisms that explain learning processes when professionals cross boundaries between different worlds. Each learning mechanism has its own characteristic processes and results for participants and practices.

- *Identification*: This learning mechanism includes the identification by the boundary crossers of the different interests from educational practice and the academic world. This results in having a better understanding of the position of oneself and the boundaries of the activity system one is part of.
- *Coordination*: Coordination entails boundary crossers who overcome the boundary of two or more activity systems, resulting in effortless movement between different worlds. Coordination is associated with role transition. These boundary crossers put their original practice to the background, at least temporary. As experiences with a new practice increases, the less difficult the role transition will be.
- *Reflection*: By reflecting on their practice, boundary crossers can obtain an expanded set of perspectives. This results in a construction of a new identity of the boundary crosser as this involves a new understanding of others and the two cultural worlds.
- *Transformation*: This learning mechanism includes confrontation with boundaries of the existing activity systems and leads to changes in these activity systems, potentially to the emerging of a new in-between practice.

While involvement in research by teacher educators is supported with time and money aiming to improve the quality and status of teacher education and teacher educators, we know little of how research affects the professional identity of teacher educators who cross boundaries between their workplace and the traditional university and how this boundary-crossing activity affects these two cultural worlds. The two main questions that guide this study therefore are: 'How does the professional identity of teacher educators develop while they study for their doctoral degree and move between the semi-academic world of teacher

education and the academic world of the traditional university?' 'And how does this boundary-crossing activity influence practice in these worlds?'

Method

Our study can be characterized as narrative research (Clandinin & Connelly, 2004). Participants were invited to talk about their own experiences, beliefs and concerns. Data were collected by means of semi-structured interviews consisting of three parts: 1. the motives and start of the research, for example: what made you decide to start the doctoral study? 2. The ongoing development as researcher, for example about the progress, including continuing support, publications and presentations of the research, problems and successes. 3. The development as researchers after the doctoral degree was completed. For all three episodes questions were asked about crossing boundaries between the two cultural worlds and how the research impacted these worlds.

The number of teacher educators who finished a doctoral thesis in The Netherlands is still small. We found and asked fifteen teacher educators from our own professional networks to participate in the study. As far as we know these are all teacher educators that obtained a doctoral degree while working as a teacher educator from 2002 until 2015. All participants are 45 years and older and they have from 10 to 35 years of experience in teacher education. Within this group sexes are equally divided, which seems representative for teacher educators in The Netherlands (there are no statistics available about Dutch teacher educators). The teacher educators teach in Primary Teacher Education (7) and Secondary Teacher Education (8) in a variety of subjects, although Educational Studies (6) and Dutch (3), both important subjects in teacher education, are dominant.

	Gender	Subject	Level TE	Years in TE	Year of doctoral degree
Ben	Male	Dutch	primary	18	2005
Clifford	Male	Educational Studies	secondary	10	2014
Cynthia	Female	History	secondary	15	2014
Ellen	Female	German	secondary	10	2014
Emily	Female	Dutch	primary	29	2011
Frits	Male	Educational Studies	secondary	28	2010
Irene	Female	Dutch	secondary	33	2007

	Gender	Subject	Level TE	Years in TE	Year of doctoral degree
Jean	Female	Educational Studies	primary	16	2007
Lars	Male	Speech Therapy	primary	20	2010
Leonore	female	Philosophy	primary	21	2010
Mary	Female	Dutch	primary	21	2013
Manfred	Male	Biology	primary	15	2013
Pete	Male	Educational Studies	secondary	28	2010
Rita	Female	Educational Studies	secondary	28	2012
Wendy	Female	Educational Studies	secondary	23	2008

Table 1. Overview of the characteristics of the participants

The interviews took between one hour and a half and two hours and were transcribed verbatim. The analysis was a combination of reading, reflecting, discussing and categorizing (Miles & Huberman, 1994) conducted by two researchers. Eventually we developed relevant themes that covered the interviews and answered our main questions.

Results

Entering the academic world

Without exceptions all teacher educators in our study have a strong identity as teacher educators when they start their doctoral study. They are active and excellent teacher educators who are leading when it comes to the improvement of teaching and supervising student teachers, the curriculum of teacher education and organization of their institutions. They participate in (teacher) education organizations and work on a national and international level on projects. The teacher educators mentioned as their motivation to start the doctoral research the need for a new challenge in their work. However, the main reason for all to start the doctoral research was first and foremost to contribute to the improvement of their own teacher education institute and their own practice as teacher educator. This was often more important than conducting research or obtaining the degree.

> *I wanted to do more with the theory in our teacher education program. And that became my research theme. (Wendy)*

I wanted to gain new knowledge. Not so much to do research, but to initiate development. (Emily)

Most of the teacher educators had a connection of some sort with the academic world of the traditional universities before it came to this PhD project. Irene, Leonore, Ben and Emily started a doctoral research before, but they did not finish it. Two teacher educators participated in the knowledge centers at their own teacher education institution. All participants knew their supervisor from their own master study or had collaborated in joint projects.

The eventually chosen research subject was predominantly part of their daily work. Mary participated in a research community within her teacher education institute and had to study a topic that fitted this group. Lars and Manfred chose a topic in consultation with their supervisors. All other teacher educators chose the subject of their research themselves. Apart from Leonore, Ellen and Cynthia, who studied a subject that was related to their former master research, all educators choose a subject that aimed at improving teacher education. Clifford, Pete and Frits wrote a doctoral thesis based on published articles in English – which would be normal for PhD-students in the Netherlands - but all other educators wrote a monograph in Dutch. Unlike regular PhD-students none of the educators participated in an academic research group at the university and none took part in courses for PhD-students.

As the Dutch government wanted more lecturers in Universities of Applied Sciences with a doctoral degree and supported the Universities of Applied Sciences financially to reach the goals, the managers of teacher education institutes supported teacher educators who want to study for a doctoral degree. Both the participants and their managers were not always aware of the time that is needed for research. Some teacher educators were allocated three days a week for their research, others two or even one day and they worked the rest of the time as teacher educator. All teacher educators invested huge amount of their private time, evenings, weekends and holidays, in their doctoral research.

My boss supported this but at the time that I started it became clear that it means a lot of your own spare time. On his invitation for others to do the same there was no reaction at all and no one to follow my example although he stimulated my colleagues to do so. They had seen how much work I had to do and that I had to offer all my Holidays. No one was eager enough to bring the same sacrifices. (Irene)

Managers had little understanding of the academic world. Irene's request to be given time and money to start a doctoral research was immediately approved

by her manager. It subsequently became apparent that he thought that she had asked for time and money to support promotion activities for the Primary Teacher Education institute to attract more students. The Dutch word for receiving a PhD is to be 'promoted' (to Doctor). Clifford also complained that his manager did not understand what a doctoral degree was about. His manager was very surprised and even upset that Clifford's research proposal had to be approved by his supervisor, a full professor, and not by the management of the Teacher Education Institute.

Developing a researcher identity

Once they had started the doctoral research, the teacher educators in our study began their boundary crossing activity between the semi-academic world of teacher education where they worked and the academic world of the university. The teacher educators had to find a way to reconcile the different cultural traditions of the two worlds and developed a researcher identity by adapting to the traditions of the academic world. The teacher educators remembered very well the moments they were first identified with being a researcher. Milestones in this development were different for each teacher educator. For Rita this was when she started the research, for others when they presented their first paper at a conference and discussed it.

> *For the first time I had to present a paper at a scientific conference and I have fixed it, but with mixed feelings. It was a totally new task for me and I do understand that it is necessary to exercise these things but I had to be prepared for this. It differs quite a lot from giving a lecture. (Leonora).*

> *My first presentation was an important moment. I realized that presenting for scientists is something different, they want to know how you have done your research, your methodology. That differs from presentations or lectures for colleagues. They are only interested in my findings and conclusions, not in the way I came to it. That means two totally different things. (Mary)*

The first accepted and published articles or the request to review articles were also seen as moments the teacher educators felt they were becoming researchers. Also, doing the work of a researcher, like studying, reading papers, writing (English) articles or collecting and analyzing data, made the participants aware of their new identity, but it is a fragile identity.

> *Being at a scientific conference I realized how lonely it was to be a researcher. Nobody around to share your feelings. (Emily)*

The stories of the teacher educators made it clear that their supervisors played an important role in socializing the researchers into the academic world. These supervisors supported them in doing their research and in academic writing, but apart from this support working on the doctoral research was a lonely enterprise for most. None of the teacher educators became a member of a research group at the university and none participated in courses as regular PhD-students do. The supervisors encouraged the educators to present their work at conferences and many did so. Visits to national and international conferences were always supported by the management – but the teacher educators went there on their own or with their supervisors.

In their workplaces, the semi-academic world of teacher education, their needs as researcher were often denied and neglected. The management had little knowledge about research and about what was needed to conduct research. While some had a manager that supported them throughout the trajectory, most others had to deal with managers who had not only little interest in what they were doing, but also urged them to finish quickly and come back to their normal work.

There were no colleagues, or only a few, with whom they could identify with as researchers. Most of their colleagues had little knowledge of the academic world and they appreciated that the doctoral researchers were given this chance as a reward for their hard work. Their interest and support concerned the fact that they were doing something special, not the research itself. One of the participants won an award for the best article in a renowned international journal, but he could not share this with his colleagues as they did not know the journal, and did not understand what it meant to publish and receive such a prestigious award. The teacher educators suffered from this lack of interest by their colleagues in the content of their research. This was especially difficult, because they studied work-related subjects and were strongly committed to improve teacher education. Their ambition was not always recognized and this caused frustration, especially when they did not get the position they hoped for after they finished. Clifford had to accept that an expert from outside was appointed in his field of expertise and Lars was frustrated because his attempts to continue his research were not successful. Management and colleagues admired the participants, but were hardly interested in the results of the research or the recommendations that were formulated for teacher education.

> *It was disappointing that there was only little interest for my research in our institute. My manager allowed me only twice to deal the – relevant for practice – findings with my teacher educator colleagues. But always at the end of the day and I had to promise in advance to keep it short and practical. (Lars)*

…one of my colleagues who just started a study to earn a master degree and for that reason got informed about different degree's, asked me if am not interested in something like he does. He did so after I finished my PhD. (Leonore)

Towards the end of the trajectory of completing their doctorate most participants encountered problems. For some time was running out and for others change in management meant that time and other resources were cut back. These teacher educators had to take unpaid leave to continue their research. Management and colleagues became impatient as the work was increasing and they were still covering for the researchers.

The ceremony in which doctoral students receive their doctoral degree is quite impressive in the Netherlands: it is a traditional and public transition ceremony that takes place in the main hall of the university with a large group of professors, family, friends and colleagues. The teacher educators mention this as a moment at which they felt they were a researcher. Some felt that such transitions - marked by ceremonies and rewards - are available for researchers, but not for teacher educators. They felt very proud to be part of such ceremony. The teacher educators developed an identity that made them different from their colleagues. This new identity, being a researcher, made them feel privileged but also slightly guilty about the time and money that was spend on them.

After the ceremony: scholarly teacher educators

All participants underlined, some passionately, that they developed a researcher identity as part of their broader professional identity as teacher educator. They became scholarly teacher educators and that is perceived as the most rewarding aspect of their research. Some emphasize that their identity as teacher educator has been strengthened by their experiences as researcher and their increase of knowledge about teaching and teacher education. After receiving their doctoral degree all, but one, of the teacher educators returned full time to their work in teacher education. Pete worked as a full time researcher at a university for one year, but he did not enjoy what he felt was the lonely world of research and writing. He missed working with students and returned to the teacher education institute. He realised that he belonged to the teacher education world where he was still able to conduct some research-related activities. Most participants tried to find ways to combine their work as teacher educators with involvement in practice based research.

I feel that I am a teacher educator, that fits better than being a researcher. I am something like a scholarly teacher educator. I don't want to choose between research and my practical work as teacher educator, I want a combination. The real flow is in the teacher education institute, not in the university. (Frits)

Two teacher educators wrote articles with their supervisors, but all others lost contact with their supervisors – who were their sole link to the academic world. Some participants visited the Dutch research conference once or twice after they finished, but they did not feel at home and did not continue to go there. None of the participants were involved in academic research at their teacher education institutes, but only Ben regrets this. Jean and Irene were given research positons and were involved in practice-based research. Most others would like to have time to conduct practice-based research, but they were not given time and resources to continue their research.

I work as a teacher educator and my research activities are meant to help the students. There is progress though not as much as I want. It is always three steps forwards, two backwards. (Irene)

The findings of the doctoral studies hardly ever led to the recommended changes that in practice and programmes. The government wants more doctoral teacher educators, but within the semi-academic world of teacher education there does not seem to be a demand for a more research based culture.

As I do not own any key position in my institute I have no influence in decision taking. Although very relevant for the teacher education practice, my results were neglected in my own institute. (Ben)

All participants felt that their identity as teacher educator had been enhanced and enriched by their experiences as researchers and they wanted to make use of these experiences. Although they were disappointed not to continue to do research any more, there newly developed skills and status were recognized by their management for practical use. Most had been given more interesting and challenging work than they had before they started their doctoral research. They had a range of new roles including: supervising research of the undergraduate student teachers; head of a masters level course; coordinator of large local and national projects; and some were active in the professional development of their colleagues, especially in the field of research capacity building.

Conclusion and discussion

We studied the development of the professional identity of fifteen Dutch teacher educators who combined working in the semi-academic world of teacher

education with doing their doctoral research in the academic world. The first research question was "How does the professional identity of teacher educators develop while they study for their doctoral degree and move between the semi-academic world of teacher education and the academic world of the traditional university?" All participants had a strong identity as teacher educators and this identity remained strong throughout the trajectory. During the years they studied for their doctoral degree, the participants developed an identity as researcher *as part* of their identity as teacher educator.

After completing their doctoral degree all teacher educators in this study went back where they felt they belonged. They tried, some more successfully than others, to profit from their newly acquired researcher identity and tried to find other projects in which to apply their research skills and theoretical knowledge. They are convinced that with their scholarly teacher education identity they can contribute to the improvement of teacher education.

The second research question was "How does the doctoral research of the teacher educators in this study influence the practice in the semi-academic world of teacher education and the academic world of the traditional university." The teacher educators were granted partial and temporary membership into the academic world. Partial, because they were never socialized fully into the academic world for two reasons. First, because the teacher educators kept a strong identity as teacher educator and developed an identity as researcher *as part* of their identity as teacher educator. They refer to themselves "scholarly teacher educators" (see also Cochran-Smith, 2005). Second, because they were supported by their supervisors to obtain their doctoral degree, but were not prepared to work at the university as researchers. The membership of the teacher educators in the academic world was temporary because after obtaining their doctoral degree all teacher educators became full time teacher educators again with very limited or no connection to the academic world.

The partial and temporary access to the academic world also led to partial identification (Akkerman & Bakker, 2011) of the teacher educators with the identity of researcher. They have an increased knowledge about what it meant to be a researcher and about the differences between the two cultural worlds. There was no full role transition – and therefore no question of "coordination". The teacher educators valued their identity as scholarly teacher educators and do not regret their coming back full time to teacher education, but they do regret that their teacher education institutes did not recognize their increased abilities and ambitions as researchers.

The teacher educators in this study individually crossed the boundary into the academic world, but the context to which they returned - their teacher education institutes at the Universities of Applied Sciences – remains semi-

academic. As a result of their doctoral study, the teacher educators in this study are able to reflect on both worlds and have an increased understanding of the boundaries. They also have as boundary crossers new knowledge and skills that originally belonged to the perspectives of the academic world (Akkerman & Bakker, 2011).

The two cultural worlds, however, did not transform as a results of the boundary crossing of the individual teacher educators. The academic world became closed to them after they obtained their degree and seems to have been unaffected by the teacher educators. The semi-academic world of teacher education was changed by the boundary-crossers as their work changed, became more interesting and challenging and now includes some 'in-between activities' as supervising student research and facilitating research-oriented professional development for teacher educators.

The researcher identity of teacher educators is ignored or only partially acknowledged within the world of teacher education, because management and colleagues are unfamiliar with research and teacher educators are not supported to develop further as established researchers. The divide between teacher education and the academic world is still strong (Zeichner, 1995). These circumstances make the development of a researcher identity much more complicated if not impossible for teacher educators compared to regular doctoral research students (Lave & Wenger, 1991).

The teacher educators we studied were among the first who studied for their doctoral degree. In the future many will follow and it is important to know how all are involved in it: supervisors, managers, or colleagues, can contribute to enhance the researcher identity of teacher educators. Investigating the identity of the fifteen teacher educators has provided us a better insight in the development of a researcher identity of teacher educators and the way this identity is influenced by the cultural worlds in which they work. Findings suggest that teacher education institutes in Universities of Applied Sciences do not take full advantage of the knowledge and skills of teacher educators who have a doctoral degree and are able to combine being a teacher educator with being a researcher. This situation in the Netherlands seems close to the experience of lecturers in nursing and midwifery in the UK where Boyd and Smith (2012) in a national survey found that lecturers did just enough to keep the institution happy and then subverted the researcher identity to continue focusing on their other identities as nurse educators.

More research may help understand how teacher educators themselves, supervisors in the academic world and managers and colleagues in the semi-academic world of teacher education understand what teacher educators with a doctoral degree need to develop a strong identity as teacher educator and researcher who are able to benefit from and contribute to both worlds.

New research may also shed light on the impact of scholarly teacher education on the quality of the teachers they educate. Will teacher education as a whole become more research based and will individual teachers be able to incorporate results from research in their work or do research to inform their practice? And if so, will this benefit the generations of pupils that they teach?

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8

Teacher Educators' Professional Development: Motivators and Delayers

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Abstract

The research presented in this chapter seeks to identify which factors motivate teacher educators to engage in professional development and which delay them from so doing. Identifying motivators and delayers will inform academic development support for teacher educators. The research involved semi-structured narrative in-depth interviews with 27 teacher educators differentiated by their years of service as teacher educators and the roles they fulfill. Each interview lasted about one hour, during which participants were asked to describe what they did in order to develop professionally and to detail their ambitions and desires with regard to their future development.

The analysis identified three principal factors that motivate teacher educators to develop professionally: studying for a doctoral degree; professional advancement ambitions; and collaboration with colleagues. The analysis identified three main factors that delay teacher educators from engaging in professional development: schedules; lack of interest and motivation; and the policy and culture of institutes for teacher education.

Key words

Professional development; Teacher educators; Teacher education; Higher education

Introduction

People in higher education, including teacher educators, are required to continue their professional development as it furthers both their expertise and their teaching abilities. In an academic context professional development means carrying out research, writing articles, participating in conference, membership of writing teams, writing curricula and syllabi, presentations at conferences, peer reviewing articles for publications and more. Participating in such activities will contribute to the professionalization of teacher educators in their areas of expertise, to the development of a body of knowledge about the teacher education profession,

to the enhancement of the academic reputation of institutions, and to students' satisfaction with their lecturers. Professional development will allow teacher educators to persevere with their research work, examine their strengths and weaknesses, and lead to improvement and professional empowerment.

Professional development's significant advantages and the influence it has on teacher educators' work have led to the fact that this area has been much researched in recent decades. Most studies have focused on the essence of these advantages and their effects, and on ways to create a platform and develop resources and infrastructures that will allow engagement in professional development.

The research presented in this chapter seeks to identify which factors motivate teacher educators to engage in professional development and which delay them from so doing. Identifying motivating factors will enable planning and building ways of encouraging teacher educators to develop throughout their professional and academic careers. And in parallel, identifying delaying factors will help construct and acquire effective tools that will prevent this from happening.

Theoretical background

Professional development in teacher education – why and what for?

Teacher educators have a great responsibility in that they educate future generations of teachers. Every society expects teacher education institutions to produce teachers who are high quality, professional and skilled educators (Dinkelman, 2011). The fruits of teacher educators' labor are considered to be significantly influential on the essence and characteristics of education systems. Because of these responsibilities and obligations, professional literature discusses and examines characteristics of personnel leading teacher education role and complexities of the tasks included in the role filled by them. In order to fulfill this role properly, they are required to possess specific abilities, skills and qualifications expressed in a variety of aspects, some of which are detailed below:

- They have to understand, recognize and master a world of content and research belonging to the profession – the teacher education profession in which they work (Bridges, 1999; Dengerink, Lunenberg, & Kools, 2015; Shagrir, 2010; Swennen, Jones, & Volman, 2010; Zeichner, 2012);
- They must be experts in the fields of knowledge they teach, keep up to date through learning and mastering findings and conclusions that emerge from new studies (Persellin & Goodrick, 2010; Terpstra & Honoree, 2009);

- They must possess unique educational personalities to set outstanding examples for future teachers (Shagrir, 2010);
- They must possess skills to analyze, criticize and reflect on ways of teaching and pedagogical judgments that have guided their teaching (Bates, Ramirez, & Drits, 2009; Lunenberg & Korthagen, 2009);
- They must be able to demonstrate clear and in-depth integration between teaching practices and teaching theories (Korthagen, Loughran, & Russell, 2006; Lunenberg & Korthagen, 2009);
- They must possess the skills and qualifications to provide routine and professional feedback to students, empowering their teaching abilities (Grossman, Hammerness, & McDonald, 2009), by developing trusting and respectful connections that create professional dialogue (Silberstein, 1993), and nurture their working relationships (Shagrir, 2015);
- They must have the ability to examine how they teach and as such serve as examples of teaching that frequently accompanies inquiry-based practice (Willemse & Boei, 2013).

This list includes, as stated, only a few of the unique qualifications required of teacher educators by virtue of their serving in their teaching and professional conduct as role models for students (Berry & Scheele, 2007; Shagrir, 2010) and by virtue of their being examples that will encourage future teachers to act as teacher-researchers as well. On this subject, Loughran (2014) added that over and above teaching skills and working with students, teacher educators must possess abilities to carry out research into teacher education practices. And these skills and means of attaining them can be acquired through professional development:

> There is growing interest in the professional development of teacher educators as the demands, expectations, and requirements of teacher education increasingly come under scrutiny. The manner in which teacher educators learn to traverse their world of work in the development of their knowledge, skills, and ability is important (Loughran, 2014, p. 271).

Ongoing engagement in professional development is considered a fundamental and important requirement of teacher educators and a channel towards expertise both in the eyes of professional colleagues and of role holders in employing institutions (Becker, Lindsay, & Grizzle, 2003; Dinkelman, 2011; Loughran, 2014; Shagrir & Altan, 2014). The aims of professional development are to bring about an overall improvement to abilities and skills, leading to the acquisition of up-to-date tools to plan and develop knowledge and expertise both in diverse areas of knowledge and teacher education. Teacher educators

interested in professional development must invest time and effort in suitable activities in addition to their teaching work, and persevere with this throughout their careers. It is possible to allocate different degrees of time and intensiveness to a variety of these activities, through diverse platforms and frameworks. Some examples of professional activities are listed here which are considered by their nature as leading to professional development:

- Participate in short or long term learning frameworks
- Initiate, lead and carry out research
- Participate in and/or lead communities of professional colleagues
- Develop and disseminate professional knowledge via presentations and academic publications
- Make good use of up to date studies and information emerging from them
- Respond to calls for research and mobilizing grants
- Organize, lead and participate in conferences and professional encounters
- Referee articles, books, research proposals and the like
- Become members of editorial boards, academic conference organizing committees, and diverse professional committees.

(Caffarella & Zinn, 1999; Denemark & Espinoza, 1974; Hadar & Brody, 2013; Murray, 2010; Murray, Swennen, & Shagrir, 2008; Shagrir, 2011, 2013; Sinkinson, 1997; Wenger & Snyder, 2000).

One may consider three important characteristics of these activities. Firstly, there is a question of collaboration. There are activities that can be undertaken independently according to one's own decisions and preferences, and there are those that involve collaboration and cooperation with professional colleagues. Effective professional development is likely to be based on collaborations with colleagues and advancing undertakings jointly and supportively. Working towards joint outputs encourages the development of each individual in a group, empowers and brings about mutual support, forces one to adhere to timetables and carry out tasks, encourages continuation and development even after joint tasks are completed, and contributes to the creation of communities of practice (Dengerink, et al., 2015; Griffiths, Thompson, & Hryniewicz, 2014; Wenger & Snyder, 2000; Willemse & Boei, 2013). Second, there is a question of time. There are activities that can be undertaken over a short term or those that need longer to achieve results and effective outputs. Thirdly, there is a question of funding. There are activities that require financial outlays, such as tuition fees, whereas some have no financial implications, but rather require one to invest time and effort.

From all of the aforementioned activities, the one that holds central position in the literature is initiating, leading, carrying out and publishing research (MacGrail, Rickard, & Jones, 2006). Since teacher educators are higher education personnel, and since activities in teacher education institutions equate to academic

institutions, members of staff are increasingly required to act as professional researchers. Focusing on carrying out research and investigating teaching is seen as activity that should be part of the professional identity of those who work in teacher education (Griffiths, et al., 2014; Hökkä, Etelapelto, & Rasku-Puttonen, 2012; Murray, 2010).

Professional identity is built throughout one's career with the accumulation of experience and confidence in one's work. Even if one takes up this role after many successful school teaching years, three to five years are needed in order to build a professional identity as a teacher educator, and to acquire the skills and pedagogical abilities necessary to become proficient in teaching how to teach. The intensity and speed with which professional identity is developed differs according to individual teacher educator's personality, professionalism and experience, according to their motivation and desire to invest in development, and according to the investment they make in shaping their identities as researchers (Avalos, 2011; Dinkelman, 2011; Murray, 2014; Murray & Male, 2005; Swennen, et al., 2010).

Teacher educators who view themselves as researchers, are convinced that undertaking research is the norm, and that it leads to better functioning (Tack & Vanderlinde, 2014). Murray (2008) pointed out that not all teacher educators are meant to undertake research, but all of them must have insights about studies and materials that are published, must be involved and aware of innovations emerging from research, and should persist in inquiries into personal practice.

In the context of all the arguments raised so far, we will examine the position of teacher education institutions in relation to faculty professional development. Institutions are called upon to contribute and help empower their faculty members and encourage them to persist and develop throughout their professional lives and develop a professional identity (Gee, 2008; McGrail, Rickard, & Jones, 2006; Willemse & Boei, 2013). The institutional context includes organizational culture, organizational frameworks, and organizational demands, all of which affect the ways and mode in which faculty members will develop (Griffiths, et al., 2014). As such, all teacher education institutions, in common with all higher education institutions, are called upon to establish infrastructures and create working environments that suit research undertakings and staff development (Camblin & Steger, 2000; Guskey, 2000; MacGrail, et al., 2006). Such environments must enable collaborative work between colleagues, initiation of formal and informal meetings with staff, to allow them to pursue research activity leading to published outputs (Willemse & Boei, 2013).

Institutions are also called upon to allow a balance between faculty members' teaching workloads and time needed to carry out research. Institutional support and flexibility will allow them to move between teaching tasks and activities to develop and learn (Griffiths, et al., 2014; Kinman & Wray, 2013).

> The clinical features of teacher education programmes often create demands on teacher educators that are not experienced by professors in other parts of the university. As activity predicated on relationships, all responsible teaching requires emotional and psychological investment of some sort. Yet I have found that such investments can become much greater the closer I get to field-based instructional responsibilities. Of course, the time spent in this work is time not spent writing for publication or developing research programmes. These sorts of demands create special challenges in fashioning a teacher educator identity. (Dinkelman, 2011 p. 315)

It is well known that academic institutions publicly lay out their demands and standards for lecturers to meet, and operate systems of supervision and evaluation. These systems allow staff members to get to know their institution's professional world view and their faculty's professional expectations. These demands represent achievements that they must reach in order to be considered successful members of staff (O'Meara, 2002, 2005), and what conditions they have to fulfill in order to climb the academic career ladder and receive remuneration and prizes for their achievements (O'Meara, 2005). Continually carrying out developmental activities is also likely to help teacher educators to develop their academic careers (Camblin & Steger, 2000; Centra, 1983). Climbing the academic ladder is measured by achievements reached as lecturers, researchers and contributors to the world of knowledge (Brew, 2010; Halse, Deane, Hobson, & Jones, 2007).

There are some institutions that enable, and some even require, staff members recruited for whom the academic work is new, to have help from mentors. Expert and experienced staff members serve as mentors who assist them in everything connected to their teaching work, their work with students and their conduct in accordance with academic institutional rules and norms. Mentors offer their support as colleagues, enable professional empowerment and development of skills and qualifications, increase professional confidence and more (Griffiths, et al., 2014; Shagrir, 2011). Hökkä et al. (2012) called for the encouragement of professional development that would allow teacher educators to explain their practices, to use knowledge and up to date research findings, to show professional values and vision and enrich their pedagogical tools by building a strong and secure professional identity.

The picture that emerges from all the arguments presented above shows how important and necessary the development of professionalism among teacher educators is. Previous studies have clarified the tools and formats that will encourage and awaken motivation to devote time and efforts to professional development (MacGrail, et al., 2006; Shagrir, 2011). Studies have identified which factors demotivate development, including lack of time and huge workload of

teaching tasks (Dinkelman, Margolis, & Sikkenga, 2006), lack of confidence in carrying out research, insufficient institutional support, being occupied with administrative roles (Griffiths, et al., 2014), institutional climate that does not encourage research, and too few research assistants (Hyeyoung, 2014). There are also teacher educators who feel that they have not yet had appropriate opportunities to undertake developmental activities, or who fear that they will have to pay a heavy personal price (Griffiths, et al., 2014).

The research presented in this chapter examines which factors influence teacher educators' decisions to invest and develop professionally and which factors prevent them from so doing. Those who have not yet been recruited to undertake these activities or who are between activities, must recognize and understand the essence of those factors that will help them buckle down, make time in their timetables, and devote effort to improving and developing their ways of working.

Research methodology

For the purposes of this research, semi-structured narrative in-depth interviews were conducted with 27 teacher educators differentiated by their places of work, the roles they fulfill and their years of service as teacher educators. The last ranges between the most experienced with twenty years' service and the newest of them with just three years' service. Among interviewees are six with Masters degrees, two who are professors and all the others have tertiary degrees. All of them are lecturers and university-based teacher educators, and some also currently undertake or have undertaken administrative roles.

Each interview was conducted separately and lasted one hour, taking place on campus at sites chosen by interviewees themselves. Every meeting was prearranged in order to make the time necessary available, and carry them out in comfort, without any interruptions from the surroundings. During the interviews, open discussion was permitted and conversations with the interviewees developed, generating in-depth information about ways of working, conceptions, and the main significance of the teacher educator professional development.

Interviewees were asked to refer to the subject of professional development of teacher educators from three aspects:

- Conceptual aspect – to present their personal perceptions and beliefs with regard to characteristics of professional development, while referring to the position, which in their opinion, it should take within the framework of their roles as teacher educators.

- Personal aspect – to describe activities they personally undertake to develop professionally, detailing types of activities, amount of time they devote to these activities, factors that motivated them to participate in activities, the intensity with which they carry out activities, and the people with whom they collaborate.
- Look to the future - to detail ambitions and desires with regard to their future development, detailing the areas in which they would like to develop, the amount of time that they would like to continue to develop, and factors that hinder and speed up activities.

In summary, previous studies have shown the intensity and nature of activities included in a professional development framework determined by a number of factors (Avalos, 2011; Shagrir, 2011, 2013). This research was carried out in order to identify principal influencing factors, and their nature. The interviews were recorded and transcribed, and, by means of a content analysis, recurring themes were identified. Content analysis of the interviews included discerning between views of the place that professional development has within the framework of one's professional life, activities that interviewees carry out in order to develop, the significance they attributed to them, their reasons and interpretations, and details of their ambitions to develop and achievements they are interested in reaching in the future through their professional development. The findings that emerged from the content analysis provided a clear picture of key driving and delaying factors as will be described in the following section.

Research findings

The analysis makes it possible to identify three principal factors that motivate teacher educators to develop professionally and three principal factors that delay teacher educators from engaging in professional development. The three principal factors motivating them to develop professionally are: (a) studying for a doctoral degree, (b) professional advancement ambitions and (c) collaborations with colleagues. The three principal factors that delay them from engaging in professional development are: (a) schedules, (b) lack of interest and motivation and (c) conduct of teacher education institute.

In this section, the characteristics of these factors are described together with an analysis of their significance and influence. Illustrative quotes from interviewees, underpinning these analyses and interpretations, will also be presented.

Studying for a doctoral degree

The first factor found to encourage professional development was studying for a doctoral degree. Many teacher education institutions around the world require every faculty member to hold a tertiary higher education degree as a minimum qualification. This requirement has meant that faculty members without such degrees have had to choose between the danger of losing their jobs or committing to return to studying for their tertiary degree. Some of the interviewees were those who had chosen to get their tertiary degree. It is important to note that among interviewees, who at the time of interview held postgraduate (second) degrees, one was studying for a doctorate whilst all the rest stated that they were not interested in undertaking a tertiary degree. They were not deterred by the fact that without this degree, they could not climb the academic ladder or be appointed to senior academic management positions.

In meeting the demands of achieving a higher education degree, teacher educators reported feelings of meeting a challenge, of success and personal empowerment:

> *Over and above the content I researched and studied when I did my doctorate, work on my thesis gave me a lot. My writing improved considerably and I learned how to manage a complex and multidimensional project.*

> *Planning my doctorate was a challenge in profound thinking, especially with regard to organizing the writing, collecting evidence…how to collect it and my writing improved greatly. It also improved my ability to observe profoundly and reach such good and appreciated output. It gave me a perception of myself as someone who is able and capable.*

Getting the degree is seen as an achievement that proves professional ability and capability and as such provides possibilities of being valued by supervisors and promotion at work:

> *My doctorate work required a period of my life. It took me six or seven years to complete. When I finished, I felt like I was playing among grown-ups. That now, I can be recognized, publish and present at conferences. I think that the years during which I did my doctorate were the most directed in my professional development.*

> *From the time I became a PhD student, just that term PhD student, opened many doors for me. I was under a lot of pressure to complete my doctorate and it was very important for me to finish. I made a huge effort to complete this important task despite my objective difficulties. I feel it helped me advance enormously and I continue to do so all the time. I see more and more channels opening up to me.*

In addition, carrying out a comprehensive research project in order to get the degrees uncovered scholarly abilities used to carry out research even after completing the degrees and carried over to scholarly writing of articles and books:

> *Only when I completed my doctorate did I understand that without research, one cannot continue to develop, it has to be part of my doing even if it is sometimes difficult and there isn't always time. Especially when your job has such a load that one doesn't even have time to think about it but I am sure that it has to be a permanent part of my professional development.*

In conclusion, analysis of the findings showed that studying for academic degrees is seen as the leading cause for intensive and in-depth professional development activities. Some of the participants, who have tertiary degrees, made time to get their degrees mainly because this was part of formal policy requirements of their employing institutions. Nonetheless, despite the fact that they were forced to do this, they remarked on the significant contribution it had made to their learning and research processes and their desire to continue and persevere with professional development. It is well known that degree requirements include carrying out a wide ranging piece of research with a supervisor who is an expert in the field. Carrying out such research helps develop and improve learning abilities, research abilities, organizational and time management abilities as well as academic writing abilities. These benefits were expressed by participants both in their professional arena – especially developing professional abilities – and in the personal arena – especially developing their professional identities both as researchers and higher education personnel. Achieving their tertiary degree is presented as an achievement that helps to position their professional name on which to base professional confidence. Within an academic framework, tertiary degree holders are viewed as experts and professionals with professional advancement channels open to them, they are more respected professionally and are held in greater esteem both by their colleagues and senior role holders.

Professional ambitions

Another factor found to influence investment in professional development among teacher educators was professional advancement ambitions. Higher education institutions follow faculty members' professional undertakings and these are measured and examined in accordance with their supervision and evaluation regulations and procedures (Earl, 2008). Ongoing participation in scholarship activities is taken into account during routine evaluations and discussions with regard to academic promotion. The desire to progress up

the academic ladder and be given more responsibility within an institutional framework constitutes motivation that drives teacher educators to continue with their academic and professional development (Centra, 1983; Terpstra & Honoree, 2009):

> *Over all the years I studied and worked in parallel, and these two channels in fact structured my personal perceptions, my professional identity. I empowered myself over the years and learned what my strengths were, which helped me not to remain in one place for too long and to get management roles. When I feel I have given everything I can, when I am no longer productive, when I am neither developing nor advancing any more, I do everything I can to open new doors to higher level posts for myself.*

Constant and in-depth development is perceived as worthy of recognition and contributing to professional advancement, which means being given academic authority and responsibility:

> *When my teaching and research leadership is successful, when I am occupied with investigating and continuously thinking, it gives me a sense of ability, a sense of professionalism, maturity, experience and success. Colleagues come and ask me questions and get professional advice from me, my professionalism improves all the time both in the eyes of students and my colleagues and this status gives me strength and confidence.*

Holding key positions is seen as having the possibility of being involved in institutional policies and their implementation by leading programs and strategic procedures:

> *The world of research was so far away from me, and suddenly it became so accessible, so clear, how come hadn't I done it before… Research led me to a different pace in my work, opened new horizons and provided me with new roles… It gave me chances and suddenly I am part of the institutional management picture and I am a part of determining its policies. It led me to new places.*

Among some of the research participants, professional development was perceived as actions that promoted them in their teaching work, the central component of their jobs, and as such they continued with it. It advanced their professionalism in areas of knowledge they teach and reinforced their expertise and professional identity:

> *The course I studied fundamentally changed my view of my professional and personal parts. It was something that gave me strength and I learned who I was and what I am worth. Suddenly*

I felt extremely able, with an enormous amount of knowledge, great strength and ability to make a change in how I perceived my teaching, in who I am and what happens around me.

I must renew, you know, not remain in one place. I will get tired. And if I get tired, my students will also get tired. My need to renew myself, to innovate, to bring new contents to students, to be attentive to what is going on in the field and to their needs. I must broaden my professional horizons.

In conclusion, an analysis of the findings shows that ambitions to progress professionally are viewed as a leading cause of ongoing, constant professional development activities. Professional development is seen as providing teacher educators with many possibilities to advance their diverse ambitions: ambition to formulate their growing professional identity and acquire professional confidence, drive to receive professional recognition where they work and earn colleagues' and role holders' respect; determination to integrate into institutional roles and contribute to implementing policy; ambition to climb the academic ladder; and motivation to deepen their professionalism as lecturers, their teaching abilities and demonstrate up to date expertise.

Collaboration

A further significant reason for teacher educators' professional development was collaboration with colleagues. Professional development including collaboration with colleagues motivates participants to contribute and adhere to timetables determined for common assignments:

We were a team that worked so well. We would initiate our own meetings at cafes and at the college and we worked as a team. Working as a team was a constitutive event for me. The colleagues I worked with influenced me greatly, I owe such a lot to that team. Without our joint work, I certainly would not have met the required timetable. When the team convened a time to meet, for me this was a must, it saved me… I never ever miss one…

Collaboration invites social and personal links with colleagues, creates a feeling of belonging and turns participants into a professional community:

We would work together to structure the program, change bibliography, read new articles. We put together a very dynamic program, open to changes, with excellent work as a team. There is wonderful collaboration that enriches me and my teaching.

In teamwork there is reciprocal and collaborative learning that allows every member of the group to participate and ponder over difficulties, get advice from

others, learn from mentors and experts, create common outputs that serve everyone in their work:

We had mutually productive meetings to which everyone brought their area and together as a team we thought as a team. It was a limitless investment, we tried to structure the best possible lessons, to structure the best possible route that we believed and thought would be best for students. It was collaboration and teamwork that one doesn't find every day.

I think it is important that every teacher has some type of group at which they can raise all sorts of issues relating to their work. During the time I worked with a group of colleagues, we were a very consolidated and close group. From my point of view it was empowering to work with people, some of whom are very experienced and skilled. Every meeting nurtured my work abilities.

Teamwork is perceived as helping to choose in which direction to take one's work, enabling partnerships and mutual assistance, helping to create final outputs:

My professional development was structured by ongoing learning along the way, personal learning and collaborative learning with teaching colleagues at the college. This learning broadened my professional knowledge and provided me with information of how to carry out research. An interdisciplinary team met once a week, researching, learning, raising key questions from fieldwork and examining thought and I saw that a professional learning community gradually emerged.

Collaborative activities gradually become reciprocal activities between partners and various role holders through creation of a mutually supportive climate. Every team member needs colleagues to recognize his/her achievements, needs their approval and acceptance and the opportunity to present his/her accompanying emotional baggage. Reciprocal dialogue gives participants a stage on which to discuss their work and doings:

I have been working in a team for a number of years. Something that improves and nurtures my work. It is the dialogue and discourse with colleagues that benefit the content area we want to promote in collaborative thinking.

The faculty must be part of a collegiate community that acts often. There is a reflective dialogue through raising personal ideas and interpretations. This causes each one of us to rethink things and reach enriching insights.

In conclusion, an analysis of the findings reveals that collaborations between colleagues are seen as a key factor driving participation in professional development activities. Opportunities to collaborate were found to reinforce and encourage teacher educators to persist and continue with joint tasks. The joint work helped them make decisions regarding the direction of development and issues to promote, it empowers every participants' professionalism, allows each individual to know that there is a group to which they belong, allows them to create professional dialogues, share difficulties and successes, give and take professional advice and promotes professional outputs. These findings reinforce those that emerged in the studies reviewed in the theoretical background (Dengerink, et al., 2015; Griffiths, et al., 2014; Wenger & Snyder, 2000).

The research findings show that there are three main factors that delay teacher educators from engaging in professional development: schedules, lack of interest and motivation, and the conduct of teacher education institutes.

Scheduling

Analysis of the findings indicate that work scheduling is one of the factors that hinders engagement in professional development activity. Together with recognizing the importance of professional development, there are teacher educators who perceive it as a collection of assignments that pressurize and overload their schedules:

> *I didn't undertake a tertiary degree because I don't have the time and I always have more important things to do. One thing I find extremely difficult to do is to turn down personal requests, and there are many who turn to me. To sit and write articles demands another type of making time, which isn't trivial to me. It is very easy for me to work as part of a team, to present our work, but afterwards, to sit down and write, that is a problem…*

> *Research is very, very important to me. I know that I do it correctly and it excites me a lot, it is spiritually uplifting. I love doing research. However, I cannot free myself up to do it. It is so difficult to find the time for it, and now research is my last priority.*

Teaching work is perceived as the central role in which teach educators must succeed and to which they devote most their time, and any other tasks are seen as likely to hamper or prevent its success:

> *The weight of the research component has to be downgraded. There is so much focus on teaching, there is not much time left. The requirements have to be a little bit more flexible. It will have to be practically oriented research. Some people don't consider practical research journals as highly as they should.*

In conclusion, the findings demonstrate that teacher educators' work schedules are viewed as a factor hindering professional development activities. Interviewees viewed their teaching work as paramount, therefore they must devote themselves to carrying out this task. Teaching work includes many tasks: planning and preparing lessons, teaching, working with students and providing advice, marking duties, providing evaluations and more. Participating in other activities is seen as likely to take away time they dedicate to these teaching tasks and likely to divert them away from their principal purpose. Overloaded schedules are likely to result in inability to function at required levels. Those who perceive this factor as delaying their development fear that they will not be able to master their schedules and will not manage to divide their time as required. These findings reinforce those that emerged in a study carried out in South Korea, as mentioned above. Participants in this study proposed that making research assistants available to them who would help them fulfill their teaching tasks as well as their scholarly undertakings (Hyeyoung, 2014).

Motivation

Another factor hindering focus on professional development is lack of interest and motivation. Professional development requires investment in energy, effort, time and resources over and above the daily investment needed for ongoing work. Therefore, it is sometimes seen as a heavy burden requiring special strengths to carry it out:

> *Although I am required to do research, I am not part of a research faculty…my emphasis is on teaching and that was a deliberate choice on my part because I wanted to be somewhere where my teaching was going to be the main focus of my work. I have already invested much effort in working for academic degrees. Getting them was seen as an achievement. There is no need or interest in continuing to become more professional or to specialize. The most important thing to me is the connection with students. I am successful at work.*

> *I have a suitable personality and I am good at teacher education. I don't need any book or research. I have broad experience and everything is very familiar to me. This is my area, that is why I was recruited to this work many years ago, and there is no doubt that I do it the best. Instead of reading a new article, it is more important to strengthen my personality and nurture myself as a lecturer.*

> *Good teacher educators do not have to do research themselves. They must know what exists and learn from others' research using critical observation. They must always be up to date because everything is dynamic and changes do occur. However, after they have completed their doctorate, they don't have to be researchers themselves all the time.*

In conclusion, the findings reveal that one of the factors impeding faculty members' professional development is a lack of desire or motivation to make that additional effort. Being active in any channel leading to development demands self-control and strict time management, carrying out tasks without external supervision or a mentor's guidance, reaching the end and presenting outputs. Such activity is likely to sometimes result in disappointments or criticism, such as articles or conference presentations being rejected, and this leads to giving up and lack of motivation to continue dealing with difficulties.

Institutions

Another factor perceived as hampering some teacher educators' professional development is the conduct of teacher education institutes. Institutes are interested in characterizing themselves as higher education institutions that offer students faculty members of the highest standard. As a result, faculty members are required not only to succeed in teaching, but also to persist in scholarship. Meeting these demands is taken into account during formal institutional evaluation processes. Some teacher educators perceive these demands as inappropriate for staff who educate teachers, which is mainly a practical profession, and as a demand enforced by institutions even on those who do not think that it is important to develop professionally.

Leading institutional management policy and messages received by teacher educators about their institutions' worldview affect the character and intensity of their scholarship activities (Gee, 2008; O'Meara, 2002; Secret, Leisey, Lanning, Polich, & Schaub, 2011; Shagrir, 2012). Some teacher educators disagree with institutional policy and vision, but nonetheless they express the desire to be appreciated and supported by academic leaders:

> *My status has been built over years of working. I had a strong belief in my professional work. Colleagues who worked with me were helped by my experience and teaching skills. This is an important position that gives me a sense of worth, professionalism, recognition…I would want my success to be acknowledged and recognized more by college role holders.*

> *I have a feeling that they don't look at me … that they don't appreciate me as a pedagogical instructor. So what if I study or research, I have satisfied students who do excellent work and they learn from me.*

> *I operate from a desire to acquire credibility in a culture where my voice and standpoint have little weight. College decision makers are those who decide and there is no room for individuals' personalities. I try to operate within these decisions and to interpret them*

according to my personality. The college hierarchy does not recognize my success and despite the fact that I am successful with my students, I am not rewarded or praised by them.

In conclusion, the findings show that some teacher educators perceive the policies determined by teacher education institutes as not only failing to encourage or promote a faculty's professional development, but sometimes even preventing such activity. Such hesitation is likely to derive from unwillingness to accept policy makers' dictates, or not understanding the worldview on which this policy is based. There are also those who see no justification to institutional regulation, which contradicts their own worldviews.

Discussion and conclusions

The research presented in this chapter is based on the assumption that it is worthwhile and desirable for teacher educators to persist in professional development throughout their careers, and therefore it is desirable that they are afforded conditions that enable this development. The findings might serve both individual members of the profession and the policies of institutes for teacher education.

The daily grind of teacher education and the priority given to teaching seems to be overwhelming for many teacher educators. From the analysis it is possible to construct a list of key factors that encourage and hinder professional development. The factors emerging from this research were grouped into three areas:

One area is **personal factors** - this area includes those factors whose origin is in everyone's personality, and derive from worldviews that guide both the way in which they fulfill their roles and the way in which they understand the makeup of their roles. Included in this area are encouraging factors such as professional advancement ambitions, and hindering factors such as lack of motivation.

The second area is **institutional factors** deriving from the nature of institutions in which teacher educators work – this area includes factors that derive from how institutions in which teacher educators work are managed and how institutional leaders perceive faculty members' positions. Encouraging factors that can be included in this area are demands to undertake tertiary degrees and impeding factors such as institutional conduct.

A third area is **social factors** – this includes factors deriving from reasons linked to conduct prior to joining developmental activities and during the time they are done. In this area one can include supporting factors such as collaboration with colleagues and delaying factors such as coping with schedules and burdens of work.

On the face of it, in this division into three areas, the tremendous influence of teacher education institutions on the second and third areas emerges. Of course management policies and institutional worldviews greatly influence faculties' professional undertakings. Furthermore, it is important to point out that in recent years in many universities around the world, centers for the advancement of faculty teaching have been established. Their aim is to promote successful teaching among university faculty members. Their work focuses on improving teaching, promoting teaching styles and methods, helping to cope with new teaching approaches, enriching and providing a variety of exiting teaching methods, including using technological means and working with students. In some of these centers, channels leading to nurturing staff, encouraging scholarship activity such as the one operating at Florida International University (FIU) in the United States.

> The Center for the Advancement of Teaching seeks to recognize and cultivate learner-centered teaching throughout the university. We provide support to faculty as they strive to balance cutting-edge research with thoughtful teaching. We want to help you harness the excitement and innovation of ground-breaking research and bring it to the classroom setting, where learning becomes the proper object of our study. We promote student success at FIU by supporting the faculty as they foster a culture of teaching excellence. FIU CAT provides a space for intellectual exchange about teaching and learning, encouraging faculty at all levels to devote their energy to student learning and assisting them to find new ways of facilitating our community project, education (Florida International University, 2016).

There are training institutions that allocate a variety of infrastructures and special services to the professional development of faculties. McGrail et al.'s (2006) study for example, examined the contribution of three types of interventions initiated by the institution they researched. This institution strove for increased publication activity and therefore invested in developing courses to develop academic writing skills, establishing joint writing groups, and creating a system of mentors to help with academic writing. The researchers made recommendations to institutions as a result of their research findings:

> We recommend that universities support the development of structured interventions for their staff in order to increase their writing for publication. A regular, ongoing arrangement seems to be most beneficial, with a format that can be adapted to meet the needs of the attendees (McGrail, et al., 2006, p. 34).

The findings of the current study reinforce these recommendations. Professional development affects both teaching work and the development of

professional communities as well as the academic reputation of an institution. There is no doubt that every individual staff member has intrinsic motivations that drive their conduct and how they fulfill their roles. Each one has a different background and experience, desires and preferences, worldviews and beliefs on which they are based. Each one chooses how to conduct themselves within an institution, their work connections and effects on professional colleagues, and their preferences how to invest their resources – time and money. Nonetheless, it is clear that external factors also have a great influence.

As such, educational systems, training institutions, unions and professional bodies are all called upon to continue to encourage involvement, learning and activities among teacher educators. They are called upon to mark out cornerstones and develop means that lead to scholarship activities. Researchers are also called upon to enlist in this matter. The more we continue to research the area, the more we add important findings and conclusions, so will opportunities for teacher educators to expand their scholarship activities increase, the profession's body of knowledge will expand and the position of teacher education as a profession, among all other academic professions, will improve.

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9

Inquiry-based Continuing Professional Development for University Teachers: Polish Initiatives and Concerns

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Abstract

Professional development of the university teacher is a complex process requiring a balance between research activity and teaching practice. Kember and MacNaught (2007) mention a specific synergy, a concept that emphasizes the interaction of both processes and their effect going much beyond their sum. Agreeing to such an approach allows us to emphasise the benefits of the duality of the role of the university teacher: filling simultaneously the role of a researcher-scientist and a teacher -practitioner. This paper analyses relevant literature and examples of research focused on academic teaching. Initially I identify several types of research to distinguish between (1) study of a theoretical nature (2) study of both theoretical and practical character (action research) (3) study in the form of programme evaluation and (4) study of the community of practitioner educators. By describing some illustrative examples of research conducted by academics in Poland I critically consider a number of initiatives showing some possibilities for professional and personal development of university teachers. However, these examples do not explicitly show how academics transfer knowledge gained through research into their teaching practice. There is therefore a concern that, despite the widely claimed significance of such research activity on the quality of higher education in Poland, the real impact does not exist or at least remains unproven. Universities in Poland often seem somewhat disinterested in the development of teaching, because the system of financing depends mainly on the number of professors and doctors within the departments (so the scientific development of personnel) and the number of students, regardless of the quality of teaching.

Key words

teacher educator, professional development, action research, inquire-based professional development

Introduction

Work at a university is connected with performing a dual role - of a teacher and of a researcher. Therefore, an academic teacher is required to possess not only a broad knowledge in the field of his or her study, which allows him or her to conduct research and transfer knowledge, but also to have proper skills to effectively give classes. These two areas of academic work combine when an academic teacher studies his or her own teaching practice. The aim of this chapter is to point out the role such pedagogical studies may play in the improvement of academic teaching and its impact on learning and learners. It will include examples of such studies, indicating their valuable contribution to teachers' educators' professional development. Concurrently, I will argue that this kind of pedagogical research is not as widespread as it should be. Studies of one's own practice in higher education teaching most often merely form a part of scientific research and their results are often not transferred into practice.

In Poland there are no regulations that would compel an academic teacher to produce documented qualifications and knowledge in the field of adult education. The analysis of academic job offers carried out by Sajdak (2013, p.193) shows us that stipulated requirements include scientific achievements and attainments, research competencies and English language skills. An experience in didactic work is expected sporadically and only of candidates applying for posts in pedagogics or those of a lecturer. Often the didactic field may also be marginalized during the performance review of academic teachers. This is suggested by studies carried out at 22 universities (departments of Pedagogy) by Marszałek and Pasikowski (2014) and Babicka-Wirkus, Pasikowski and Szplit (2015). Documentation analysis shows that scientific and organizational areas prevail during the performance review of academic staff. In review sheet questions these areas are more detailed and universities are much more explicit in setting out expectations of staff. So didactics is obligatory for academic teachers, but has no great influence on their careers (Cyboran, 2008). And even though said teachers spend most of their time and energy teaching, they are evaluated on the basis of their scientific achievements (Clark, 1987, after: Melosik, 2009). A great scholar who is a poor educator is generally held in much higher esteem than an excellent educator who does not conduct scientific research (Brzeziński, 1997). According to Melosik (2009), this paradox, typical for all higher education institutions in Poland, cannot be solved within Polish present educational system. Still, it is postulated that the role of didactic achievements in assessing and promoting academic teachers should be increased and that an academic teacher should be able to choose a didactic path of his or her scientific career (Higher Education and Science Development Programme, 2015). We should also remember the positive impact of scientific research on didactic work, for instance because it

may deepen one's knowledge, forces one to reflect, provoke didactic inspirations and provide a source of practical examples (Bauman, 2011).

A conviction that didactics is in great part disregarded and that educational activity has little influence on promotion has appeared for many years already (research by University of Warsaw's Centre for the Studies in Research Policy and Higher Education of 1993, after: Radecki, 1998). These have also been advanced that members of academic staff at reputable higher education institutions concentrate mainly on science, which is the main reason why they choose an academic career, and they consider teaching a 'necessary evil' (Cyboran, 2008). Meanwhile didactics is positioned as a specialty of so-called 'low-rank' academic institutions (Najduchowska, Wnuk-Lipińska, 1990). Academic teachers, even teacher educators, are often not well trained for didactic and educative work (Cyboran, 2008) or they even lack pedagogical credentials at academic institutions specializing in economics, technology or exact science and at non-public institutions (Potoczny, 2009). On the other hand, contemporary literature emphasizes that didactic competencies are essential for academic teachers (Sajdak, 2012, 2013) and the transformation of a university depends heavily on increasing the quality of university didactics (Denek, 2012).

However, due to constant changes of a didactic situation as well as the many and various factors exerting influence over it, it is not possible to fully prepare a teacher for the practical tasks he or she performs. Kwaśnica (2014) claims that a teacher's occupational training is always 'unfinished' because of the uniqueness of educational situations, the communicative and processual character of this work and the necessity to develop the candidate's whole personality. This fact forces teachers to learn constantly, discover the personal meaning of what they have learned (Miszczak, 2000) and be ready to continually upgrade their theoretical and practical knowledge (Parzęcki, 2011). Studies of their own practice conducted by academic teachers are considered one of the most effective ways to a creative professional development (Hensen, 1996). They are an efficient method by which to 'finish' one's education.

Teachers' studies of their own practice

The basis for the teacher-researcher model was created by Stenhouse (1975), who brought to attention three essential characteristics of such a teacher:

1. A commitment to systematic questioning of one's own didactic practice, which is an impulse for development.
2. A commitment and skills that allow to study one's own practice.
3. A concern to question and to test theory in practice.

Further deliberations on this model have led to emphasizing the role of: relations between studies and critical reflection; regularity of research on one's own practice; control over it and personal engagement in the research (Cochran-Smith & Lytle, 1993; Zeichner & Noffke, 2001).

Where teachers study their own practice, they are usually expected to perform particular actions, among which Othman and Dahari (2011) identify: defining the problem or issue important for the teacher and the community; collecting, reorganizing and interpreting information related to the subject; reviewing relevant literature and research; determining possible actions, which should ensure fulfillment of assumed goals; and taking up action and documenting results.

Taking into consideration teachers' professional development as a whole, Sparks and Loucks-Horsley (1989) defined its five forms, that also concern all teachers, including academic ones. These are: individually-guided development; observation/assessment; involvement in a development/improvement process; training; and inquiry. Professional development in higher education concerns upgrading teachers' knowledge and skills, evolution of their teaching strategies and increasing awareness of the great role of studying one's own practice (Astor-Jack, McCallie & Balcerzak, 2007). This last component is the basis of the professional development of a teacher, who should study his or her own teaching and the skills necessary for it, and test theories in practice (Day, 2004). This is action research, aimed at perfecting practice, creating new knowledge and generating theories that grow out of experience (McNiff, Whitehead, 2010). According to McNiff and Whitehead (2010), action research concentrates on the improvement of a learning process instead of behaviours that simulate learning, and on the values originating from practice. It means asking profound questions, is the process of calling into doubt, deconstructing and destroying assumed schemes.

This approach might be used by academic teachers for two purposes (Czerepaniak-Walczak, 2001): (1) to diagnose facts, educational situations and their own teacher-researcher practice and (2) in order to implement changes (therapies) regarding their educational practice and research activity after hypotheses have been verified, in the way of an experiment. Action research is situational (Czerepaniak-Walczak, 2001), which means that a problem is defined in a given context, in which it is also solved - the context of an academic institution. Action research is supposed to solve a specific practical problem, increase knowledge, develop certain competencies of the participants of an educational process and enable an immediate use of research results (Chalmers et al., 2012), often in the same class or in the same course of studies. It is sometimes a collaborative process (Czerepaniak-Walczak, 2001; Chalmers et al., 2012),

where research team members are also the subjects of the study. During this study subjects cooperate, instead of being passive (Gołębniak, 2012). It enables collective creation of a practice-based knowledge (McNiff, Whitehead, 2010). Action research requires a researcher to be aware of his or her action and feel responsible for them (McNiff, Whitehead, 2010). To transform from an 'outside observer' into an 'inner observer' (Kemmis, McTaggart, 2009), to beocome a 'first-person researcher' in opposition to people not personally engaged, that is 'second- and third-person researchers' (Reason, Torbert, 2010). The research process is constructed in a way that enables a teacher-researcher to understand and support the processes of an educational change (Clarke, 2005). In order to achieve this purpose, he or she constantly evaluates the modifications of an educational situation (Czerepaniak-Walczak, 2001), which leads to perfecting his or her practice.

The key points of interest in studies on academic teachers' own practice are the students involved and the improvement of their results. Improvement in student results may be demonstrated only through relating teacher's actions directly to students' learning (Strong, Silver, Perini, 2001) and by getting feedback on the classes they teach (Łobocki, 1999). It is important to note the significant difference between a systematic study of their own practice compared to the widespread quality assurance approach of simply using a survey to gather student evaluative feedback in order to 'assess' the academic staff (this latter approach has become an obligatory, formal method of academics' assessment which is now fairly common in Poland). Both methods serve to collect information from outside sources, but only the first one is likely to lead to real change in educational practice. Gathering evaluative feedback makes sense only when a teacher truly analyses the responses and uses the findings to improve his or her practice (Zajączkowska, 2007). This very common method of assessment by students is a formal category used by superiors to review academic teachers and provides too little real, definite information that would allow teachers to modify their own practice. Therefore, we may observe that academic teachers highly distrust students' opinions gathered for this purpose (Garbacik, 2001, Kotysz-Marczak, 2001). What is more, even surveys conducted in different didactic contexts often show unreliability of such assessments, as these are strongly influenced by students' anticipations regarding grades they will get from a given teacher (Matos-Diaz, Ragan, 2010; Ewing, 2012; Susanli, Kaytaz, 2015).

The improvement of students' results depends on changes in teachers' practice influenced by teachers' developing pedagogical knowledge. Action research by teachers is based on reflection and critical analysis of one's own actions, in relation to personal knowledge and formal knowledge (Dróżka, 2002, p.111). Interactions between theory and practice are a sort of an interactive relation. 'A

theory is not entirely true as long as it is not practiced, and practice will serve its purpose only when correct conclusions are drawn out of it' (Miszczak, 2000, p. 255). This is why studying one's own practice requires a simultaneous performing of educational tasks and action research.

Taking up actions aimed at getting to know and perfecting one's own practice also provides a range of benefits in the sphere of an academic teacher's personal and professional development (Czerepaniak-Walczak, 2001). A teacher develops confidence, insight into their professional and research interactions and the ability to overcome difficulties, which results in discovering new possibilities to act and take up an autocreative activity. In addition, a teacher improves his or her social, managerial and leadership skills, if research is conducted in teams or study groups. A sort of a "side-effect" of such research is increasing cooperative skills, perfecting communicating competencies, developing courage and taking responsibility for one's own actions. Acquiring professional knowledge by a teacher is not only a cognitive process, but also a social interaction (Gołębniak, 2002).

Studying their own practice requires teachers to be prepared intellectually and emotionally. Necessary features include an ability to make rational assessments, an ability to see limitations and courage to accept information that may destroy one's previous view of reality. So, at the start of a study teachers must decide if they intend to discover objective and universal truths or search for ways to change their academic reality. Action research aims to improve the quality of teaching and learning activities, but it is also the "ways and means of a researcher's self-development" (Czerepaniak-Walczak, 2001, p.194).

Setting the scope of the research is the responsibility of the teacher, who feels there is a problem and does not just 'perform commissioned tasks' implementing curriculum and an educational programme (Czerepaniak-Walczak, 2007, p.80). And he or she is also a concious participant of the study, not just a 'subject' or 'case'. Finally, a teacher researcher analyses research results and can circulate them, publishing a report in the form of a treatise or as practical guidelines for other teachers. Reflection on practice can take different forms, from discussions to treatises. Teachers can study their own portfolio, their own teaching materials, or a conspectus of a class, as well as consciously watching and evaluating their own actions (Sajdak, 2013). They actively gain knowledge of their own abilities and limitations, weaknesses and strengths.

Even though there is considerable work on school teachers' professional development, there are few studies of specific action taken up by academic teachers in the field of studying their own practice in higher education settings. The current paper reviews Polish literature on teacher educators researching their own practice.

Typology of Studies on Academic Teachers' Practice

The professional development of an academic teacher is a complex process seeking a balance between research activity and teaching practice. Sometimes a sort of peculiar **synergy** is mentioned (Kember & MacNaught, 2007). Such synergy emphasizes interaction between research and teaching and promises an output greater than their simple sum total. While we agree with this perspective, we may also underline benefits of an academic teacher's dual role - that of being both a researcher-scientist and a teacher-practician. The above mentioned synergy is of a triple character (Goncalves, Soeiro, Silva, 2014). Firstly, the process allows teachers to verify theories by providing the actual examples of their implementations. Innovative didactic ideas may also be the basis of treatises and inspire empirical studies. Secondly, scientific research is the source of many ideas, which may be put into practice, it expands practice and encourages teachers to search for new teaching methods. And thirdly the form of the synergy is an academic studying their own practice.

When we study examples of teacher educators' research on their didactic practice, we may distinguish four types of such research: (1) study of a theoretical nature (2) study of both theoretical and practical character (action research) (3) study in the form of programme evaluation and (4) study of the community of practitioner educators.

The first type of research on didactic practice conducted by academic teachers are studies of a mainly theoretical, purely **scientific** character, that contribute to scientific advance. These studies regard an academic teacher-researcher directly only in part, as they lead to reflections and considerations of a global character and concern a larger academic community. Their immediate, individual benefit is hard to be spotted. It seems their role comes down to making teachers aware of important aspects of their academic work and enriching their professional knowledge in the field of teaching (Ostrowska, 2000). These studies have a strong scientific impact, but it is hard to tell how much of their content will influence the practice of a single teacher directly, since such influence requires a purposeful and conscious searching for knowledge and also a profound personal cogitation. We may assume they will have some influence on teaching practice, only if among their results academic teachers find examples corresponding with their comprehension of didactics and therefore confirming choices they have made, or if academic teachers find information about negative reception of behaviours and this fact will inspire them to rethink and modify practice. In theory this kind of impact on professional development from published studies is, of course, possible, but in practice outside information seems likely to be modified by teachers convictions, their own practical theories and professional identities.

One example of an academic studying their own teaching practice is research Dróżka (2002) carried out, regarding the image of an academic teacher among students, their expectations and reality. This work was an attempt to find criteria for the assessment of teaching quality at a higher education institution. Another example found in Polish literature are the studies of Potoczny (2009), conducted among students of non-public higher education institutions. This work asked how an academic teacher is perceived by students in relation to personality traits, relations with students, pedagogical and psychological credentials and the effectiveness of chosen didactic methods. Other examples of theoretical studies include a study on the authority of an academic teacher, together with his or her methodological skills (Zając, 1998), and an attempt to create an academic teacher's role model on the basis of information collected from students (Bartoszewicz, 1999). Scientific research concern has focused on interactions between teachers and students (Pawlak, Szymczak, Posłuszna, 1998) and the methodology of giving and classes academic teachers' attitude (Iwicka, 1998). They comprise students' expectations of academic staff and its competencies (Wróblewska, 1998; Fiedor et al., 2007; Gaweł-Luty, Gwardzik, 2001; Mańczak, 2001; Nevo, 2003; Zajączkowska, 2007), including communication (Olejarz, 2007) and computer skills (Górnikiewicz, 2001).

Research studies popular among academic teachers include research carried out in order to solve some existing or anticipated problems connected with improving a didactic process. Such studies are of a theoretical and practical character and therefore they allow engagement with theoretical bases for academic work in connection with a readiness to **self-modify** a teaching process that is enlarging knowledge and expanding practice (Ciekot, 2005). They represent a research attitude toward one's own educational activity (Ostrowska, 2000) and creative modifying of one's own professional work (Dziedziczak-Foltyn, 2006). This is a typical action research. According to its definition, action research is a continuing cycle repeated endlessly by an academic teacher (Harvey & Knight, 1996). It starts with a question and, through reflection and planning, a researcher gets to the action stage. In this stage another question or doubt arises and the cycle repeats itself. This is a cycle of learning through experience, based on four phases: (1) specific experience, (2) study/ observation/ reflection, (3) theories and conclusions, and (4) implementation/ action/ verification (Kolb et al., 2002). An interesting example of studies of an exploring character, with a broad scope of interest, is research carried out at the University of Gdańsk and described by Bauman (2011). The author presents studies in three subject fields, one of which, the widest, regards an educational process at the University from a student's and an academic teacher's points of view. The two remaining subject fields are: academic teachers (their self-assessment as educators, plans,

experience, difficulties and successes) and students (how content and satisfied they feel with their studies). This research had a clear practical goal (to recognize the quality of a didactic process at the University) and helped to define means of supporting an academic teacher in improving his or her educational proficiency and to prepare an adequate training offer.

Through pursuing inquiry into their own practice academic teachers ascribe an important role to their students. On one hand, action research enables a teacher to reflect, and on the other, it is profitable for students, too, as partaking in the studies helps them to deepen their knowledge on the methodology of pedagogic research, thanks to watching their teacher's actions and participating actively (Jenkins, 2003). This type of study also allows students to pursue additional goals, for instance it may enhance students' self-cognition (Ciekot, 2005). The direct benefit of such research is an opportunity to combine research output objectives with didactic development with a given course, and research findings may support deeper analysis of practical pedagogical issues. These practitioner research studies by academic teachers are also often designed to diagnose problematic aspects of teaching and they contribute to altering a didactic process at a given academic institution. Although the use of student evaluation to assess university teaching effectiveness is controversial (Stark-Wróblewski, Ahlering, Brill, 2007), it is often used for perfecting curricula and didactics. And so we can see a need for preparing students to participate in research on teaching quality and developing skills by academic teachers in the scope of gaining students' evaluative feedback and including analysis of this data to inform practice.

The third type of research on practice is studying the effects of teaching in chosen courses provided at universities. Teacher educators collect evaluative feedback concerning students' experiences within a given course for the purposes of modifying the programme or the teaching strategies (Kubiak, 1998). These studies are of an **evaluative** character. Sometimes this kind of research is connected with carrying out pedagogical experiments and implementing certain interventions, for instance applying a new teaching method. An example of such an intervention is a journalism and social communication course that implemented an innovative teaching strategy based on on-line learning, workshops with students, project work, creativity enhancing techniques, e-tests and poster-based tests (Drzewiecki, 2014).

The fourth type of research are studies of one's own practice conducted in projects organized by communities of practice. In this case these studies of a didactic process form part of a larger process of implementing educational change at an academic institution. So these studies are of a **diagnostic** character (at the start of a project - in order to determine what alterations are needed at a given

institution) or an **evaluative** one (to evaluate the effectiveness of implemented changes and their benefits).

Developing didactic competencies was the purpose of the project 'The Modern University - a comprehensive support program for doctoral students and teaching staff of the University of Warsaw', carried out during the years 2009-2014. The project's starting point was affirming that individual actions of an academic teacher were not sufficient to ensure students' educational success, therefore the project involved a whole faculty. Still, it is of some concern that despite the wide scope of described actions, it is not clear that a survey or other instrument was used to identify the developmental needs of its participants prior to the project's implementation. So we may have concerns that decisions regarding workshop and training topics depended simply on some unspecified conclusions 'drawn from seminars organized within the framework of the project with experts, educators, training staff and teaching quality specialists' (Wasilewski & Kocik, 2014, p.20). There had been no teacher educators' needs analysis before the training syllabus was designed. Although, evaluative studies were conducted, they did not support practice with their conclusions. That is why, to some extent, this project seemed to be only a critical appraisal of an organized process of supporting academic staff development, giving an account of achieving goals set within the project.

Conclusions

The purpose of the chapter is to investigate the different ways by which teacher educators lead their professional research concerning their practice. I have tried to provide some insight into the national culture of practitioner inquiry and indicate its strengths, weaknesses and constraints.

The examples of studies that this chapter has considered provide some insight into interesting research and development initiatives. However, this review of Polish pedagogical literature has not revealed examples that fully explain the impact of new knowledge gained during studies on one's own practice. Such examples do exist in Western literature. In Poland academic staff are provided with handbooks, training, workshops and conferences on didactics. However, these activities tend to be short-term, limited to a project timeline, and there is a lack of longer term actions that provide sustained inquiry-based support for academic teachers.

The publications I have considered are mainly research papers, documenting teachers' reflections. The influence of these studies on specific behaviours and actions of academic teachers (the 4th phase of the Kolb's cycle, Kolb et al., 2002)

unfortunately remains undefined. In addition, there is a lack of evidence for the impact of research on organizations and institutional policy. And so, despite the claimed impact of studies on the quality of academic teaching, it may be that no such impact exists. One could think that the research serves to satisfy the teacher's need for professional development. Perhaps it also reflects the higher education sector, where a scientific aspect prevails over a didactic one. Studies on his or her own practice are a way to create a treatise, which is needed to assess an academic teacher and his or her formal professional development. In Poland's higher education system we seem to lack a worked-out method of drawing information from such studies. Our academic institutions do not seem to be very interested in developing didactics. One reason for such a state of affairs is probably our system for financing higher education institutions, which depends on scientific development and the number of students being educated, no matter the quality of teaching and didactic work of academic staff. Despite this broader situation in Poland, studying one's own practice is an effective approach that supports the professional development of an academic teacher. There are considerable benefits deriving from researching academic practice, both for teacher educators and students.

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10

Supporting Teacher Educators' Professional Development in Research and Supervising Students' Research

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Abstract

As in many other countries, in the Netherlands there is growing attention towards research conducted by teacher educators working at universities of applied sciences, previously known as university colleges, or teaching intensive institutes for higher vocational education. This attention places demands on teacher education departments in terms of their policies and their professional development support for teacher educators, for whom conducting research or supervising students' research have not been common practice. This chapter is about the lessons learned from several studies concerning designing and establishing professional development activities to support teacher educators in conducting research and supervising students' research.

Key words

Teacher educators, pre-service teachers research, professional development activities, policy, design principles.

Introduction[1]

It has been widely accepted that if teacher educators conduct research it contributes to their professional development, to their teaching practices and to the quality of the preparation of student-teachers (Willemse & Boei, 2013). In addition, teacher educators' research can contribute to the body of knowledge of the profession (Cochran-Smith, 2003; Lunenberg, Dengerink & Korthagen, 2014; Loughran, 2011, 2014; Willemse & Boei, 2013).

[1] This chapter is based on studies mostly conducted within a special interest group linked to Dutch association for Teacher eduators (VELON). We want to thank Quinta Kools, Gerda Geerdink, Marieke Pillen, Lidewij van Katwijk and Loes van wessum for their collaboration in these studies and their critical feedback regarding this chapter.

However, despite the recently increased attention for the profession of teacher educators (hereinafter referred to as 'educators') (e.g. European Commission, 2013) and the fact that nowadays conducting research is conceived as part of educators' professional role (Cochran-Smith, 2005; Goodwin & Kosnik, 2013; Lunenberg, et al., 2014), it is not always common practice for a great number of educators in many countries (Murray, Czerniawski, & Barber, 2011; Chetty & Lubben, 2010; Willemse, Boei, & Pillen, 2016). This particularly applies to educators who work in teaching intensive universities (Murray, 2010; Heggen, Karseth, & Kyvik, 2010; Willemse & Boei, 2013).

In The Netherlands, as in several other countries, higher education is still offered by traditional research universities and by institutes for higher vocational education, also called 'comprehensive higher education institutes', 'polytechnics', 'university colleges' or, more recently, universities of applied sciences (UAS). Regarding the latter institutes, UASs, similar to developments in other countries in which the dual system ended by appointing 'new universities (cf. Borg & Alshumaimeri, 2012; Chetty & Lubben, 2010; Gilroy & McNamara, 2009) or by merging these institutes with research universities (cf. Erixon Arreman, 2008), research is increasingly seen as one of their assigned tasks (Kyvik & Lepori, 2010; Willemse & Boei, 2013; Willemse et al., 2016). Moreover, these UASs are also assigned the task of preparing their students for research (Heggen et al., 2010). This also applies to the departments of teacher education within these UASs (Willemse & Boei, 2013; Geerdink, Boei, Willemse, Kools, & Van Vlokhoven, 2016).

However, in these (former) teaching intensive universities most educators are selected on the basis of their performance as a teacher, not on their research capabilities (Griffiths, Thompson, & Hryniewicz, 2010; Louhgran, 2014). Besides, their hands-on experience with research is quite often from the distant past: mostly derived from their own masters education (Willemse & Boei, 2013) and educators lack research capacity.

As a result, Dutch teacher education departments changed their policies and started supporting the professional development of educators by offering professional development activities (PDA) (Geerdink et al., 2016; Willemse & Boei, 2013; Willemse et al., 2016). Over the past years we have conducted several studies relating to the policy changes which have been made by teacher educations departments concerning the support of educators' professional development, what kind of PDAs are offered and how these PDAs contribute to educators' professional development.

The aim of this chapter is to provide an overview of these studies and to reflect on lessons learned with regard to the policy and practice implications to support educators' professional development in research and supervising students' research.

The demands for educators as researchers

While not all educators consider conducting research as part of their professional tasks, the importance of educators as researchers has internationally been emphasized many times (Borg & Alshumaimeri, 2012; BERA, 2014; Cochran-Smith, 2003; 2005; Chetty & Lubben, 2010; Lunenberg et al., 2014; Loughran, 2014; Murray et al., 2011; Swennen, Jones, & Volman, 2010; Goodwin & Kosnik, 2013). Two reasons can be distinguished for this emphasis. On the one hand it can be explained as a result of changes in the position of teacher education departments over the past decades in many countries; and on the other hand by arguments regarding new professional demands on educators.

Changes in the position of teacher education departments

Changes in the position of teacher education departments have taken part over the past decades in several countries in Europe, like Sweden, England, or Swiss (see, inter alia, Erixson Arreman, 2008; Christie & Menter, 2009; Lepori, 2008; Gray et al., 2009), North-America (Clarke, 2001; Cochran-Smith, 2005), Australia and New-Zealand (Ham & Kane, 2004; Loughran, 2011), South Africa (Chetty & Lubben, 2010; Gallangher et al., 2011) and Saudi-Arabia (Borg & Alshumaimeri, 2012).

Three developments have ensued from the changing positions of teacher education departments in these:

1. university colleges have been merged into existing research universities,
2. former university colleges became 'new universities',
3. university colleges and institutes for higher vocational education were asked to focus on research tasks.

Loughran (2011), for example, describes the process of merging university colleges into research universities. While this development might imply a reappraisal of the importance of teacher education, it also increased the demands on educators to conduct research and to meet academic standards, such as the need for academics to publish and bid for grants. Clarke (2001) also describes this development on the North-American continent and argues that the shift to university settings causes a change in focus (and status) from the role of educator to the role of scholar. Concerning this role of scholar Clarke states that having expertise in research leads to a significant contribution to the knowledge of the academy. This is in contrast with the role of 'educator' who focuses on teaching student-teachers. However, combining these two roles puts a considerable strain on educators:

> [...] to be regarded as a 'teacher educator' during this period was the equivalent to being a 'practitioner'. In contrast to this deliberately demeaning portrayal, to be

> regarded as a 'scholar' was equated with being a 'theoretician' where theory was the touchstone for acceptance by, and advancement within, the academy. (Clarke, 2001, p. 602).

Gray et al. (2009; e.g., Murray et al., 2009) describe for the UK the transformation from colleges of education into ('new') universities:

> 'As a result of these mergers, staff within these institutions found themselves in situations where research, having previously been of a low, or lower, priority was now elevated to a position where it became a central requirement' (Gray et al., 2009, p.426).

Chetty and Lubben (2010) emphasized the increased need for educators to become capable of conducting research, and/or even to gain a master's or PhD degree to meet the standards as 'new university' in South-Africa, which include to increase their ranking as a university and guarantee research funding for their university. In other words, those teacher education departments in these 'new universities' were expected to compete with existing research universities.

In other countries, university colleges or institutes for higher vocational education also had to focus more on research, as described by Heggen and colleagues (2010; cf. Willemse & Boei, 2013; Willemse et al., 2016). As a result of national and European governmental policies these teaching intensive universities, including the teacher education departments, were supposed to conduct research and to supervise students' research.

In all three developments, teacher education departments and educators were confronted with the challenges of conducting research. However, being tasked with a research focus, does not, in itself, develop a research culture and does not, in itself, turn educators into researchers.

Research as a professional requirement for educators

Besides the changing position of teacher education departments and the need to focus on research, several arguments considering research as a professional requirement for educators have been emphasized. Cochran-Smith (2005), for example, argues that educators not only have to be smart consumers of research (e.g. reading research articles critically; understanding the epistemological background of the article), but also need to be capable of conducting research into their own practices and programs. By conducting such research, educators are able to substantiate and improve their daily practices on theoretical grounds and, concurrently, contribute to their professional development. As Tack and Vanderlinde (2014, 299) state: 'If educators aim to become better teachers of teachers, they will have to engage in research activities enabling a better

understanding of that teaching practice'. This implies that teaching and conducting research should be intertwined in educators' professional lives (Barak, Gidron, & Turniansky, 2010). This systematic and critical inquiry is also described as 'habit of mind' (Livingston, McCall, & Morgado, 2009), or 'inquiry as stance' (Cochran-Smith, 2003; Cochran-Smith & Lytle, 2009). With the latter, Cochran-Smith (2003, p. 21) refers to 'an intellectual perspective - a way of questioning, making sense of, and connecting one's day-to-day work with the work of others and to larger social, historical, cultural, and political contexts'. According to her, this kind of systematic inquiry contributes to educators' actual practices (local knowledge) as well as to a broader context of the profession (public knowledge). Also Tack and Vanderlinde (2014) state that educators need, what they call, a 'researcherly disposition': 'the habit of mind to engage in research and thus to produce both local knowledge and public knowledge on teacher education' (p. 301). They distinguish three interrelated aspects of educators' researcherly dispositions:

- an inclination towards research;
- an ability to conduct research;
- sensitivity to research opportunities.

These three aspects refer to an affective dimension (whether educators conceive their role as researcher and value conducting research into their practices), a cognitive dimension (being capable of conducting research and their understandings and knowledge of research and research methods) and a behavioural dimension (the alertness to research opportunities). In summary, there is consensus that research should be part of educators' daily practices and that educators should be inclined to do so.

Obstacles to becoming an educator-researcher

Despite the consensus that research should be part of educators' daily practices and that educators should be inclined to do so, not every educator chooses to be involved in research. Three critical features can be distinguished influencing educators to become a researcher (Lunenberg et al., 2014; Willemse et al., 2016): 1) the views of the role as researcher, 2) the practical elaboration of the role of researcher, and 3) the focus of the research.

First of all, educators' views on research might depend on whether or not they consider it as a characteristic of a being good educator (Smith, 2005), and whether or not they feel that the role of researcher might undermine their role as teacher of teachers. As most educators are recruited for their excellence as teachers in primary and/or secondary education, they might consider themselves primarily as teachers of teachers. In addition, their views on research are coloured by their understanding of what they consider research. An explanation may be found in the diverse academic backgrounds of educators (e.g. biology, mathematics,

social sciences). As a result, their views of what constitutes 'research' differ and a common language is lacking (Murray, 2010; Willemse & Boei, 2013).

Secondly, the practical challenges of the role of researcher refer to a lack of time, support and a lack of a more general research culture. Kosnik and colleagues (2015, p. 61; Goodwin & Kosnik, 2013) report in their study that none of the educators could identify any afforded support to enhance their research skills. In addition, Willemse and colleagues (2016) found that some educators thought they were only evaluated by their management on their teaching performances not on research output.

Thirdly, the lack of clear and coherent research programs with suitable research methods as well as the lack of possibilities to conduct research within a group, may discourage educators to get involved in research. Lunenberg and colleagues (2014) argue that despite the recognised approach in which educators study their own practices tend to gain more recognition, this approach is also subject to a lot of criticism (Cochran-Smith, 2005), mainly in relation to research goals, methods, quality and criteria. In addition, such self-study approaches do not form part of any research programmes. In particular, existing research groups and programmes in which educators participate can be helpful to get educators more involved in research (cf. Christie & Menter, 2009). The growing attention for research in teacher education, at least at UASs, and all its expectations indicate that support is needed to foster educators' professional development in conducting research. This means that educators need to get support to reconsider their roles and their views on research as well as needing support to enhance their research skills. This support should in the first place be organized by the teacher education departments.

Implications for teacher education departments and their policies

This need for support should be organized by the teacher education departments and should become a policy driver. Managers of teacher education departments play an important role (Willemse & Boei, 2013; Boei, Willemse, Kools, Van Katwijk, & Van Wessum, submitted). Their decision whether to consider that research and/or supervising students' research are essential for every educator influences institutional policies. In a study on policies of UASs supporting educators in research by organizing professional development activities (PDA) the work of Brown and McCartney is useful (1998; cf. Boei et al., submitted). They identify two policies: on the one hand, management might hold the opinion that every educator should be involved in research, especially since research contributes to the development of the curriculum of the programmes. On the other hand, they might hold the opinion that only a select number of educators should be involved in research or supervising students' research. The first policy might result in a

lot of individual stand-alone research with meagre research outputs for the time and effort expended. The pitfall would be a limited contribution to the body of knowledge. The second policy might contribute to a so-called 'dual economy' (Christie & Menter, 2009) whereby theoretical or practical outcomes of research in teacher education departments might not find their way into educators' practices. In this latter policy, non-researcher educators might be strengthened in their views of being solely a 'teacher of teachers'.

Besides, the opinions of programme managers on research and the involvement of educators influences important preconditions like allocation of time, the focus of the evaluation of educators' performances, access to data sources and support of educators' professional development in research (Boei et al., submitted). Nevertheless, in order to be able to conduct research Livingston et al. (2009; Willemse & Boei, 2013) have emphasized the importance of the existence of preconditions, such as access to data sources, programmes for data collection or analysis; and funding for conference attendance. Management can create the opportunity to join an existing research group and a research program in which the cohesion between individual research is guarded (cf. Zeichner, 2010), or which supports the development of a shared vision and the development of a common language for research and teaching (Willemse & Boei, 2013). Management policies influence the kind of PDAs which are offered to educators (Geerdink et al., 2016) and how this support will be retained in the future.

Supporting educators' professional development

By supporting educators' professional development we referred (see Willemse et al., 2016) to the two views described by Dengerink, Lunenberg and Kools (2015, p.80): 'the focus might be on the development of educators as a profession or the focus might be on the individual development'. In this chapter, the focus on educators' professional development at an individual level, concerns changes in knowledge, attitudes and skills (Kosnik et al 2015) and implies that educators' beliefs and understandings are also embedded in educators' professional development (cf. Loughran, 2014). This corresponds with Vanassche and Kelchtermans' (2014) view that educators' professionalism should be considered as their personal interpretative framework, which they define as 'the set of cognitions and beliefs that operates as a lens through which teacher educators perceive their job situations, give meaning to, and act in them' (p.118). Educators' views about themselves, their personal conceptions of their professional tasks and responsibilities, what they consider for example as their moral (professional) responsibilities and duties toward student-teachers, their job motivation and their expectations about their professional future, influence their professional development as well as the way they act.

Earlier we argued this applies to educators' professional development as researchers or supervisors of students' research too:

> When educators' professional development in conducting research is fostered, it might contribute to 1) changes in their views, beliefs, understandings and attitudes towards research and their research role (affective dimension, Tack & Vanderlinde, 2014); 2) changes in their knowledge and skills concerning research and research methods (cognitive dimension); and 3) changes in their behaviour regarding research opportunities (behavioural dimension) (Willemse et al., 2016, p. 88).

In other words, educators' professional development for their role as researcher or supervisor of students' research might contribute to the following areas:

- Educators' views, beliefs, understandings and attitudes towards research and their role as researcher (Tack & Vanderlinde, 2014; Willemse & Boei, 2013);
- Knowledge and skills concerning research and research methods (Willemse et al., 2016);
- Knowledge and skills regarding supervising students' research (knowledge of pedagogy in higher education, cf. Kosnik et al., 2015);
- Knowledge and skills concerning the subject of research in their teaching practice (subject matter knowledge, cf. Kosnik et al., 2015);
- Other elements of educators' professional life (external domain, Geerdink et al., 2016).

Underlying the statement that educators' professional development in conducting research contribute to their knowledge, skills, views, beliefs and understandings in this area, is the assumption that there is an increase in knowledge and skills; and a change in views, beliefs or understandings. However, as Willemse and Boei found (2013), educators might at first also become aware of their lack of research skills after participating in professional development activity. This process of awareness, of course, can foster continuing further professional development. Therefore, all reported changes in the above mentioned areas are considered relevant.

Areas in which professional development might occur, however, does not determine how educators' professional development in their role of researcher might be fostered (Swennen et al., 2010). However, over the past years based on literature studies and research we identified three forms of PDAs (Geerdink et al., 2016; Boei et al., submitted) in general, which also might be offered in hybrid forms:

1. ***Courses or workshops*** (Livingston et al., 2009; Smith, 2003; European Commission, 2013; Geerdink et al., 2016)

According to Geerdink and colleagues (2016) participation in courses leads to changes of attitudes towards research and an increase of research knowledge and skills. They describe the benefits of a course as follows:

A course in research methods can be an effective and a sufficient way to internalize and learn about research. Lectures or workshops are useful because of their efficiency. Larger groups can be educated together…Courses have to be interactive and the content of the course should fit into the daily practice (Geerdink et al., p. 969).

Livingston and colleagues (2009) plead for attention to research to start during the induction course of beginning educators. This attention can vary from indicating institutional expectations for staff research and/or describing the main topics of research within the institute, to specific courses on research methods supporting educators' professional development regarding quantitative and qualitative research. In addition, Boei and colleagues suggested that courses can be divided into those aimed at research capabilities or those aimed at the way student-teachers should be supervised during their own research.

2. ***Formal and informal peer exchange groups*** (Kosnik et al., 2015; Geerdink et al., 2016)

Geerdink and colleagues (2016) refer to formal and informal peer exchange groups. Groups, sometimes under the guidance of an expert researcher, exchange experiences and concerns with regard to supervising students' research. These groups seem to be what Kosnik and colleagues call Communities of Practice: 'groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise'.

3. ***Engagement in research and research networks*** (Cochran-Smith, 2003; Loughran, 2014; Willemse et al., 2016)

Actually conducting research is also promoted as a way to professionalize educators (Loughran, 2014; Cochran-Smith, 2003; Lunenberg & Willemse, 2006; Willemse et al,. 2016; Christie & Menter, 2009; Murray et al., 2009; Gallagher et al., 2011). For example Loughran (2014) contends that educators who conduct research contribute to their professional development. Others emphasize the benefits of collaborative research (cf. Chistie & Menter, 2009; Willemse et al., 2016). Or as Cochran-Smith (2003, p. 7) states: 'the opportunity to engage in inquiry within a learning community may be a vital part of teachers' and educators' ongoing education'.

Exploring the demands on teacher education departments and educators of UASs to conduct research and to supervise students' research resulted, at least in the Netherlands, in supporting educators' professional development through organizing PDAs; and in studies about its contributions. In the next two cases we will describe what we learned from these studies regarding educators' professional development.

Lessons from a national study about supporting professional development

The increased attention in the Netherlands to conducting research in UASs including teacher education departments made us curious about the actual practices (and policies) in these teacher education departments. There is currently a lack of knowledge about:

a. present policies of teacher education departments for primary and secondary education;
b. evaluation of the PDAs offered from the perspective of program managers and educators; and
c. views about retaining professional development support.

In 2015 we conducted a national study (see for an extended description Boei et al., submitted) with two on-line surveys: one to question the programme managers of the teacher education departments and one to question individual educators. This study aimed to gather a better understanding of how educators are supported in their professional development in research and supervising students' research. The following research questions were addressed in this study:

1. What are the managers' and educators' views on departmental policies regarding educators' research, supervising students' research and professional development activities?
2. How do managers and educators evaluate the offered PDAs?
3. What views are held by managers and educators on retaining professional development in the future?

Policies

With regard to policies, we asked the respondents whether they considered involvement in research important and whether they considered this involvement as well as supervising students' research, relevant tasks for every educator. Moreover, we asked them about policies regarding supervising students' research. Finally, educators were asked which aims they considered applicable

for research. Instigated by the possibly diverse views of educators on research (Murray et al., 2011; Willemse et al., 2016) and to get a better understanding of individual views on policies and PDAs, we wanted to explore their perceptions of the aims of research.

Professional Development Activities (PDAs)
Before presenting a fixed set of six PDAs based on literature (informal forms of consultation and peer exchange, courses and involvement in research) and based on former research (Willemse et al., 2016; Geerdink et al., 2016), we invited educators to identify all PDAs about research or about supervising research that they attended over the past years. With this we hoped to discover PDAs which were not distinguished in literature but already existed in practice. Hence, educators were invited to mark which of the six PDAs they had attended and managers marked which PDAs were offered in their departments. If a manager or educator marked a specific PDA as offered, or attended, some additional questions followed, asking them about aims and whether they assessed positive or negative characteristics of the PDA. In addition, we invited educators to describe what they achieved by attending the PDA.

Retaining professional development
At the end of the survey we asked managers and educators about their ideas for retaining professional development support in the teacher education departments, for instance, which PDA they wanted to keep and how support should be organized.

Twenty-five of the 30 managers from programs for primary and secondary education and 269 educators[2] completed the survey.

In this study we found that educators and their managers agreed on the importance of research within their departments. Most educators emphasized that conducting research is important from the perspective 'teach what you preach'. In addition, they emphasized that it contributes to their professional development, their practices and to the quality of teacher education curricula. However, managers and educators differed on the question of who should be involved in research. The overwhelming majority of managers appeared to choose the policy that all educators should be involved, although limited financial resources seems to limit this policy. Educators take a somewhat different

[2] The survey sent to all 533 VELON-members (Dutch Association of Teacher Educators) working in bachelor programmes of UASs was filled out by 149 educators. In addition the survey send as an open invitation to non VELON-members resulted in an additional 120 educators.

approach to this policy. They argue that research is best done by those educators who are motivated and prepared for this task. Some of them referred to their core business: being a teacher of teachers: an approach that could result in a dual economy within departments.

Significant differences were found between educators involved in programmes for primary and secondary education regarding which aims are met by conducting research and who is allowed to supervise students' research. Despite the fact they all agreed that research in their departments contributes to educators' teaching practices and that every educator needs to be aware of the outcomes of new research in order to improve their teaching, (consumer of research), educators working in primary education have a broader opinion of the benefits of conducting research. At the same time they appeared more strict about who is allowed to supervise students' research, namely those who are qualified and experienced to conduct and supervise research. Educators for secondary education emphasized that everyone who wants to supervise students' research should be allowed to do so. This, at least, illustrates a variety of views and opinions about the aims of research and what is expected from those who supervise future teachers in their research.

Moreover, in this study we found that the most frequently chosen or offered PDAs appeared to be courses on how to supervise students' research and formal or informal peer exchange and consultation. Interestingly, a significant difference was found at gender level. Female educators tend to take a course, whereas male educators prefer informal peer exchange or consultation. This last PDA, however, seems according to respondents' descriptions and reported positive or negative outcomes, to be a meagre way to gain more insight into research and the relationship between research and the profession. Instead, it seems to be directed more at institutional concerns like enhancing the reliability of the assessment of students' research. The development of a 'researcherly disposition' described by Tack and Vanderlinde (2014) in which educators possess the ability to conduct research; sensitivity to research occasions; and an inclination towards research, might not be supported through this PDA. Moreover, we wonder whether this PDAs supports educators to consider research as part of their professional role. However, simply removing peer exchange and consultation from the array of PDAs offered is not the solution. This PDA (informally or formally) provide educators with an appreciated opportunity to collaborate with each other and the possibility to exchange views on supervising students' research. In other words, it illustrated the need for collaboration and for a social component to be included in what is often labelled an isolated culture of teacher education (Hadar & Brody, 2010). In this study at least it appeared that providing collegial support or allowing educators to collaborate with each others were the most frequently encountered positive remarks about the PDAs.

The lessons we learned from this study included the realisation that a wide variety of views, policies and professional support existed among the teacher education departments in the Netherlands, resulting in a wide variety of positive, negative remarks and described needs. Support of educators' professional development demands a clear vision of the aims and needs in teacher education departments. The varying positive and negative remarks made regarding all PDAs suggest that managers and/or organisers of these PDAs should critically reflect on whether these PDAs meet the aims intended, what improvements are needed and for which target group of educators a PDA is eligible. The significant difference between men and women, or between programmes for primary and secondary teacher training is difficult to explain, but it might indicate that specific teacher educator groups, differing in gender, programme or career stage, have specific needs (Dengerink et al., 2014) and may require other types of support.

Finally, the question of how this support can made sustainable is important too. Some educators and most managers indicate that going beyond the boundaries of their own department by offering joint PDAs with other UASs could be an interesting way to broaden the collection of PDAs offered. These inter-institutional PDAs might decrease the risk of tunnel vision occurring within a single department. Where a PDA course related to supervising students' research, this could help to develop a common view, not only on students' research itself, but on teachers' and educators' research in general, thus supporting positive attitudes to their professional roles of researchers.

Lesson from small-scale studies

Over the past years we have conducted several small-scale studies to explore how educators' professional development can be adequately supported, what key characteristics of effective PDAs can be identified and what educators actually learn. For example, one study focused on the existing practices in four UASs exploring how these practices contributed to educators' professional development (see for an extended description Geerdink et al., 2016). Another study examined issues around designing and establishing educators' communities of inquiry (COIs, see for an extended description Willemse et al., 2016). In both small-scale, illustrative studies we found indications and suggestions for improving PDAs and supporting educators' professional development. For example, in the study at four UASs based on the interviews of 36 educators from four different PDAs, we identified seven general characteristics and features to take into account when designing a PDA:

1. Provide the opportunity to exchange and discuss experiences with colleagues;
2. Make a connection between the activities content and form and the educator's daily practices and activities (in line with Lunenberg, Korthagen, & Zwart, 2010; Van der Linden, Bakx, Ros, Beijaard, & Vermeulen, 2012);
3. Make use of theory (see also Cochran-Smith, 2003; Lunenberg et al., 2010);
4. Ensure an activity is led by a senior expert educator researcher (e.g. Lunenberg et al., 2010);
5. Provide external pressure to do homework;
6. Facilitate time to attend meetings and do homework.
7. Organize activities with colleagues in the same departments

In addition, an important feature, which appeared in both small-scale studies, concerned the importance of being a teacher of teachers (especially pre-service teachers) which educators perceived as their most important roles. This latter feature implies that in the design of a PDA it seems to be important that consequently attention should be paid to the implications of their research towards educators' role as teacher of teachers.

Our second illustrative study supported secondary educators to participate in communities of inquiry. Over three years around 13 educators participated in several communities. The design of these PDAs was based on eight principles (Willemse et al., 2016). However, during this study, attendance and time pressures appeared to be the main influencing factors, roughly divided into two main aspects: firstly, the commitment of the participants; and secondly, time and timing-related issues. The lack of commitment seemed (partly) due to time pressure experienced on other duties. Besides, educators considered themselves mainly as 'teachers of teachers', so conducting research hardly comes first. Both viewpoints - the institutional demands as well as their own vision of what constitutes being an educator - seem to have resulted for example in irregular attendance at the community meetings. Based on these experiences we adapted the design principles to nine:

1. Research is conducted together (Cochran-Smith, 2003; Smith, 2003) in small groups of six to eight educators to make sure mutual collaboration and decision making is ensured;
2. The subject of inquiry is chosen on a mutual experienced problem derived from practice (Zellermayer & Tabak, 2006; Murray et al., 2009; Zeichner, 2003);
3. Frequent meetings (every four weeks) (Zeichner, 2003; Gallagher et al., 2011; Hadar & Brody, 2010);
4. Propose fixed dates for meetings and provide a clear exchange of commitment and expectations of the community (Zellmayer & Tabak, 2006);
5. The meetings follow the stages of research (problem definition, literature search, formulating research questions, designing instruments and planning

the data collection, data collection, analyzing, sharing the results with others) (Cochran-Smith, 2003; Zeichner, 2003; Lunenberg et al., 2010);
6. Organize each meeting using three stages: 1) explore the current research stage and exchanging prior knowledge; 2) work on the research project; 3) reflect on learning experiences and on supervising pre-service teachers' research (Griffiths et al., 2010; Murray, 2010; Willemse & Boei, 2013; Kosnik et al., 2014; Smith, 2003)
7. In between meetings, participants should elaborate on certain tasks in pairs to guarantee the continuation of the research;
8. Experienced educator / researchers should participate as full members and as mentors (Lunenberg et al., 2010; Murray et al., 2009; Zellermayer & Tabak, 2006; Griffiths et al., 2010);
9. Results of the research are shared within the department, after collaborative consideration in the community, or outside the department at a conference or through publications (Boyd, Harris, & Murray, 2011; Lunenberg et al., 2010; Zellermayer & Tabak, 2006).

In both studies we realized that our findings and conclusions are often based on educators' perceived outcomes and on short term professional development support. In other words it is hard to make statements about the sustainability of educators' professional development. Nevertheless a lot of similarities were found with regard to key characteristics for designing PDAs. Some of these key characteristics were in line with what we found in the national study and endorsed by several other (international) studies. At least we learned a most important lesson: it seems that educators feel better prepared for their new tasks if they are given the opportunity to attend professional development activities under the right preconditions.

Conclusions

Supporting educators to get involved in research and become educators as researchers cannot be taken for granted. It demands a clear vision about the aims and needs of departments for teacher education on what is considered to be research; on how research should become part of educators' professional practices; and with regard to educators needs, which PDAs might be supportive. At the least, attention needs to be paid to the views and beliefs of educators. Based on our work over the past years we learned several valuable lessons concerning how to support educators' professional development. To summarize our main experiences:

Take into account, while formulating departmental policies and selecting the desired forms of the PDA, the views held by educators on what constitutes practitioner research, both on individual and at an organisational level and address these views in relation to educators' role as teacher of teachers;

PDAs within which educators can gather hands-on experiences seems to lead to the best learning outcomes, although they are also time consuming;

Regardless of what PDA is chosen, make sure educators are able to attend the meetings. A scheduled part of the week, free of other obligation - especially teaching - seems to be necessary.

However, the limitation of these small studies prevented us from exploring the sustainability of educators' development and the ways in which further professional development in teacher education departments can be organized in a sustainable way. Longitudinal research with a bigger sample in different contexts and countries, might be helpful firstly, to explore these issues, secondly, to examine educators' professional development in their actual practices instead of studying perceived development, and finally, to improve and authorize the key characteristics for effective PDAs keeping in mind the variety of educators and the different career stages.

More research might provide better insights into how we can support, through PDAs, educators to gain a researcherly disposition (Tack & Vanderlinde, 2014), using research in their daily practices as an 'inquiry as stance' (Cochran-Smith, 2003) and as a means for their professional development or for contributing to the body of knowledge of the profession. However, this support for educators' professional development in research cannot be isolated from educators' main focus on being a 'teacher of teachers'. In our opinion the latter implicates two aspects. On the one hand within the departments of teacher education the importance of research as contribution toward teacher educators' role as 'teacher of teachers' should be emphasized explicitly and on the other hand in the design of a PDA consequently attention should be paid to the implications of educators' research towards this role.

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11

Professional Learning Communities of Teacher Educators: a Tool for Building an Academic Ethos in Colleges of Education

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Abstract

This paper deals with the conduct of 12 professional learning communities (PLCs) in a large college of education in Israel and their impact on building the research capacities of individuals and the college as a whole. Creation of these PLCs was a comprehensive strategic act, meant to enhance the research capacity of individual staff members as well as of the entire institution. The specific objectives of this act included formation of participants' research identity, support for their academic writing skills, development of collaborative working norms and the nurturing and maintenance of an intellectual discourse as part of campus culture. The findings indicated that the majority of these objectives were attained on the individual as well as the college level. Nonetheless, the aim of developing a research identity among the community's members remains a challenge.

Key words

research capacity, teacher educators, professional learning communities

Introduction

The notion that learning is a social process and that professional learning occurs best in work settings by means of professional learning communities (hereafter PLCs) led many schools to establish PLCs in the 1990s for the purpose of building professional capacities through transformation of the entire school into a learning community (Hargreaves, 1994; Kruse, Louis & Bryk, 1995; Lieberman, 1995; Louis, Marks, & Kruse, 1996). Extending these ideas to institutions of higher education with the intent of building their

research capacity was another step in PLC proliferation. One setting where the building of research capacity takes place is teacher education institutions. This endeavor should be viewed in the context of the 'academization process' these institutions have undergone in recent decades. This process required them to meet quality assurance standards regarding research and staff engagement in activities that were not in line with their former occupational profile. Creation of PLCs for the purpose of building the needed research capacity of individual teacher educators and of entire institutions was soon acknowledged in many countries (Chetty & Lubben, 2010; Cochran-Smith, 2003; Cochran-Smith & Zeichner, 2005; Erixon Arreman & Erixon, 2008; Gore & Morrison, 2001; Hill & Haigh, 2012; Lucas, 2007; Lunenberg, Ponte & Van De Ven, 2007; Murray, 2006, 2008; Murray, Jones, et al., 2009; Rees et al., 2007; Stoll et al., 2006; Tarrou & Holmesland, 2001). Some of these communities took the form of micro-communities established in one teacher education institution (Murray 2006, 2008), while others took the form of networks connecting several institutions (Davies and Salisbury, 2008; Murray, Jones, et al., 2009; Murray & Campbell, et al., 2009).

In Israel, similar changes have occurred since 1980 (Hofman & Niederland, 2012) and the building of research capacity of teacher educators working in teacher-education institutions became a must. Establishing institutional PLCs or interinstitutional networks of teacher educators seemed to be an answer to this need (Ben-Peretz & Silberstein, 2001). Following this line PLCs of teacher educators were created in some teacher education institutions, however only on a small scale and dealing only with specific topics e.g.: higher order thinking skills, digital skills, curriculum development (Brody & Haddar, 2012; Margolin, Ezer & Karton, 2002; Goldshtein, Simka & Kuzminsky, 2004).

The opportunity to study the implementation of a more comprehensive act of establishing a variety of PLCs in one of Israel's largest colleges of education, and to assess their success in building staff and institutional research capacity, triggered the current study. The study's purpose was to learn about the development, conduct and success of the PLCs in achieving their aims. These aims included formation of the staff's research identity, support of academic writing skills, development of collaborative working norms among college staff, and maintenance of an intellectual discourse on campus. The present study was intended to shed light on the process of building research capacity by means of PLCs and thus guide other teacher education institutions planning to create similar communities in the context of recent academization. In the following section, we will discuss ideas underlying the PLCs and describe their different manifestations.

Development and Definitions of PLCs

Inspired by socio-cultural constructivist notions of knowing and learning, situated learning and distributed cognition (Cobb, 1994; Lave & Wenger, 1991; Salomon, 1993; Vygotsky, 1978), the idea that learning and knowledge generation occurs best in community settings was embraced by those engaged in the professional development of individual teachers as well as those interested in learning on the organizational level.

From a professional development perspective, PLCs mark a change from traditional 'transmissive' models of the professional development of individual teachers, usually guided by an 'acquisition metaphor' (Sfard, 1998), to 'transformative' models of professional development (Kennedy, 2014) guided by the concept of 'participation' in communities of practice (Wegner, 1999). From an organizational perspective (Sergiovanni, 1994), the entire organization can be viewed as one PLC. Senge (1990) refers to this as a learning organization, "where people continually expand their capacity to create the results they truly desire…, where collective aspiration is set free and where people are continually learning to see the whole together" (p. 3). Senge also points to the fact that the aims of building research capacity on the individual and the institutional level are related because 'organizations learn only through individuals...Individual learning does not guarantee organizational learning. But without it no organizational learning occurs" (p. 139).

Viewing PLCs from these dual perspectives yielded various definitions and emphasized different characteristics. For example, in line with the professional development of individuals approach, PLCs are defined as groups "of people sharing and critically interrogating their practice in an on-going reflective, collaborative, inclusive, learning oriented, growth promoting way" (Stoll et al. 2006, p.233). Stressing their inquiry-oriented nature, Cochran-Smith and Lytle (1999) describe the major characteristic of such communities as generating professional knowledge by calling into question 'assumptions about common practices' and 'uncovering the relationship between concrete cases and more general issues and constructs' (pp.294-295).

Considering PLCs from an organizational perspective yields other definitions. One such definition illustrates the difference: 'A school-wide culture that makes collaboration expected, inclusive, genuine, on-going and focused on critically examining practice to improve student outcomes' (Seashore, Anderson, and Riedel, 2003, p.3). In line with this perspective, Newmann (1996, pp.181-182) describes five core PLC characteristics: 'shared values and norms', 'focus on student learning', 'reflective dialogue that leads to extensive and continuing conversations among teachers', 'de-privatizing practice to make teaching public', and 'focus on collaboration'.

The collaborative nature of learning in PLCs is mentioned in both perspectives; however, the organizational perspective emphasizes learning to improve practice and ultimately student learning while the professional development perspective stresses teacher learning in the joint generation of practical knowledge for the sake of personal advancement.

The various definitions and characteristics appear in different operative types of PLC. Following is the description of four main types which are not mutually exclusive, but rather contain a certain overlap.

Communities of Inquiry, where groups of teachers 'make classrooms and schools sites for research, working collaboratively in inquiry communities to understand the co-construction of curriculum, developing local knowledge and adopting a critical perspective on theory and on the research of others (Cochran-Smith & Lytle, 1999, p.275).

Communities of Practice, where learning is described as participation in doing, with collective action performed in the real world and where 'newcomers (learners) are absorbing and being absorbed in the culture of practice' (Lave, 1996; Lave & Wenger, 1991, p.95). Participation is conceived as a process of identity formation based on mutual engagement, joint enterprise and sharing repertoires of tools and concepts that are highly embedded in practice (Wenger 1999, p.4).

Writing Communities, which focus on the process of writing and serve as a tool for developing ideas and scaffolding participants' own writing practices. In such communities, writing is conceived as 'normal business,' not the end of a research process – the 'writing up' phase – but, rather, an on-going activity involving constructing and reconstructing, synthesizing, re-collecting, re-evaluating and re-interpreting a newly created text (Badley 2009; Gere 1987; Lee 1998; Lee & Boud 2003; Shteiman, Gidron, & Eilon 2012).

Discourse communities, described as a group of scholars who share goals and use inter-communal communication to achieve those goals (Borg, 2003). Swales (1987), who coined this term, defines its six characteristics: shared interest, participatory mechanisms, information exchange and feedback, discourse expectations that create distinct genres, a shared specialized language, and a critical mass of expert members.

Using PLCs for building research capacity

The creation of professional learning communities in higher education institution is intended to change the institutional culture of teaching and learning in these institutions from one guided by an instruction paradigm to one guided by a

learning paradigm (Barr & Tag, 1995). Within this framework, 'Faculty Learning Communities' (FLCs) were defined as cross-disciplinary faculty and staff groups engaged in the active collaborative learning that leads to improved teaching and learning, professional development, scholarship of teaching and community building (Beach & Cox, 2009; Cox, 2001, 2004; Ward & Selvester, 2012). In the case of the academic teacher-education institutions, the creation of the PLCs is directed specifically also at building the needed research capacity of both staff members and the entire institutions (Davis & Salisbury, 2008; McIntyre & McIntyre, 1999). Research capacity is defined here as the potential for conducting research in the conditions currently found in higher-education institutions and *not* by how much research is actually done. Leaning on Desforges' equation (Cited in Murray, Jones, et al., 2009), three elements are noted as essential for developing research capacity: *expertise*, *motivation* to do research, and *opportunities* for research. Expertise includes methodological understanding as well as substantive theoretical understanding, an ingredient stressed by Biesta, Allan and Edwards (2011). Motivation is the extent to which research is prioritized and provides incentives within the work culture, whereas opportunities refer to the working conditions and funding supporting the research effort (McIntyre & McIntyre 1999). If all these elements are present, the concomitance endows individuals, groups, schools, and the entire system with the power to become involved and sustain learning over time. The presence of a multiplier in Desforges' equation suggests that the lack of even one element reduces the equation's outcome to zero. As we use Deforges' terminology, we considered the PLCs created in teacher education institutions to be an opportunity for promoting the development of the research capacity of individuals and of the organizations. The study that followed the creation of the PLCs was designed to shed light on this process.

The Study

The study institutional context

The study was conducted in one of the largest of the 24 academic teacher colleges in Israel. A call for establishing a variety of communities in the college, for studying professional issues and conceptualizing and writing on these issues, yielded twelve PLCs that operated concurrently and conducted their meetings during a three-year period from 2011-2014. Each community was headed by a leading faculty member who invited others to join the community also on a voluntary basis. The teacher educators who joined the PLCs were not paid for their participation, nor forced to participate. They perceived the invitation as an opportunity for their own academic professional development.

The communities initiated during these years reflected different domains of interest and engagement of staff, as suggested by their names: Teaching the bible and the Jewish culture, Technology and Education, Art education, Qualitative research and professional learning, Teaching about the holocaust, Ecological and social sustainability, Education and gender in teacher education, Supervision in Art education, Interdisciplinary in humanity studies, Visual literacy, Media education, Adventurous pedagogy.

Research questions

The study's objective, determined after the PLCs were established, was to learn about motivations to join the PLCs and the development, conduct, and impact of the PLCs on building research capacity in the college. This objective was translated into four research questions:

1. What motivated staff members to join the PLCs, and what are their perceptions as to whether these were fulfilled?
2. What was the nature of the meetings held in the different PLCs (activities, atmosphere, and orientation)?
3. What was the impact of attending the PLC meetings on the research capacity of individual members: perceptions of their professional identity, evolving norms of collaboration, interpersonal relations and success in conceptualizing and writing academic papers?
4. What was the impact of the PLC activity on the research capacity of the college as a whole and on the intellectual and academic discourse it produced?

Participants

A total of 187 individuals registered voluntarily to the 12 PLCs. These make about half of the permanent staff members working at the college at that time. Out of them, 136 participated in the PLC meetings on a regular basis. Most of the teacher educators who responded were women (71%), similar to the proportion of women among the college faculty. The age of the participants ranged from 33 to 77 and about two thirds were between 40 to 60 years old. The teacher educators taught variety of content areas. Most (67%) held doctorates; amongst these, 24% were at the final stages of study toward a doctorate. All had some previous academic experience in writing, publishing and supervising students. However, most of them were only in initial positions along their career paths with a minor academic record.

Methodology

As the study dealt with 12 PLCs that operated concurrently, it took the nature of a collective case study (Bogdan & Biklen 1998; Stake, 1995). Using a mixed

method approach, we obtained both quantitative and qualitative data. The complimentary sources helped in illuminating and interpreting the findings.

Qualitative data was obtained through a non-participant type of observations carried out at most PLC's meetings, as well as through semi-structured interviews with all PLC leaders conducted twice during the study period. The data obtained from these two sources, contributed to construction of the measures used to describe the PLCs' conduct. The measures were:

Intensity of meeting – Proportion of meetings per total number of months the PLC's operation (scored between 0 [low] to 1[high])

Participants' commitment – Number of regularly participating members as a proportion of registered members, on a three-point scale: 'high' (above 2/3), 'medium' (2/3 to 1/2), and 'low' (less than 1/2).

The PLC's main orientation to act: writing and inquiry, practice and action, discourse and conversation and listening to lectures (obtained from observations and interviews).

Collaborative atmosphere – level of trust and sharing on a three-point scale: low-medium-high (obtained from observations).

Written products – proportion of papers written per number of regular participants (scored between 0[low] to 1[high]).

Quantitative data were obtained from a questionnaire administered to all PLC participants toward the end of the study. The questionnaires included the following sections: (a) Personal background data (e.g. education, experience, rank, publications, research activity); (b) motivations and expectations to join the PLC's and whether these were fulfilled on a five-point Likert scale (c) Perceptions of professional roles, perceived frequency of the various types of activities taking place in PLC meetings, and perceived contributions of these meetings. Most of these items were on a five-point Likert scale; (d) main orientation / tendency to act dominant in their PLC. (e) Atmosphere and personal relations prevailing in PLC meetings using a semantic differential scale.

Results

Results will be presented in relation to the four research questions.

Staff motivations for joining the PLC and the extent to which these were fulfilled

Data were obtained from responses to items in questionnaire on a five point Likert scale.

Table 1 presents the mean scores on the motivation and fulfilment scales as well as t-tests and significance for paired differences between the two scales.

Motivation	N	Motivation Mean (SD)	Fulfilment Mean (SD)	Gap	t(p)
Being affiliated to a knowledge creating group	76	4.2 (0.9)	3.7 (0.9)	0.5	5.5 ***
Motivation for academic writing and publication	76	4.2 (0.9)	3.6 (1.1)	0.5	4.7 ***
Opportunity for learning, updating, renewal and enrichment	76	4.0 (1.0)	3.6 (1.0)	0.4	4.2 ***
Opportunity for collaboration and mutual enrichment	76	4.0 (0.9)	3.2 (1.1)	0.8	7.3 ***
Extending the circle of acquaintance with other staff members in the college	73	3.6 (1.1)	3.7 (1.2)	-0.1	-1.5
Getting support in writing from 'critical friends'	72	3.2 (1.2)	3.0 (1.2)	0.2	2.0 *
Restructuring my professional knowledge	75	3.3 (1.1)	3.0 (1.2)	0.3	3.1**

*$p < .05$ **$p < .01$ ***$p < .001$

Table 1. Motivation for joining the PLC and the extent to which they were fulfilled – Paired samples test

The main motives for joining the PLCs were found to be a mix of academic and social ones: the wish to be affiliated with an elite group of knowledge producers, extending a circle of acquaintances with other staff members in the college, professional enrichment and renewal and the need to write for publication. Most of the motives were fulfilled although to a lesser extent.

The nature of the meetings held in the different PLCs: activities, atmosphere, and orientation (tendency to act).

Table 2 presents findings on the nature of the PLC meeting. These findings were obtained from observations in ten out of twelve PLCs that still operated in the year the study. The table provides data on the measures described above: intensity of the meetings, the commitment of the participants to attend the meetings, the main orientation to act, the atmosphere that prevailed in the meetings and their written yield. The PLCs in the table are ordered according to their starting date from the oldest to the youngest.

PLC	Intensity	Commitment	Orientation	Atmosphere	Product
Teaching the Bible	7/9 (0.77)	12/19 (0.63) M	Writing & inquiry	No data	7/12 (0.58)
Education and technology	No data	15/22 (0.68) H	Writing	No data	15/15 (1.0)
Art education	5/23 (0.20)	15/20 (0.75) H	Writing & action	H	11/15 (0.73)
Ecological and social sustainability	9/20 (0.45)	14/19 (0.74) H	Writing & action	H	17/19 (0.89)
Qualitative research	10/28 (0.36)	10/15 (0.66) H	Writing & discourse	H	8/10 (0.80)
Teaching about the Holocaust	13/21 (0.62)	12/17 (0.71) H	Writing & discourse	H	14/15 (0.93)
Interdisciplinary humanities	6/21 (0.29)	23/31 (0.74) H	Listening & discourse	No data	0/23 (0)
Gender issue in teacher education	11/18 (0.61)	10/16 (0.63) M	Action & discourse	M	0/10 (0)
Media	8/10 (0.80)	9/15 (0.60) M	Listening & discourse	M	0/9 (0)
Adventurous pedagogy	5/10 (0.50)	8/15 (0.53) M	Discourse	No data	0/8 (0)

M= Medium; H=High

Table 2. Characteristics of PLC meetings

Table 2 shows high variability among the PLCs in the intensity of their meeting, ranging from low intensity (meetings held in only one-third of the months in which the PLC operated) to high (meetings held almost every month). High levels of member commitment (participation) were found in most communities, excluding the communities established toward the end of the study period (e.g., Adventurous pedagogy). These communities were still in their initial phase.

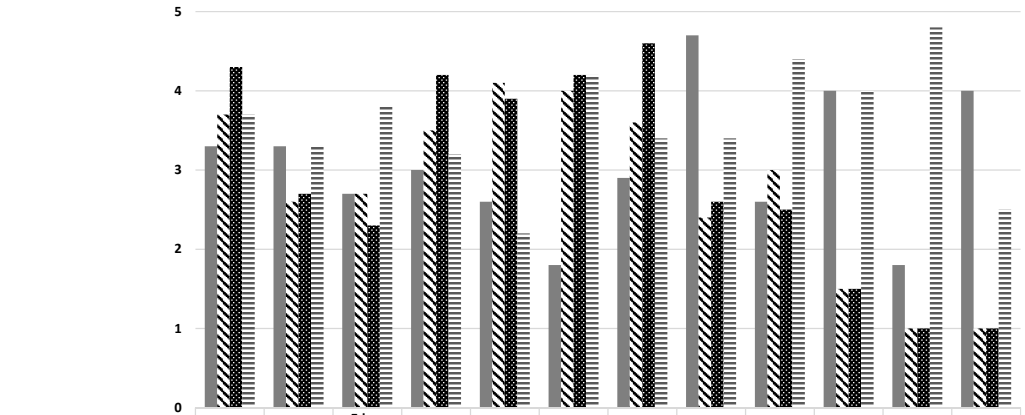
The communities also differed in orientation, by the time of their establishment. In the six PLCs established earlier, the main orientation was toward writing, whereas in the four PLCs established later, the main orientation was toward discourse. PLCs oriented toward writing were found to be more explicitly

productive, with more than two-thirds of their members producing either a draft or a written paper.

The general picture emerging is of communities with highly engaged, creative and committed members.

Activities

Participants were asked to evaluate on 1-5 scale the extent to which the meetings of their PLC were dedicated to different types of activities: listening to lectures, reporting on their writing, conversations not necessarily related to their writing, and giving/receiving feedback on written products. Figure 1 shows the average scores obtained for the different activities in each PLC. PLCs appear in the order of their establishment from the early ones to the latest. Activities scored 4 or more were considered to be frequently implemented; those scored 3-4 were considered to be only moderately implemented.



	Political Education	Bible	Educ-Technology	Art Education	Eco. & Soc. Sustain.	Qualitative Research	Holocaust Education	Humanities	Gender Education	Media	Adventurous Pedag.	Visual Literacy
Listening to lectures	3,3	3,3	2,7	3	2,6	1,8	2,9	4,7	2,6	4	1,8	4
Reporting on writing	3,7	2,6	2,7	3,5	4,1	4	3,6	2,4	3	1,5	1	1
Feedbacking on writing	4,3	2,7	2,3	4,2	3,9	4,2	4,6	2,6	2,5	1,5	1	1
Discourse and Conversation	3,7	3,3	3,8	3,2	2,2	4,2	3,4	3,4	4,4	4	4,8	2,5

Figure 1. Different activities in each PLC

All PLCs exhibited a mixture of activities balancing between activities targeted toward writing and toward discourse. Frequent writing activities were typical of the five more mature communities that began their activities in the first year of the project. Frequent discourse activity not necessarily related to writing appeared to be dominant in relatively younger communities that began only in the project's third year.

Atmosphere and personal relationships

Participants were asked to describe the atmosphere and type of interpersonal relationships that developed in the meetings on a bipolar semantic differential scale ranging from 1 (positive) to 7 (negative) (Table 3).

Dimension	N	Mean (SD)
Atmosphere (1 positive – 7 negative)	81	1.9 (1.3)
Cooperation (1 cooperative –competitiveness)	78	2.3 (1.2)
Sharing (1 shared – 7 individual)	80	2.1 (1.3)
Trust (1 trust – 7 suspicion)	73	2.4 (1.2)
Modesty (1 modesty – 7 pretension)	80	2.4 (1.3)

Table 3 . Means of group responses regarding atmosphere and interpersonal relationships

The mean scores indicate overall positive personal relationships, positive atmosphere, high levels of sharing, cooperation trust and seemly behaviour.

The impact of PLC activities on building the individual's research capacity and researcher identity

We used writing productivity as a measure of the individuals' research capacity and individuals' professional role perception as a measure of professional identity. Regarding research capacity, out of the 136 active PLC members, 72 (53%) reported success in writing. When relating only to the more-mature communities (the first six appearing in Table 1) the percentage was even higher (84%).

PLC members were asked to rank on scale of 1 (no agreement) to 5 (full agreement) their perceptions regarding their identification with eight professional identities: Teacher; educator and social activist; scholar and writer in the discipline; scholar and writer in education: researcher in the discipline; researcher in education; self-study researcher of own practice; and school principal. Table 4 shows the means of participants' identification with each of these professional identities and the percentages of those agreeing and fully agreeing with each.

Occupational Role	N	Mean (SD)	Agree and Mostly Agree
Teacher	68	4.4 (1.1)	68%
Educator and social activist	74	4.0 (1.1)	64%
Scholar (theorizing and writing) in the discipline	72	3.9 (1.2)	61%
Scholar (theorizing and writing) in education	69	3.6 (1.3)	47%
Researcher in discipline	75	3.9 (1.4)	62%
Researcher in education	69	3.4 (1.3)	39%
Practitioner researching own practice	71	3.3 (1.4)	33%
Manager – Principal	73	3.0 (1.5)	33%

Table 4. Professional identity of PLC members

The average agreement score, on a scale of 1 to 5, was found to be the highest for the role of teacher or educator (4.4 and 4.0, respectively), while the average agreement score for the role of researcher in education, or scholar who studies his/her own practice were found to be the lower (3.4 and 3.3, respectively). Only 33%-39% of the participants agreed or fully agreed to identify themselves with the role of researcher in education. Similarly, only 33% agreed or fully agreed to identify themselves with the role of school principal. We should note that 60% of participants agreed or fully agreed to identify themselves as scholars or researchers in their disciplines. It seems that teacher-educators remained faithful to doing research in their academic specialization but not in education. Hence, it appears that expectations regarding PLCs as means to strengthen the professional identity of teacher-educators as educational researchers were not fulfilled.

Responses to another question confirmed these findings. When asked about changes emerging from their participation in PLC meetings, only a third of the respondents agreed or fully agreed that participation strengthened their identity as researchers and writers. The change most agreed upon by the participants was an increase in feelings of affiliation with other community members and with the college (about 60%). Table 5 shows the percentage of respondents who agreed or fully agreed with these changes.

Area of Change	Agree and Mostly Agree
Strengthening of researcher identity	34%
Improvement in writing abilities	35%
Improvement in ability to give feedback on others' writing	38%
Increased affiliation with other members of the community	62%
Increased affiliation with the college and all activities held	61%
Increase in my self-efficacy as a social change agent	48%

Table 5. Changes due to participation in PLC meetings

Despite the fact that only one-third of the respondents perceived any improvement in their writing skills, when asked which activities did help them, about 60% responded that the discussions and feedback were very helpful due to the opportunities provided to look at their writing from different angles and to focus on what they really wanted to say.

Item	N	Mean (SD)	Agree and Mostly Agree
Discussion enabled me to look at my writing from a different angle	69	3.5 (1.1)	58%
The feedback I got enabled me to rearrange my paper	66	3.4 (1.1)	56%
The feedback I got enabled me to focus on what I really wanted to say	65	3.3 (1.1)	51%
I feel gratitude to those who gave me feedback	65	3.8 (1.2)	62%
In enabled me to reach a publishable product	60	3.6 (1.1)	62%

Table 6. Contribution to writing

The impact of PLC activities on institutional research capacity

Evidence regarding the impact on institutional research capacity was obtained from participation rate in the PLC's meetings the overall yield of papers written

and the way participants perceived the main orientation to act in the PLCs meetings.

The high voluntary participation rates in the PLC meetings (about half of the permanent teaching force in the college), was a sign of growing institutional research capacity. It reflected considerable motivation of the staff to play the 'academic game' with respect to article publication. Beyond the papers that were written by the community members, the academic yield of the college staff during the period in which the PLCs functioned was impressive. 154-refereed papers were written by staff members over the three years respectively (40, 47, and 64) and there were 266 presentations at conferences (56, 104, and 106).

In responses to a question that required the participants to define the main orientation or tendency to act that was dominant in their PLC, the most common tendencies reported were toward writing (45%) and toward discourse and conversation (31%). Table 7 shows the frequency of these responses.

Tendency to Act	N (percentage)
Writing	34 (45%)
Action/Practice	3 (4%)
Discourse/Conversation	24 (31%)
Enrichment	3 (4%)
Mixed	12 (16%)
Total	76 (100%)

Table 7. Main tendency to act (N=76)

These activities are in line with expectations that the PLC would support academic writing and the intellectual discourse in the college, both considered expressions of academic institutional research capacity. However, it should be noted here that this yield could be also the result of other opportunities the college opened to interested staff members during these years.

Discussion

When summing up the findings of this study, our impressions are that the PLC activity in the college was more in line with a professional development perspective than with an organizational perspective. Faculty motivation for

joining the PLC was rooted primarily in their desire to be affiliated with an elite group of knowledge producers and in their need to write articles for purposes of promotion. Members were less interested in the organizational learning taking place in the college. Given that, we should recall Senge's (1990) argument regarding the linkage between individual and organizational learning.

We learned a lot on the nature, conduct and dynamics of the PLCs operation. Our findings revealed activities of a mixed nature, balancing writing with discourse. A typical sequence of activities began with a period of formal learning, in which members are engaged in listening to lectures on topics relevant to the theme of their PLC. This phase enabled participants to get acquainted and develop trust and feelings of belonging to the group, which seemed to be pre-conditions for the willingness to share as well as accept feedback. In this sense, PLC meetings strengthened interpersonal relations and facilitated the development of norms of collaborative learning. At this stage, growth in feelings of affiliation with one another and with the college as a workplace, were reported. In the next phase, writing and revising took place. Participants began to present their drafts; they were very interested in receiving feedback and grateful to those who offered it. It seems that the community structure provided space for the very necessary intellectual discourse among scholars in the college and also supported their academic writing. The excitement caused by concurrent PLC activities succeeded in changing the atmosphere in the workplace from one of isolated activity, usually carried out in the departments, to a more system-wide, collaborative one.

We can conclude that the goal of building research capacity at the institutional level and changing the intellectual atmosphere in the college was achieved, even though not only due to PLC activity but also because of the additional initiatives mentioned. Among these was the launching in 2014 of a refereed journal that until the end of the research period published six issues. Provision of additional hours for faculty research as well as increased funding for writing and travel to conferences. Other opportunities that were made available included annual local research conferences in which the college's entire faculty presented their research. We interpret the high rate of participation in these local conferences as indicating increased research capacity. Due to all opportunities and improved conditions for pursuing research, a new stratum of scholars interested in conducting research parallel to teaching appeared, bringing with them a more academic and research-oriented spirit.

However, when assessing the success of the PLC project in achieving the aims of building individuals' research capacity and strengthening their research identity, the conclusions are mixed. While more than half of faculty who participated in the PLCs meetings on a regular basis succeeded in writing and submitting papers,

the aim of developing a professional identity as educational researchers was not achieved. Toward the end of the study period, two-thirds of the community members continued to view themselves primarily as teachers or educators and social agents, with only one-third as researchers in education. Similarly, only one-third agreed that their identity as researchers was strengthened. Furthermore, the aim of improving faculty academic writing capacity was only partially achieved. Only a third of PLC members agreed or fully agreed that participation in PLC meetings improved their writing.

Difficulties in building a research identity among teacher educators have been reported in many studies. When required to construct a new professional identity, especially one often conflicting with traditional role perceptions and commitment to teaching, many teacher-educators viewed abandonment of their role as teachers and modification of their worldviews as either highly risky (Chetty & Lubben, 2010; Stryker, 2007), or as inducing feelings of loss (Becky & Young, 2005) and uncertainty (Lee & Boud, 2003).

In trying to explain the reasons for the difficulties in building a researcher identity, we can cite Labaree (2003) who, although not dealing specifically with teacher-educators, mentions four transformations that all teachers must experience when crossing the boundaries between teaching and research. Each can be considered a separate obstacle: replacing a normative-moral for an analytical way of thinking, the personal for the intellectual, the particular for the universal, and the experiential for the theoretical. When acknowledging these conflicts, Labaree suggests offering the research perspective as an additional rather than an alternative perspective.

Tack and Vanderlinde (2014), when dealing specifically with teacher-educators, suggest another cause, the lack of what they term a 'researcherly disposition', that is, the habit of mind required to engage in research. This mindset has three features: affective (an inclination or a felt tendency toward research), cognitive (the actual ability to engage in research), and behavioural (a sensitivity to research opportunities). A lack in any of these features may explain why some teacher-educators become teacher-educator-researchers while others do not.

We share other scholars' claims (Hill & Haigh, 2012; Murray et al., 2009) that a strategic approach to building research capacity in teacher education is essential for fostering a research identity among teacher-educators. However, teacher-educators cannot transform themselves into researchers in isolation. This act is a community enterprise in which college-level if not national leadership may have a crucial role to play. As we view transformation of the professional identity of teacher-educators to be an ambitious goal, demanding time beyond the three years of the PLC project, we highly recommend extending the project and conducting additional research for a longer period of time.

The findings suggest that the PLC project was fruitful in enhancing the research capacity of teacher-educators and of the college. However, before adhering to this conclusion, some limitations of the study must be acknowledged.

To begin with, some of the factors presented as evidence of growing institutional research capacity (e.g., allocation of funds for research, organizing conferences and launching a refereed journal) are not directly related to the PLC project; instead, they reflect a change in college policy that coincided with this project. Furthermore, it is difficult to distinguish between the impacts of the different initiatives that acted concurrently in enhancing research capacity although their combined effect might have added to the academic ethos of the college. For studying the net effect of the PLC operation, interaction effects between the PLC operation project and the other institutional actions carried out at the same time, should be considered.

Finally, we suggest that the skew toward the positive impact of the PLCs, as expressed by faculty members, might be a result of their enthusiasm and expectations, which together amplified the results. Yet with all these reservations, our study points to the success of the PLCs operation that still continues with the creation of more PLCs in the college. This strategic act seems to be a fruitful direction for continuous professional development of teacher educators and is recommended as a policy line.

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12

Collaborative Inquiry by Teacher Educators: Mess and Messiness

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Abstract

Collaborative inquiry is a widespread and dominant approach to professional learning within education and is backed by a growing research base. However, one dimension of it seems to have been largely neglected by research methods texts and research accounts: the messiness of teacher collaboration. This seems a significant gap in the collaborative inquiry "story". Drawing on Adamson and Walker's notion of messiness as the choices, problems and unexpected challenges of a collaborative inquiry, this chapter foregrounds mess and messiness to answer four research questions: what is messiness in collaborative inquiry? How does messiness happen? Should we document mess and messiness? How can you document messiness? These questions are answered by drawing on existing literature and using illustrative examples from the author's doctoral research. The chapter argues that when honestly documented, using "Second Text" and "confessional tales", for instance, messiness can contribute to enhanced rigour within collaborative inquiry. It concludes by asserting that researchers need to acquire "Bildung" if they are to "surf the wave(s) of messiness" in their research.

Key words

collaborative inquiry; messiness; Second Text; confessional tales; "Bildung"

Introduction

> Collaboration is an action noun, describing the act of working with one or more other people on a joint project. It can be conceptualised as 'united labour' and might result in something which has been created or enabled by the participants' combined effort. (Lofthouse and Thomas, 2015, p.8)

This helpful definition was provided by Lofthouse and Thomas as a prompt for "a conversation" (p.8) with secondary school teachers about their experiences of working in partnership with other teachers to develop aspects of their practice and to establish to what extent they considered this to have been "collaboration".

Their definition emphasises its active nature, that it is open ended in terms of who you might be collaborating with, and suggests possible benefits of collaborative inquiry. It might be described as a neat and tidy definition of collaboration. However, Eraut argues (2000, p.133) that "tidy maps of knowledge and learning are usually deceptive". Lofthouse and Thomas' definition was useful to their research participants but is silent on one of collaboration's most important characteristics: its "messiness" (Adamson & Walker, 2011, p. 29). Messiness can mean the "complexity, unpredictability and difficulty in monitoring and management when teachers work and research together" (ibid). Messiness also includes 'the dilemmas" faced within collaborative inquiry (ibid). However, there appears to be a reluctance to openly discuss messiness within accounts of educational research (Cook, 1998). Whilst some authors do mention mess within the accounts of their collaborative inquiry, for instance, Lofthouse, Flannagan and Wigley (2016, p.529), drawing on Cook, describe action research as being "a messy area", it is often brief and the authors quickly move on. It would seem that Strathern et al.'s (1987, p.251) "persuasive fictions" continue to dominate accounts of educational research; a culture in which researchers adopt particular writing approaches to tell their research stories and get published. This could be problematic if the researcher makes their account incomplete by not discussing instances of messiness in their study. Therefore, I am arguing that ethically mess and messiness in collaborative inquiry should be documented, that as story tellers and rigorous researchers we should be commit to telling the "whole story" and giving the reader an "honest" account of our research (McNiff, 2014). Therefore, this chapter seeks to foreground and unpack mess, messiness and "messy texts" (Segall, 2002, p.170) within collaborative teacher educator inquiry and the tensions that may occur when we attempt to capture this in our writing.

Murray (2012) asserts that as a discipline teacher education sits within Schön's (1987, p.3) "swampy zone of professional practice". It is worth re-visiting Schön's work to consider how he describes the landscape surrounding this swamp as it has relevance for collaborative inquiry. Schön describes two types of terrain: the "high ground" and the "swamp" (ibid). The former is a space where "manageable problems lend themselves to solution through the application of research-based theory and technique" (ibid), the latter is where "messy, confusing problems defy technical solution" (ibid). Schön asserts that it is in the "swamp of important problems" (ibid) that "the problems of greatest human concern" (ibid), except for medical science, it could be argued, can be found and where collaborative inquiry is situated. I assert that by going into the "swamp of important problems" we are likely to encounter mess and messiness. Interestingly, Schön also suggests that a characteristic of this type of research is that it is "non-rigorous inquiry" (ibid). I would argue that omitting accounts of our encounters with "messy, confusing

problems" (ibid) and any associated messiness that arises during the research process contributes to Schön's claim of this being "non-rigorous inquiry" (ibid), and I return to address this point more extensively later in Section 3.

This chapter draws on my inquiry on teacher educators' use of modelling and existing literature to answer the following questions around messiness:

1. What is messiness in collaborative inquiry?
2. How does messiness happen within collaborative inquiry?
3. Should we document mess and messiness in collaborative inquiry?
4. How can you document messiness within collaborative inquiry?

I employ four conceptual frameworks to answer these questions:

1. Ecologies of practices and practice architectures (Kemmis et al. 2014a);
2. "Messiness" within teacher collaboration (Adamson & Walker, 2011, p.29);
3. Using confessional tales as part of a reflexive account of collaborative inquiry (Van Maanen, 2011)
4. "Second Text" as a way of documenting the "messy" text and "untidy" world of teacher education and collaborative inquiry (Segall, 2002, p.170).

The chapter's research questions and conceptual frameworks are addressed in five sections. The first defines the study's key concepts of collaborative inquiry, ecologies of practices and practice architectures, messiness in collaborative inquiry, "confessional tales", and "Second Text". The second explores how mess and messiness occurs within collaborative inquiry. The third sets out the case for documenting messiness in an inquiry and how this can enhance the rigour of our accounts (Sparkes, 1995). The fourth presents instances of messiness within my inquiry for consideration as examples of how to document it. Finally, I draw some conclusions and suggest the possible implications for researchers involved in collaborative inquiry.

Section 1: Key concepts

Collaborative inquiry

Teachers are encouraged to collaborate with other teachers (Admiraal, Akkerman, & Graaf, 2012) because "since 2000, collaborative inquiry has emerged as the dominant structure for the professional learning of educators in the UK, North America and other parts of the work" (Baumfield, 2016, p.103). Teachers are also encouraged to collaborate with their students (Kemmis, McTaggart & Nixon, 2014b) as it is seen as beneficial in terms of informing and improving teaching, learning and assessment (Lofthouse & Thomas, 2015). This leads to two questions:

1. What do we mean by collaborate?
2. What factors shape collaborative inquiry?

Collaboration is concerned with the researcher(s) and participant(s) – they may be other teachers, students, student teachers, managers, for instance - forming a partnership to explore an area of mutual concern; it involves them sharing ideas and knowledge, searching for joint solutions and in some instances "co-construction" (Lofthouse & Thomas, 2015, p.17). It is a defining feature of two types of research, self-study and action research, and is evident in the "sayings, doings and relatings" of its research participants (Kemmis et al., 2014a). More than that, it is a "democratic" process in which participants contribute to the design of the research (Carr & Kemmis, 1986, p.199).

Coffield (2014a), drawing on Ball's work, suggests that the *context* of teachers' practice is more than just the setting for it; it is an "active force" on it. Coffield proposes that teachers and their teaching, and I would argue any collaborative inquiry linked to it, are always situated within the force-field of four contexts, three of which are internal and the other external. They are:

1. the site(s) of the collaboration and all the actors' actions at the site (internal context), i.e. their "sayings, doings and relatings";
2. the "professional cultures" (p.83) of the teachers and managers at the site(s) (internal context) and the associated "sayings, doings and relatings". These teachers and managers are not necessarily "unidimensional, highly stable, and predictable characters", according to Sparkes (1995, p.164). Professional lives can be often "messy" and this can feature in our collaborative inquiry (Cook, 1998);
3. the "resources" (ibid) of the site(s) such as the staff development budget (internal context);
4. and "externalities" (ibid) that shape the site(s) such as government policy and awarding body requirements (external context).

To this framework, I would suggest a fourth internal contextual influence that might be present within the field as an "active force" shaping teachers' practice and collaborative inquiry: the "'learning cultures" of their students and who they may be collaborating with (James, Biesta, Hodkinson, Postlethwaite, & Gleeson, 2007). Therefore, I assert that there are up to five contexts actively shaping a piece of collaborative inquiry. This is presented visually in Figure 1.

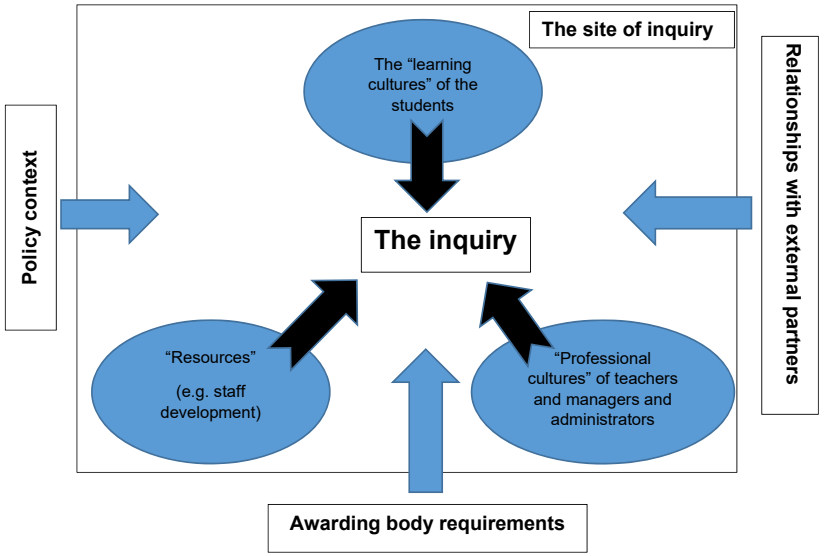

Figure 1. The forces actively shaping teacher collaborative inquiry

Ecologies of practice and practice architectures

Kemmis et al.'s (2014a) work on ecologies of practices and practice architectures, contemporary theories of practice for an educational institution, might add another layer to our understanding of collaborative inquiry and research at a site. The ecologies of practices are the five practices of an educational site (a school, college or university, for instance), namely their students and their learning; teachers and their teaching; leaders and administrators; managers of continuing professional development and/or teacher educators, and researchers. Each of these practices consists of "sayings, doings and relatings" (p.3) and these are enacted in the arrangements of three "intersubjective spaces" (p.4) at the site. For example, how research participants can communicate with each other within the "semantic space" (ibid) of language; how the "physical space-time" (ibid) arrangements of the site, such as timetables, allow participants to meet up within a busy teaching schedule and provide a meeting space for them when they do; how the "social space" (ibid) supports or stifles collaborative relationships between participants. This is visually presented in Figure 2.

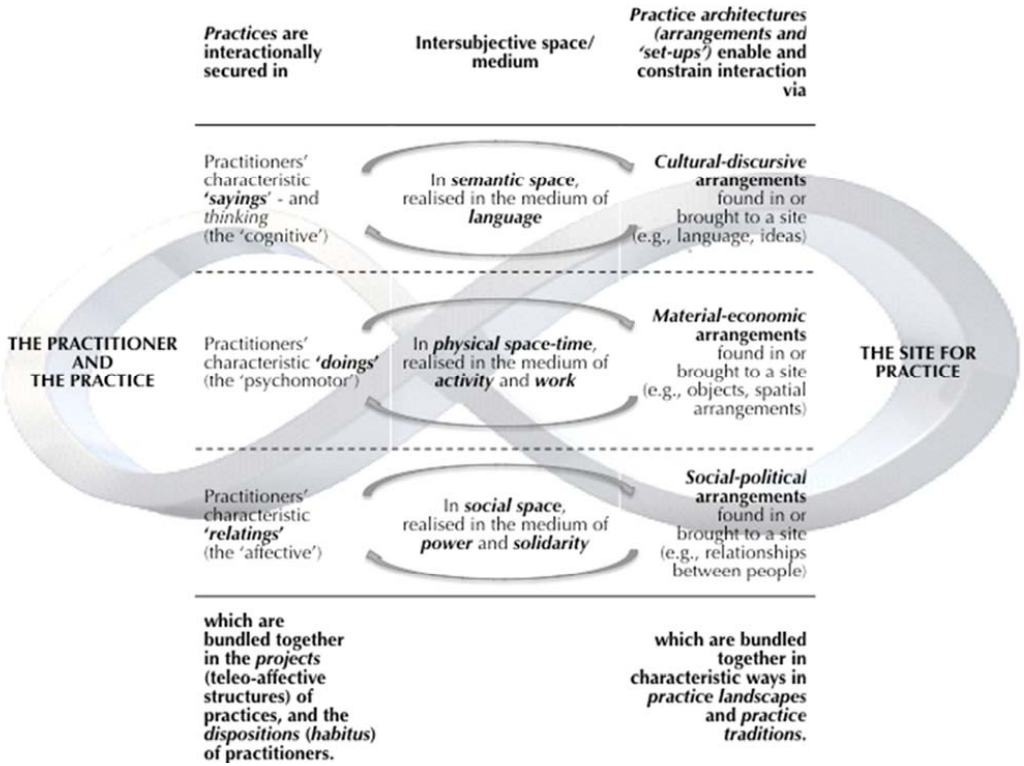

Figure 2. the theory of practice architectures (Kemmis, 2017, personal communication)

Kemmis et al. (2014b, p.150) argue the most courageous form of collaboration within education research is when partnerships are formed between participants from each of the five "ecologies of practices" in order to open a communicative space and develop a "conversation" on an issue of mutual concern. This is inclusive and powerful collaboration because it includes the voices of "groups who [can be inadvertently] excluded" (ibid) from these conversations such as students and "ancillary staff" (ibid). The value of this type of conversation is that it allows participants "to see the life and work of the classrooms and schools from very different perspectives" (ibid) and this can helpfully challenge any "competing self-interests" (p.151) that may exist. However, Lofthouse and Thomas (2015, p.19) posit that such an approach and the values which underpin it are somewhat counter cultural in today's "highly performative cultures", which are increasingly a worldwide phenomenon.

Messiness in Collaborative Inquiry

Encountering messiness within research for the first time can be disorientating and disheartening, though if we could understand more about why and how it happens then that may help us work with it and navigate our way through it. Adamson and Walker (2011) identify that messiness occurs within teacher collaboration and tell us what it is, though they do not explain how it happens. Law (2003, p.3) states that "contemporary social science methods are hopelessly bad at knowing…mess" and suggests that the "dominant approaches", who are committed to neat and tidy accounts of research, seek to "repress the very possibility of mess" and messiness. This is unacceptable in Law's view. The "world is largely messy" (ibid) and therefore Law asserts we should be "interested in the process of knowing mess…[and the] methodologies for knowing mess" (Law, 2003, p.3). In Section 2 I will return to mess and messiness and explore four possible explanations for how messiness may occur in collaborative inquiry. I now want to turn to the interlinked ideas of "confessional tales" and "second text" and how they may be helpful when writing about messiness.

Confessional tales

The concept of "confessional tales" originated in the research of ethnographers who were attempting to reflexively de-privatise their fieldwork; it was a direct response to the criticism from scientifically orientated research community (Van Maanen, 2011). It requires the researcher to make explicit the data collection process of "fieldwork" and so make visible the humanity of the researcher and their relationships with those they are researching (ibid). It is a "modest, unassuming style of [some]one struggling to piece together something reasonably coherent…[amongst the] disorder, doubt and difficulty" of their research setting (Van Maanen, 2011, p.75). One of the weakness of such an approach is that it may become too "self-absorbed" (Sparkes, 1995, p.171) or in attempt to involve others' voices it might inadvertently "consume" individuals' stories (p.167). On the other hand, confessing to what has happened in our inquiry "exposes more of [ourselves] to the reader at a personal level and an author, as well as giving some interesting insights into the process of" (p.172) conducting collaborative inquiry. This is not an easy process. Foley (1992) agonised over how to "write truly accessible…[texts] that are reflexive and thus fulfil the criteria of good post-positivist critical interpretation…and was left feeling that there was no way to serve two masters, the people and the professoriate…" (Foley, 1992, p44). When it does appear, Van Maanen (2011) notes that "confessional tales" are often buried in the appendices of the research, or the methodology and methods section of ethnographic research, where it is usually presented as "a separate chapter" (p.81). I would argue this could decouple any instances of messiness from the

research and its processes. Van Maanen adds that in fact most "confessional tales" are never published and any that are written are by established researchers with a publication record based on their "realist tales". Van Maanen (2011, p.81) makes a telling point:

> The confessional is apparently interesting only insofar as there is something of note to confess as well as something of note to situate the confession. It is apparently more difficult to achieve the latter than the former. Authors of unknown studies, while they surely have much to confess, will rarely find an audience who cares to read their confessions.

Alongside our "confessional tales" in our research accounts can sit a "second text".

Second Text

Writing up an account of collaborative inquiry is itself complex because it requires us to narrate an "untidy world" (Lather in Segall, 2002, p.170) and the convention and expectation and indeed requirement of a journal is to tidy up the text into neat conclusions for the reader (Lather, 1996; Segall, 2002). However, collaborative inquiry is not always neat and tidy and the findings may be debatable. Van Maanen (2011, p.95) asserts that "fieldwork data are constructed from talk and action" and as such might be interpreted in more than one way because of the setting; the identities of the participants, and the knowledge of the researcher and their participants. Instances of "messy" research like this need a way of writing up the messiness of the inquiry; it requires us to try and capture the "messy" text (Denzin in Segall, 2002, p.170) that exists within collaborative inquiry. There is an ethical dimension to illuminating messiness in research, I assert. Segall's (2002, p.150) "Second Text" is one way of doing this.

Second text is a "method of inquiry" (Segall, ibid), informed by Lather's work, which addresses "the complexity of narrating an untidy world" (p.170); it seeks to capture the "polyphonic" (ibid) voices of those within the inquiry and invites them to commentate on the text as it is being constructed and once it is finished. It is a methodological and philosophical approach that is congruent with collaborative inquiry because it acknowledges that the researcher's/author's account is "personal" and "positioned" (p.150) and as such readers need to hear the participants' voices and "words" (p.151) too. These should be "presented unedited and in full wherever participants chose to place them" (ibid) in the text. It is not member checking though, asserts Segall, it is more open and democratic than that. Second Text is a collaborative way of conducting research that gives participants "an opportunity to comment on the process and produce of that

investigation, a space to voice their rejections and evaluate" your work with them and your "words about them" (Segall, 2002, p.152). It opens the researcher's "text to interrogation" (ibid) and makes this "interrogation visible to" (ibid) those who read it. The way Segall (2002, p.16) made visible "Second Text" within his work was to italicise it. To conclude, Second Text offers every participant a voice and words to contribute to an account of a collaborative inquiry, illumining any messiness within it and this potentially gives the research greater verisimilitude.

Section 2: How mess and messiness can occur in collaborative inquiry

A starting point for beginning to know mess would seem to be the "active force" (Coffield, 2014a, p.83) of government policy towards education. Murray, Swennen and Shagrir (2009, p.30), drawing on Cochrane-Smith (2005), assert that "teacher education is positioned as a public policy problem", both within the United Kingdom and internationally. As such, it has moved towards the forefront of national politicians' and the European Union's education policy agenda (European Commission, 2015). Whilst Murray (2012, p.19) acknowledges that examples from England might be described as "The English exception" and be a result of "English-specific factors", she argues that performativity has become "a global phenomenon" and as such is familiar and relevant to international colleagues. Therefore, I assert that readers can consider my English examples by asking the two key questions: What is this policy? Does it apply to my own country and context?

In the United Kingdom in 1976, the then Prime Minister, Jim Callaghan, began "The Great Debate" about the state of education in England. This was the first time the British government had explicitly expressed an interest in education and a presage for "more than 30 years of policy hyperactivity" (Coffield, 2015, p.13) devised by ever-changing Secretaries of State from successive governments (Orr, 2016). For instance, Coffield (2008), drawing on research undertaken by Gemma Moss, stated that 459 documents were sent by "government agencies to all primary schools in England on the topic of literacy during the years 1996 and 2004…which amounts to 51 per year or almost one a week for nine years" (p.8). This lack of political stability (Orr, 2016) has meant teachers in England have experienced "a permanent revolution" (Coffield, 2008, p.9) that has intensified itself into an ever accelerating "pace of change" (ibid). These reforms have been underpinned by the advent of an unholy trinity of "*policy technologies*" that characterise neo-liberalism: marketization, "managerialism and performativity" (Ball, 2003, p.215). In terms of the external "context", I assert that, within England, these *policy technologies* contribute significantly to the architecture of any mess

and messiness within collaborative inquiry. They may also be present, though perhaps to a lesser extent, within research undertaken within Europe and other parts of the world.

On a more personal level, Cook observes (1998) that messiness occurs in action research (and self-study, therefore) because the professional lives of the researcher and participants are rarely neat and tidy. This is the mess and messiness of the self within collaborative inquiry. There are two dimensions to this: our "confessional tales" (Van Maanen, 2011) and our "helping" work as teacher educators (Wilcox, Watson and Paterson, 2004, p.278).

Sparkes (1997, p.173) asserts that well told "confessional tales" lift "the veil of secrecy" of what actually happened when we seek "access to the field", collect our data and analyse it; they remove the methodological silence surrounding messy data collection. These narratives, according to Bruner, provide "believable… accounts" of the research and "human or human-like intention and action and the vicissitudes and consequences that mark their course" (Bruner, 1986, p.13). It is in the human actions, "vicissitudes and consequences" that "mess and messiness happens".

Wilcox, Watson and Paterson (2004, p.278), writing about self-study, posit that "those in the helping professions have the distinct and messy business of making sense of their experience rather than assessing results against a standard measure (Schön, 1983)." Thus, we may add our role and those of our participants as contributors to mess and messiness in collaborative inquiry.

Alongside the policy context and the self sits the focus of our collaborative inquiry: teaching, learning and assessment. Coffield (2014b, p.113) posits that the "leitmotiv" for those studying teaching, learning and assessment is that it is inherently "messy, elusive… unpredictable", complex and ambiguous and as such might be viewed as a "confusing" mess (Schön, 1983, p.42); it may be slippery to describe (Rushton, 2015). Therefore, I am arguing that teaching, learning and assessment brings its own messiness into the research. All collaborative inquiries are surrounded by a force-field of at least four factors that can create mess and messiness. These factors interact with the inquiry and the inquiry can interact with them. This is visually presented in Figure 3.

There are two final points. First, when using the terms mess and messiness, I am not suggesting that any research where it occurs is necessarily "disordered or undisciplined" (Thomas in Cook, 2009, p.278), though Sparkes (1995, p.173) suggests we should accept that "shocks, surprises, blunders, and social gaffes" can occur. I prefer to adopt the view that telling stories of messiness within our accounts unveils our humanity as researchers, and might reassure other researchers that "mess happens". Second, I am foregrounding Adamson and Walker's (2011, p.29) view of messiness as "complexity, unpredictability…

Figure 3. How mess and messiness can occur within collaborative inquiry

dilemmas" and difficulties that happen in research and that to navigate our way through it is a "very highly skilled process" (Cook, 1998, p.103) which requires "professional knowledge, judgement, tacit knowledge, intuition, and professional maturity" (Cook, 1998, p.107). Therefore, reporting on any messiness in our research and explaining how we dealt with I might enhance its rigour and reassure other researchers, particularly early career researchers who are undertaking an apprenticeship in becoming and being a researcher.

Section 3: Should we document mess and messiness in research?

I began building this argument earlier in the chapter, though I want to develop it into a forceful argument for collaborative inquirers to include accounts of mess and messiness within their papers and texts. Within this section I consider why documenting it is an ethical and methodological issue for collaborative inquiry and how these two "compass points" might guide its researchers to write more rigorous and relevant accounts of their research (Levin, 2012). Simultaneously they should seek to find what may be an elusive balance between these two and in the process enhance the inquiry's "academic integrity" (Levin, 2012, p.141), giving it credibility within the wider research community, and removing the label of "non-rigorous inquiry" attributed to it by Schön (1983, p.3).

Fraser (1997, p.161) posits that action research is "an ethical enquiry" concerned with "address[ing] the professional dilemmas" of teachers. Dilemmas,

according to Altrichter, Feldman, Posch and Somekh (2008, p.189), are "situation[s] in which someone must choose one or two or more alternatives…" They add that using a tool like Winter's dilemma analysis might allow us to see into how a teacher makes decisions when dealing with the messiness of teaching, learning and assessment (Coffield, 2014b) and this could sit alongside the messiness – the "dilemmas" (Adamson & Walker, 2011, p.29), for instance - of collaborative inquiry. Both of which could be written up as part of an "ethical enquiry". Fraser's (1997) argument that the ethical dimensions of research are not considered and discussed sufficiently within education research still holds, it seems to me. 15 years later Levin argued that there was still too little discussion of the ethical issues, and I would add messiness, within action research texts. My argument is that this may still hold today as researchers seek to "fit" the "whole story" and the findings within the prescribed editorial requirements of a journal or book chapter, and build their reputation as they do it.

The credibility of collaborative inquiry is dependent on its ability to hold in balance the competing demands of your commitment to your participants, your joint work and telling its story and at the same time meeting the expectations of the academy and professoriate who require rigorous research. This tension creates Janus-faced collaborative inquirers (Levin, 2012) and as a result its own type of messiness. One way forward is to employ rhetorical devices (Sparkes, 1995) like "Second Text" to create "alternative explanations" (Levin, 2012, p.145) for inquiring about the complexities of teachers' practices and teaching, learning and assessment.

Levin (2012, p.143) sets out five "factors" that together contribute to the credibility and rigour of action research: research partnering, researcher's bias; standardized methods; alternative explanations, and trustworthiness. Levin (2012, p.140) proposes that another way forward to support "academic integrity in action research" lies within the concept of "Bildung", a process of becoming and being which originated in the German universities in the late nineteenth century. It is a contested notion, however, according to Levin. Nevertheless, he argues that "Bildung" enables the collaborative inquirer to master its process including "knowing how to…reflect on ethical and moral challenges in the research process…[it] must prepare the practitioners for writing up [action research] AR in such a way that it contributes to the social science discourse" (Levin, 2012, p.135). It seems to me that implicit within these five factors and "Bildung" is knowing how to deal with mess and messiness when it arises, learning from it, and how to document this within your research without compromising its rigour. As Cook (2009, p.277) argues, mess and rigour are unlikely "bedfellows", though they can be through "Bildung". Levin (2012) goes on to suggest that one-way action researchers might acquire "Bildung" is through "training". However, how this might happen within the "institutionalized form of in-service education"

(Kinsler, 2010, p.172) that exists in UK and American universities, where most teachers are inducted into action research, is unclear.

My penultimate point is concerned with the validation of action. Heikkinen, Huttunen, Syrjälä and Pesonen (2012, p.8) identify five "principles" for validating action research: how the story of the action is told; being reflexive; the presence of dialectics in the writing; its "workability and ethics"; its "evocativeness". They add that these principles are closely aligned with Kemmis et al.'s concept of ecologies of practices, in terms of their sayings, doings and relatings, and the practice architectures of the site and how these "hang together" within a site's intersubjective spaces. It seems that this text is also silent on the potential for Adamson and Walker's messiness to be present where these principles, practices and spaces intersect and interplay. I would suggest that part of any validation process should be the inquirers and validators discussing any instances of mess and messiness and considering how it might be documented before the research is written up and presented to its intended audience.

My starting point in this section was should we document messiness and I conclude the chapter by asking how much messiness do we report on, what is considered rigorous accounting for messiness, and what might be "over telling the story". It is clear that there is a balance to be found between the story and presenting a piece of rigorous research. Published researchers with an established publication record can afford to be experimental when documenting messiness (Sparkes, 1995); however, early career researchers will want guidance on where the balance lies and one way they may learn how to find it is by reading others' work. However, it is not always easy to find examples and indeed I would not want to prescribe how much messiness is documented, though some useful criteria might be: sufficient detail for a reader to trust and believe the honesty of the account and not so much that the story dominates the rigorous reporting of the research. This will require researchers to take risks as they search for the balance between the two. Tierney (1993, p.314) suggests that "some [of these] will fail, but others will succeed and [be published], in doing so, they will enable us to see the world in dramatically different new ways", illuminating and guiding the way for others to follow.

Section 4: Examples of messiness from a messy collaborative inquiry

As a university-based teacher educator and apprentice researcher (Murray, 2012), I have been involved in a "messy" collaborative inquiry over a period of four years with a team of teacher educators based in a further education college and their in-service student teachers. This inquiry was a piece of second-person practice action research (Chandler & Torbert, 2003, p.142) with six teacher educators and

three of their student teacher groups. The focus of this inquiry was the teacher educators' use of 'modelling' within an initial teacher education programme and what impact this had on the student teachers' learning.

Externalities make things messy

The setting for this inquiry is the English further education sector. Internationally, further education colleges are similar to technical and vocational further education institutions in Australia, community colleges in the USA, and Fachoberschules in Germany. Orr and Simmons (2010, p.78) note that in England "virtually all aspects of further education are now highly mediated by the State". The sector has traditionally been responsible for post-compulsory education in England and has a reputation for giving students, 16-18 year olds and adults, a "second chance" (Orr, 2016, p.20). It provides education and training for about four million students (National Audit Office, 2015, para. 1.1, p.12) and has a budget in the region of £7 billion (p.5). Its further education colleges are diverse organisations with a large number of 16 to 18 year olds undertaking apprenticeships and many adults also studying (Association of Colleges, 2016). During the period of inquiry (2011 to 2016) two neo-liberal policies have fashioned the further education landscape, teacher education and this collaborative inquiry. First, between 2010 and 2016 the budget for the sector was reduced by over 30 per cent per annum (Keep, 2014) and this resulted in fewer new teachers being recruited and fewer undertaking initial teacher education (Education and Training Foundation, 2016). Second, the statutory qualification requirements for teachers in the further education sector were removed in 2013 (Orr, 2016).

The combined "externalities" of austerity and de-regulation contributed to the messiness of this inquiry as fewer student teachers were recruited at my partner college and this meant the size of the team of teacher educators I was collaborating with reduced from 13 in July 2012 to five in July 2016. A consequence of this was that none of the teacher educators I worked with in the first cycle of the inquiry were teaching on the programme when the second cycle of the inquiry started, so could not be filmed teaching, which was one of the ways I was collecting data on their use of modelling. Whilst none of my participants lost their jobs, some of their teaching hours were reduced and one of them left. All of these changes made the research more difficult to conduct.

The messy process of securing participants

Murray (2012) points out that performativity is shaping teacher educators' work lives throughout the world, though the extent of this varies between countries.

In my study I found that it was also present. Three factors combined to affect my recruitment of more participants at a meeting in July 2012: my own naivety, my choice of data collection methods, and the performative climate of the college where the study was taking place. How did this mess happen? First, my letter asking for institutional approval to carry out the study naively offered to the Principal, the Head of the college, a copy of my thesis once it was completed. Some researchers make this offer; however, within the performative climate that existed, which I should have been aware of, this was ill advised. The institutional approval was granted but as I sought to recruit more participants "my promise" became a sticking point in the inquiry and I had to work hard to persuade some of them they could trust me.

Second, seeking to emulate Swennen et al.'s (2008) use of stimulated recall interviews (SRI) in their study on modelling, I planned to film the teacher educators teaching and conduct an SRI afterwards. However, some of the potential participants did not want to be filmed. I should not have assumed, as I had done, that people would be happy to be filmed and talk about their teaching to me. Teacher Educator A, a work colleague from my University, had allowed me to film them teach and participated in a SRI as part of my piloting of the data collection instruments, saying: "I'm quite happy now talking to you about all of this, but I don't want to watch myself teach..." (SRI, June, 2012). Whilst Lunenberg et al. (2007) argue that teacher educators need to make themselves vulnerable if they are to model teaching behaviours to their student teachers, Teacher Educator A's "sayings" and the reactions of some of the potential participants to being filmed gave me my first insight into the contribution identity has to messiness within collaborative inquiry. Segall (2002, p.170) help us understand how they might have been feeling: "...regardless of how committed teacher educators are, not everyone would relish the idea of having their practice open to external, critical scrutiny". Further reflection led me to consider the impact of accountability and the performative work place on these teacher educators' identities (Powell, 2016).

Then I told them of my offer to provide the Principal with a copy of my thesis. The atmosphere in the meeting dramatically changed as concerns were expressed by two of the potential participants about "my promise"; they seemed fearful. This critical incident forced me to think again about the planned inquiry and the potential impact of my behaviour (the self); the teacher educators' identities; the management of the college, in terms of Kemmis et al.'s ecologies of practices; and the external forces of a performative environment on it. However, it is useful to see it from one of the participant's perspectives as well. Teacher Educator F reflected at a "Teacher Talk" (Hardy, 2010) meeting in September 2013:

> Do you remember you said you were going to pass the information back to the Vice Principal and I think there was a real problem of trust and that was really questioned at that point by some of us in our minds because that felt as if the surveillance was going to have repercussions?

Two points seem important. Firstly, the sayings, doings and relatings" of "the reconnaissance stage" (Kemmis et al., 2014b, p.92) create the climate for the inquiry. Secondly, at the start of the inquiry there appeared to be what Ball (2003, p.226) calls a "regress of mistrust"; a "mistrust" between myself and some of the participants because of "my promise" and how I had said I wanted to conduct the inquiry, and "mistrust" between some of the teacher educators and the leadership of the college. These "relatings" were shaping the "sayings and doings" of this inquiry. In November 2014, I gained a further insight into some of the "active forces" present at that meeting in July 2012. Below are two extracts from a "Teacher Talk" meeting held in November 2014 when we were reflecting on the inquiry.

Extract 1

Speaker	Dialogue
Teacher Educator B	I think what people were worried about – if I may be so bold to say – is that there was a host of competing and contradictory practices within so many people …I think [the start of] this research came at a moment where people were vulnerable in that respect.
Teacher Educator F	We were quite vulnerable.
Teacher Educator G	We brought our baggage with us.

Extract 2
Teacher Educator B reflected:

> …there are so many things that were involved in the inquiry that were unpredicted and unpredictable and so I would say the policy context and all the changes that we've had as a team…the audit culture within which we work was too powerful for some in terms of some of the initial stages back in 2012 where people didn't feel comfortable in participating and that was something I don't think you predicted in your research…

To conclude, I made an apprentice researcher's mistake when offering to share a copy of the inquiry with the senior managers of the college without discussing this with my participants; however, there were other "active forces" present

in the room during my meeting with the participants in July 2012 that shaped "the sayings, doings and relatings" that afternoon, contributing to the messiness within this inquiry. They only became visible later because of the level of trust that had been established with the participants.

Messy relationships

This instance of messiness led to a "a disorientating dilemma" (Mezirow, 2000, p.22) for myself and Teacher Educator C after I had held the focus group with their student teachers, who were first years. I had asked for verbal consent before the focus group started on the understanding that I would send them a consent form to sign. At the end I thanked them for their time and contribution and left, unaware that something had happened in the focus group. I was therefore shocked when I got the following email from Teacher Educator C:

> The group were very reluctant to be involved after your visit and one learner was very unhappy with regard to "wait time" used with them when you asked a question about how I used modelling. They thought I had used it and then you waited a long time for their answer to explain how and they didn't respond. They said that a long wait time for 1-2-1 questioning is fine, but in a whole class context they felt very unhappy with the experience. They also did not understand what you were researching despite your PowerPoint presentation and explanation but were pleased that the consent form explained the reasons for the research… (personal communication, April 2013)

I was puzzled by what had happened as I had used exactly the same approach for the focus groups with the two year 2 groups of student teachers without a problem and all the consent forms had been signed. Further reflection suggested that perhaps I had not spent enough time getting to know this group of student teachers and establishing a strong student-teacher relationship (Hattie, 2009) for them to trust me. They did not know me and I did not know them well enough to use Rowe's (1974) "wait time" with them. A second theory which might shed light on what happened in the focus group with this first year group is the research into learning cultures in FE in England (James et al., 2007).

Learning cultures "should be understood as the (social) practice through which – students and tutors – learn" (Hodkinson, Biesta & James, 2007a, p.420). They are shaped by the relationship between the student and their teacher(s) and any change, a new or different teacher, for instance, can impact on it (Gallacher et al., 2007). "Differences in power are always an issue [in learning cultures]", according to Hodkinson et al., 2007a, p.419), and the student teachers may have seen me

as being from the awarding body and been intimidated by this. They may have wondered whether I was assessing them. "A learning culture will permit, promote, inhibit or rule out certain kinds of learning." (Hodkinson, Biesta & James, 2007b, p.28) and it would seem that these student teachers, who were first years, may not have been confident enough and ready to discuss how they were learning to teach with someone they did not know and not yet trust.

Clearly I could not use the data from the focus group but I still had the dilemma of what to do about the data from the filmed class, as they had not objected to that, and it was agreed that I should not quote any of the student teachers when writing up the inquiry. Second, I decided that I would invest more time in getting to know the student teachers involved in Cycle 2 of the inquiry before any filming commenced. Thirdly, and as a result of a discussion in a "Teacher Talk" meeting in September 2013, I agreed with the teacher educators that we would invite one of the student teachers to film the classes in Cycle 2 and then the teacher educator would facilitate the focus groups with their own student teachers.

Narrating messiness in an "untidy" world

There are two challenges for us as we document messiness in our studies: the rhetorical device we use to do this, and presenting the account to a wider audience (Sparkes, 1995). Berry (2007) suggests that writing up accounts of research on teaching about teaching is a difficult task. Interpreting what is written, said or seen with qualitative research can be problematic (Denzin, 1995). The person who is listening, reading or watching can only understand these observable "sayings, doings and relatings" if they are part of the dialogue. Anyone who is outside the dialogue is a "superaddressee", according to Denzin (1995, p.10), "a hypothetical third party who is presumed to understand what is being spoken" but often does not always appreciate the "sayings, doings and relatings" they are interpreting. Examples of this from my collaboration were when I was seeking to transcribe and interpret a section of a filmed class with Teacher Educator C and their student teachers. In the first example I was seeking to provide as thick a description (Lincoln and Guba, 1985) as possible for the reader and so indicated in my transcription that Teacher Educator C had waited two seconds after asking a question. I passed my transcription and initial analysis to them to review and comment on. Here I was seeking to move beyond simply member checking the accuracy of my transcription and invite my participant to challenge my account of what I had filmed; I was inviting Teacher Educator C to provide an alternative, "Second Text" (Segall, 2002, p.150) to my text. To be clear, this was a participant using their "voice" and "words" to provide another version of the film. I italicised

their comments in the transcription, as suggested by Segall (2002, p.16), and told my readers that this is what the italicisation signified. Their response was:

> *…I would argue that with this particular class and in that moment I was maintaining the pace of the class by not waiting too long… This shows that actually wait time also relies on your knowledge of a class and particular trainees and their interactions and confidence levels (personal communication, October 2014).*

Their response made me think further about how we can know and what we can know about others' teaching behaviours when we are filming them.

To conclude, it would seem that using "Secondary Text" can be a method for researchers "to reflect the impossibility of mapping an "untidy" world into a "tidy" text (Lather, 1996, p.529) and the problematics inherent in the interpretation of (someone else's) lived experience" (Segall, 2002, pp.150-151). It also captures the complexity and dilemmas, both characteristics of messiness, when transcribing and interpreting data.

Conclusion

This chapter has not attempted to "tidy away" the messiness of collaboration (Cook, 1998); it foregrounds it, it unpacks it and it provides examples of it. This paper set out to consider messiness within collaborative inquiry; its forms and how it happens. More than that, it has sought to build a case for messiness to be present in accounts of collaborative inquiry where it is evident in the research process. It suggests adopting "Second Text" and "confessional tale" as ways of doing this and acknowledges that when doing so a balance needs to be found between ensuring the relevance and the rigour of the account, something which will require researchers to be more experimental in their writing. Doing this, for me, is part of telling an inquiry's story honestly (McNiff, 2014, p.101) and telling the "whole story" of the collaboration. Otherwise there is a danger that researchers concerned with researching classroom practice could unintentionally, I would argue, collude with a government's view that TLA is "uncomplicated… [and] controllable" (Coffield, 2014b, p.133) and formulaic if they omit mess and messiness from their research accounts or reduce it to a single sentence. Cook (1998, p.107) calls for researchers to "get this mess out into the open and as such, allow it to be critically scrutinised for its intrinsic worth and what it has to offer." There appears to be very limited literature and research on messiness within collaborative inquiry and I want to address this by inviting other researchers, especially colleagues from Europe and further afield, to join

me and be experimental in their writing when and where opportunities to write about messiness occur. I have learned from "surfing the waves of messiness" in my collaborative inquiry" and our ability to "surf" them reflects our professional knowledge, skills and abilities, or "Bildung", as researchers. In the spirit of Pete Boyd's encouragement to surf the waves of neo-liberalism, I have "surfed the waves of mess and messiness" in my inquiry. They made me think harder and better about my "sayings, doings and relatings" and those of my participants and helped me develop a deeper, more critically reflexive understanding of my collaboration with a team of FE-based teacher educators and their student teachers. It made me a more mindful action researcher in Cycle 2 of my inquiry. I am looking forward to my next 'big wave(s) of messiness'.

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13

In-service Content and Language Integrated Learning (CLIL) Teacher Development: an Action Research Project in Teachers' Professional Learning

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Abstract

All teacher education programmes require to handle complex layers of learning because they are teaching teachers to teach. Arguably a programme involving Content and Language Integrated Learning (CLIL), preparing experienced school teachers to teach curriculum subjects in a target foreign language (usually English), has an additional layer of complexity. This chapter describes an action research approach to the investigation of a CLIL teacher education programme and indicates that a pedagogy aligned to action research seems effective in such contexts. There is an indication that action research based pedagogy applied to CLIL teacher education can lay the foundation for inquiry-based professional learning where teachers develop as practitioner-researchers who are able to improve their own practice and also apply research methods to systematically validate their work, thus contributing to the body of CLIL research.

Key words

Content and Language Integrated Learning (CLIL), in-service teacher development, professional learning, action research, physical education

Introduction

The importance of having foreign language skills has come sharply into focus in recent years (European Commission 1995) and member states of the European Union have funded numerous initiatives to promote the teaching and learning of foreign languages, particularly English (Dalton-Puffer 2011; Lorenzo, Casal & Moore 2011). There is an increasing need and desire among global citizens to communicate easily with anyone, and English is the language in which much of the world's communicative exchange is carried out. Increasing number of schools are

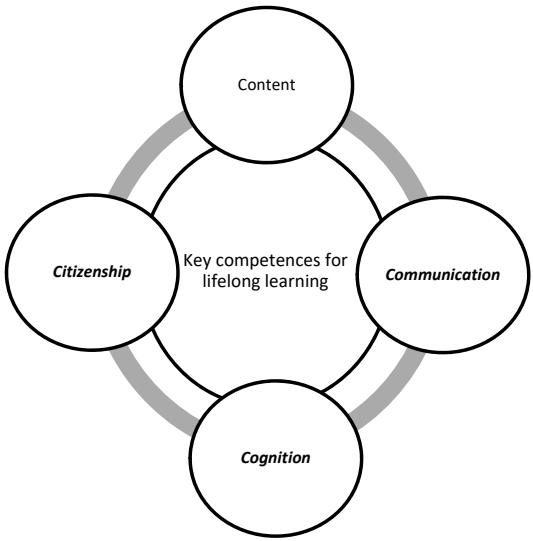

Figure 1. Adaptation of the 4Cs theoretical concept (Coyle, 1999) in the context of a competence-based curriculum.

offering content and language integrated learning programmes (hereafter, CLIL) to teach subjects such as mathematics, physical education (PE) or music, using English as the instructional medium. Integrating content and language is not an especially new idea. Snow, Met and Genesse (1989) proposed a conceptual model for a content-based programme emphasizing collaboration between content and language teachers to achieve their separate objectives in tandem. The acronym 'CLIL' appeared shortly thereafter, in the mid-1990s, and is now an umbrella term that refers to any educational situation where an additional language, usually a foreign language, is used for the teaching and learning of subjects other than the language itself (Marsh & Langé, 2000). Coyle, Hood & Marsh (2010, p.1) state that, 'CLIL is not a new form of language education. It is not a new form of subject education. It is an innovative fusion of both'. However, it is a particularly challenging approach because in CLIL classrooms both the curricular subject and the new language are taught at the same time, and this requires integrating thinking and learning skills by means of supportive language scaffolding.

Bentley (2010, p. 5) states that 'CLIL can involve many methodologies from both subject and language teaching', and this represents a new challenge not only for aspiring CLIL teachers, who require specialised training, but also for the authorities responsible for providing that training. In the case of Catalonia, the Department of Education has chosen to adopt a conceptual map for

understanding CLIL, the so-called 4Cs framework (Coyle, 1999, 2006), as its base-model in teacher training. The adaptation of the original 4Cs stands for Content, Communication, Cognition and Citizenship (this fourth C was originally Culture but we reformulated it as Citizenship) and is a theoretical concept that must be always considered within a context which, in our case, is a competence-based curriculum (figure 1).

Competences are defined as 'a combination of knowledge, skills and attitudes appropriate to the context. Key Competences are those which all individuals need for personal fulfilment and development, active citizenship, social inclusion and employment (European Union, 2006: L 394/313). The radial cycle diagram in figure 1 illustrates how each of the 4Cs has an equal bearing on the key competences for lifelong learning. It is up to the teacher, informed by the 4Cs, to facilitate a learner's acquisition of those key competences.

To accomplish that goal, the CLIL teacher must possess multiple types of expertise. The European Framework for CLIL Teacher notes the need for expertise 'in the content subject; in a language; in best practice in teaching and learning; in the integration of the previous three; and in the integration of CLIL within an educational institution' (Marsh, Mehisto, Wolff & Frigols, 2010). Thus, while proficiency level in foreign language is essential, adequate training in CLIL classroom methodology is no less important for a teacher to be truly effective. Educational administrations are usually quite rigorous about requiring CLIL teachers to hold a C1 foreign language competence certification[1]. When it refers to methodology, however, though the teacher may be obliged pass a specific methodological course offered by universities or the educational administration itself, finding a methodology that works for a particular subject with a particular student profile is likely to come as much out of actual empirical experience in the classroom as it does from the sort of theoretical reflections that have often tended to predominate in formal in-service teacher education programmes. Thus, rather than simply attending lectures, the trainees in the programme would work under the guidance of CLIL experts to empirically resolve the issues particular to their specific CLIL classroom context, sharing ideas and experiences with their co-trainees, and at the end of the programme scientifically validate the results of their efforts to make a formal contribution to the body of CLIL research.

This relates to the distinction between *professional development*, which is usually associated with the kind of formal lecture-based courses that are widespread throughout Europe and the idea of *professional learning*, which involves a practice-based approach in which teachers undertake practitioner-driven research within

[1] It corresponds to an advanced user of a foreign language acccording to the Common European Framework of Reference for Languages (CEFR).

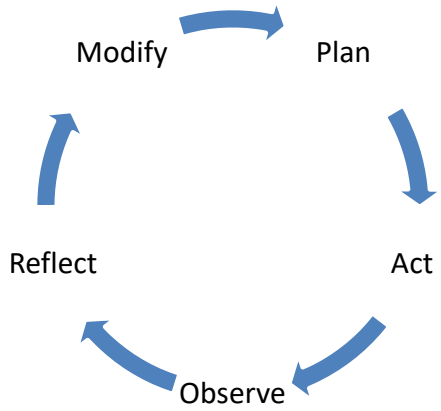

Figure 2. The Action Research cycle.

Adapted from Kemmis and McTaggart (1982)

a professional learning community (Macphail, 2011). Although there are many different models of practitioner research applied to teaching, teachers analyse their own practices and discuss issues that affect their teaching with their peers (Miller & Maguire, 2009). The key features of a practice-based teacher education programme are teachers' commitment to the collective project and their capacity to analyse and evaluate what is happening in their own lessons (Zwozdiak-Myers, 2012). This combination of action and reflection will allow teachers to enhance the quality of their teaching and thus their students' learning.

The pilot study that we present in this chapter is 'a form of enquiry that enables practitioners everywhere to investigate and evaluate their work' (McNiff & Whitehead, 2008, p.7) and also an example of how the Action Research cycle illustrated in figure 2 (adapted from Kemmis & Taggart, 1982) can be applied as a general tool in teacher education. The AR cycle represents a continuous process whereby existing knowledge is combined with actions that can either '... contribute to, or be derived from, such knowledge' (Townsend, 2010, p.131). This formula was thought to be well suited to in-service CLIL teachers in Catalonia since they tend to be highly experienced and motivated teachers fully able to plan effective subject lessons in their L1. More often than not, however, teaching in a foreign language after only a short theoretical introduction to CLIL constitutes a considerable challenge to them. Nonetheless, once engaged in the AR process of planning, acting, observing, reflecting and if necessary modifying the original plan, under the guidance of an action researcher, teachers find that achieving solutions to complex problems of practice seems much less daunting.

The Action Research project to support CLIL teachers' professional learning

The goal of the AR project was to provide primary and secondary school teachers with the evidence-based and inquiry-based knowledge necessary to successfully negotiate CLIL lessons at their schools. Lasting over the 2014-2015 and 2015-2016 school years, the project followed a five-stage process adapted from Elliot (1991) and consisting of a preliminary preparation stage, a reconnaissance and revision stage, two fieldwork cycles and a focused research stage (see figure 3).

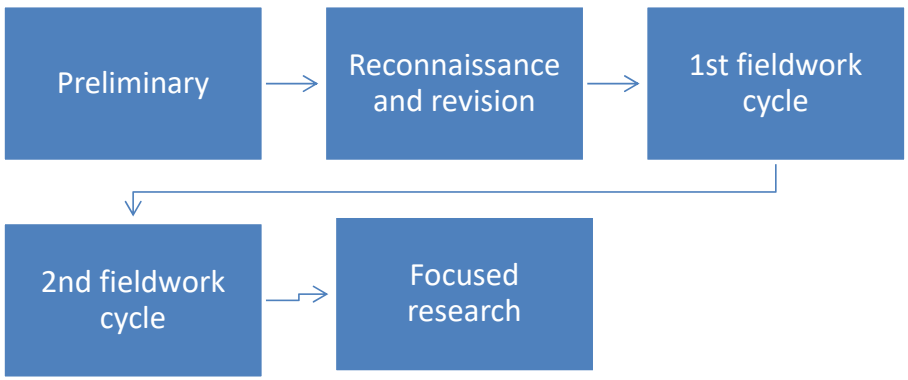

Figure 3. The five-stage process of the AR project

- In the preliminary stage, participating teachers attended a 30-hour summer course which introduced them to the basic principles of integrating content and language teaching in the classroom.
- The reconnaissance and revision stage was intended to make teachers conscious of the gaps in their knowledge about and understanding of CLIL, and to help them take responsibility for their own learning process in a collective fashion. This stage took place concurrently with the summer course.
- A first period of fieldwork focused on task design, oral interaction and language scaffolding. Participants met with teacher educators and fellow participants either face-to-face or online. In this case, the role of the educators focused more on the diagnosis of problems that individual teachers had encountered and helping them find the most appropriate solution for their particular teaching context (Imbernón, 2009).
- A second period of fieldwork focused on analysing the success or failure of the classroom tasks implemented in the first fieldwork cycle, revising them accordingly, re-implementing them and carrying out classroom observations (Coral & Lleixà, 2014, 2016).

- Finally, in the specific focused research stage, participants carried out a formal investigation of two issues that had arisen in the course of the fieldwork cycles, with the ultimate goal of publishing their results and thus contributing to the body of CLIL research.

The preliminary stage: the summer course

This stage consisted of a 30-hour summer course[2], with 25 of the hours devoted to lectures and practical activities held face-to-face and the remaining five involving distance learning. This module was one of the many professional development courses offered by the Catalan government's Department of Education and was thus open to any teacher in the public system. It was intended to provide participants with the basic notions of CLIL and information about how it can be practically applied in theory to any school subject in the context of a competence-based curriculum, although in this case it focused on CLIL for physical education (PE) classes by way of example. Though it was therefore of primary interest to PE teachers, it also gave guidance to teachers of other subjects such as music and even English on how to incorporate physical activities into their class in accordance with CLIL principles, the assumption being that the skills thus learned would allow content teachers to develop tailored CLIL activities appropriate to their own specific needs.

Once all participating teachers had been enrolled in the module programme, and before the summer coursework proper started, they were organised into groups such that each group had as heterogeneous a mix as possible in terms of level of English, educational stage (primary or secondary), gender and previous knowledge of or experience in CLIL. This was done in order to allow participants to experience for themselves the value of cross-curricular cooperation and how working with a diversity of skills and skill levels—a likely feature of their own future CLIL classrooms—can yield a more enriching and effective learning environment.

The first part of the summer course focused on introducing CLIL approach (Escobar Urmeneta, 2011) and exemplifying the cross-curricular relationships among the 4Cs framework, key competences and learning outcomes. Figure 4 illustrates relationships between the 4Cs and competences specifically related to PE classes.

[2] A total of 20 teachers enrolled in this summer course, and for various reasons only 13 were prepared to make a commitment to the full two years of the AR process.

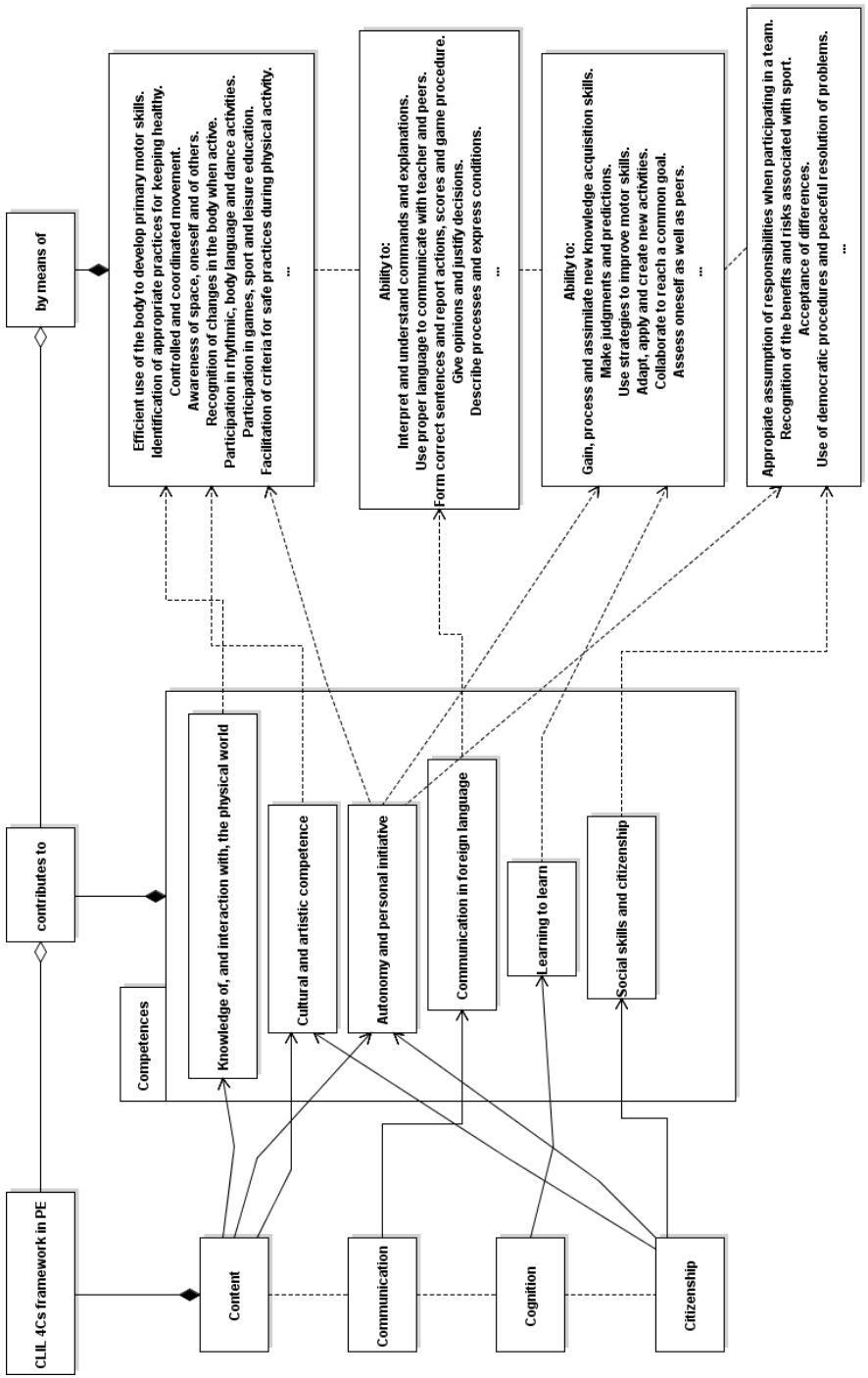

Figure 4. How the relationships between the 4Cs and Key Competences manifest themselves in skills and competences specifically related to PE classes

By emphasizing that the 4Cs framework is just another way to mobilise 'practical skills, knowledge, motivation, ethical values, attitudes, emotions and other social components and behaviour' (Lleixà, González-Arévalo & Braz-Vieira, 2016), this approach showed teachers how teaching methods need to be grounded in the 4Cs and directed towards enhancing key competences in order to yield effective learning outcomes (Coral, J., Lleixà, T., & Ventura, C., 2016). Above all, it emphasised the importance of applying the principles of learning by doing when teaching in CLIL.

Of the 4Cs, Content and Communication, clearly form the twin centrepiece in CLIL. Communication in CLIL contexts is described as learning to use language and using language to learn (Coyle et al., 2010) and is divided into *language of* (vocabulary and structures), *language for* (basic language functions such as asking & answering, explaining, giving reasons, etc.) and *language through* (the language needed to engage learners cognitively and solve unplanned situations). As the Content is always the dominant element in terms of curricular objectives, the sort of language needed for any particular CLIL class is dependent on the subject matter of the class, a situation best served by close cooperation between language and content teachers, as recommended by Snow et al. (1989). Cognition refers to thinking skills, which, in Bloom's taxonomy, can be broken down into Lower Order Thinking Skills (LOTS) and Higher Order Thinking Skills (HOTS). It is also linked to "learning to learn" competence through the use of cooperative learning and problem-solving strategies as well as formative assessment. Finally, Citizenship develops cultural awareness, intercultural understanding and global citizenship (Coyle et al., 2010), although we link it more broadly to the key competences of cultural and artistic competence, autonomy and personal initiative, and social skills.

The second part of the summer course introduced teachers to the use of cooperative learning strategies in CLIL settings, showed them how to prepare supportive language scaffolding and ensured their familiarity with CLIL teaching performance indicators (de Graaff, Koopman, Anikina & Westhoff, 2007). By the end of the course participants have reflected on and were able to articulate a rationale for the teaching of PE or another specialised subject through a CLIL approach within a competence-based curriculum. They had also learned about task design (Meyer, 2010; Coyle et al., 2010; Coral, 2013) and had opportunities to put these concepts into practice through peer teaching activities. In order to support their own English speaking skills and awareness, teachers had also been given the opportunity to practise in real contexts with some language teaching techniques such as pre-teaching, paraphrasing and reformulating.

Finally, the distance learning segment of the summer course was composed of two compulsory readings (Coral, 2013; Dyson & Grineski, 2013) and a document

with expressions for discussion and debate was provided to support their oral skills and help them to improve their fluency. Moreover, each participant designed a CLIL task and then, through a cross-procedure system, the members of each group evaluated each other's tasks.

The reconnaissance and revision stage

This stage was carried out concurrently with the summer course by having each participating teacher continuously reflect on their learning process. On the first day of the summer course, each teacher identified the knowledge about CLIL theory and practice with which they had come into the course as well as the knowledge that they felt they lacked. Thereafter, on a daily basis, each group summarised those knowledge gaps that had been filled in the course of that session and those knowledge gaps that remained to be addressed. By following this procedure, the participants had the chance to reflect on their learning process. Finally, on the last day of the course, participants identified the aspects they wanted to work on in the next stage, to wit:

- the design of tasks that would facilitate oral interaction in CLIL settings.
- the type of language scaffolding that would be needed to implement those tasks.

The first fieldwork cycle

This stage —which constituted the heart of this inquiry-based in-service professional learning model for CLIL teachers —was carried out with the support of the Specific Educational Resource Centre for Innovation and Educational Research[3] (henceforth CESIRE), a unit of the Catalan government's Department of Education created in 2014. CESIRE includes several professional teams of primary and secondary school teachers that were previously distributed throughout the Catalan community in different units organized according to curricular disciplines. One of CESIRE's aims is to keep abreast of research in teaching and education from schools, universities and other institutions so that the results can be promoted and adapted to meet teachers' needs. Thus, because the training programme's fieldwork cycles were led by CLIL experts from both CESIRE and Autonomous University of Barcelona, the fieldwork itself was fully informed by the latest CLIL research.

[3] http://xtec.gencat.cat/ca/innovacio/cesire/

The specific interests of the participating teachers having been identified at the conclusion of the reconnaissance and revision stage as described above, an AR group was formed under the title 'Action Research as professional development: teaching Physical Education and motor activities in CLIL contexts'. It was made up of a university educator and researcher, a CESIRE educator and the 13 teachers who had volunteered to participate: nine PE teachers of primary and secondary education, three primary teachers of English and one primary teacher of music. Upon completing the full programme, they would each receive formal certification from CESIRE for having completed 40 hours of training. It was agreed among the participants that English would be the language of communication, since this would not only give them opportunities to develop their own English communication skills but give them an idea of what a CLIL classroom felt like from the students' perspective.

The first fieldwork cycle took place during the first term of 2014-2015 school year. In its first face-to-face meeting, the full AR group discussed the procedure that would be followed during the first fieldwork cycle and came to an agreement regarding how they would prepare, carry out and fully document the process. It was decided to begin by focusing on the following specific question:

- In motor game settings[4], how can student oracy be improved while teachers are checking comprehension of motor activities, speaking in English and performing the same motor actions as they would be in a L1 classroom context?

In addition, in accordance with the specific needs identified by teachers in the reconnaissance and revision stage, three objectives were set:

- To design tasks that facilitate oral interaction in motor games in a CLIL context.
- To check that in such tasks comprehension is achieved and motor actions are developed similarly to what one would expect in a L1 context.
- To analyse the type of language scaffolding that is needed in order to facilitate the achievement of goals 1 and 2.

The teachers then informed their school boards that they were participating in this AR research group and received full permission to video-record tasks and pupils in their classrooms. Each teacher then decided which one of his or her groups of pupils would serve as the context for their trying out ideas and conducting research. The next step was for each teacher to design a task or set of tasks based on motor games/actions that would be new for the group that they had chosen along with the necessary learning scaffolding. They also selected three students from the target group according the following criteria:

[4] It refers to activities, tasks and teaching proposals that involve or include physical games.

- One pupil whom they knew to have excellent motor skills but severe difficulties in using English.
- One pupil with excellent motor skills and mild difficulties in using English.
- One pupil with a very good command of English, independent of their motor skills.

Teachers then carried out the task or tasks they had designed, with the entire session video-recorded. When the lesson was finished, they interviewed the three focus students in their L1 (Catalan) and audio-recorded the interviews. The questions that they posed to the three students were:

1. What is your opinion about the activity you have just done?
2. What were the most important physical skills involved in the activity?
3. In your opinion, did you perform them properly?
4. What were the key words and the most important sentences used during the activity?
5. In your opinion, did you employ them properly?
6. How could the activity be improved?

Teachers transcribed the interviews within a period of 24 hours and added a description of the pupils selected including gender, age, personality, school achievements, and attitude to PE. Then they wrote their reflections as a diary entry following these guidelines:

- The date
- The location and socio-economic-cultural context of the school.
- Number of pupils in their target class, their level in the school system and their ages.
- Facilities/environment where the task/s were carried out.
- Title and aim of the task.
- A description of what transpired as the tasks were carried.
- Difficulties the teacher encountered in connection with the motor contents of the task.
- Difficulties the teacher encountered in connection with the language contents of the task.
- Procedural difficulties the teacher encountered.
- Perceived strengths and weaknesses of the task/s.
- Proposals for improving the task/s.
- Further comments.

During the first term of the 2014-2015 school year, teachers designed, applied and recorded their CLIL tasks in this fashion. They then shared their diary

entries with fellow participants and educators by means of online folders using the Moodle forum platform provided by CESIRE. Teachers also posted the files of their classroom video-recordings in a shared Google Drive folder.

The first fieldwork cycle concluded with a reflection process conducted through groups (Wibeck, Dahlgreen & Öberg, 2007) and a presentation of their respective video recordings of tasks. To make the reflection process less unwieldy, the main group was split into two and a CLIL expert acting as a moderator was assigned to each one. Group discussions were also audio-recorded and then analysed separately, in a cross-procedure system, without any exchange of information between analysts.

Figure 5 relates to the template that was provided in order to guide the analysis and give it a cohesive framework.

Date:	**Main ideas**	
Category 1: **The teaching of PE through CLIL**	1:	
	2:	
	3:	
Category 2: **How can oracy be improved?**	1:	
	2:	
	3:	
Identify the main key words, i.e., the words or concepts repeated most frequently in the discussion		
Key words		How many times did the word appear in the transcription?
1:		
2:		
3:		

Figure 5. Template to guide analysis of the group discussion

Additionally, the following questions were posed to collect concrete information. The goal here was to identify changes in teachers' beliefs and gather clues to guide the second AR cycle.

- How do your fellow teachers' opinions about teaching PE through English seem to have changed?
- What comments did they make about the differences between teaching PE in L1 and teaching it in a foreign language?

- What inherent strengths and weaknesses of PE-in-CLIL teaching did they identify?
- Regarding more specifically oracy in PE-in-CLIL, did they identify the strengths and weaknesses of this approach?
- According to their opinions, how can oracy be improved in PE-in-CLIL settings?

To complete the transcriptions, the analysis and answer the questions extra time was required so teachers agreed to finish it at home and post the results in the Moodle platform.

The second fieldwork cycle

Once the weaknesses and strengths of the tasks had been identified in this collective fashion, it was agreed that the necessary changes should be applied to the design of the tasks in question and the tasks implemented a second time in their improved form. Teachers would use their reflections, the feedback they had received and the conclusions of their group discussions to introduce changes in the activities they had designed. Having thus revised the lesson plan involving the activity and modified the scaffolding as necessary, each teacher then applied the revised activity to the target group again and to another group as well. Teachers were asked to once again video-record the new task as it was implemented in these two classes and to write up their reflections as a diary entry including the following information:

- The number of the version of the task (v2, v3, etc)
- A description of all the changes that have been introduced.
- A description of what transpired as the modified task was carried out.
- An assessment of how successful the revised version was at overcoming the problems identified in the original version of the task.
- An identification of any new problems arising in the revised version of the activity.
- An overall conclusion.

At the end of the second fieldwork cycle, which took two terms of the 2014-2015 school year, a second group evaluation process was carried out although this time organised in three focus groups, separated by subject content or level whereby the three English teachers and one music teacher formed one group, the primary school PE teachers formed another and the secondary school PE teachers formed the third. Each group discussed questions related to the learning process they had undergone, to wit:

- The knowledge that they had already before participating in the programme.
- The gaps in their knowledge prior to starting.
- The knowledge gaps that they felt had been successfully filled in the course of the AR process.
- The knowledge gaps that they felt still had not been filled by the process.
- The things that helped them to fill those gaps.
- The things that had not helped them to fill those gaps.

Each group then prepared a short summary of the main points made during the group discussion. This was intended to help the educators identify the issues that remained to be covered, whether by means of self-study materials, a complementary formal course or through the research that the participants would carry out themselves in the fifth stage of the AR process.

PARTICIPANTS' KNOWLEDGE ABOUT CLIL PRIOR TO PARTICIPATION IN THE AR PROJECT		
ENGLISH AND MUSIC TEACHERS	PRIMARY PE TEACHERS	SECONDARY PE TEACHERS
'To be honest, we did not have a strong and solid knowledge about this matter.' 'At first, we felt a bit insecure because our main objective was to enrol in this research group in order to learn.' 'The only knowledge we can refer to is our experience teaching at schools.'	'We all had done the summer course about PE in CLIL. So we had some previous knowledge about it.' 'We had more prior information about PE activities than English language activities so we had to focus our efforts on the linguistic aspects.'	'We did not have any experience in applying the CLIL approach in PE context.' 'We had only experienced this approach in some courses offered by the Department of Education.'

Table 1. Excerpts from summaries of the focus group discussions related to participants' knowledge about CLIL prior to participation in the AR project

The feedback provided by these summaries showed that the knowledge about CLIL that the participants had brought with them to the programme was indeed slim, confirming that the summer course had provided them with the basic concepts of the CLIL approach but was not really long enough to give them the confidence necessary to actually carry out the CLIL approach in their classrooms. In general, however, the feedback also showed that despite their

lack of experience participating teachers were highly motivated and had enrolled in the AR group expecting to learn more in this inquiry-based approach.

GAPS IN PARTICIPANTS' CLIL-RELATED KNOWLEDGE PRIOR TO THEIR IN THE PROJECT		
ENGLISH AND MUSIC TEACHERS	PRIMARY PE TEACHERS	SECONDARY PE TEACHERS
'We had a lot of questions about, for instance, how to put into practice these physical games in our speciality. For some of us, this has been the first time ever to carry out a PE activity through oral communication in English.'	'We did not know how to link language content with motor content and how to make pupils speak in English.' 'We did not know how to relate PE and linguistic content. We lacked knowledge about the steps to introduce English language progressively in PE lessons.'	'We were not sure how difficult the tasks should be given the English level of the target students.' 'We did not know how to create understandable and useful scaffolding for the students to improve their English communicative skills.' 'We were unsure about how to apply the task/s in a PE class taking into account the CLIL approach.' 'We had questions about how long the task/s proposed to the students should last.' 'We did not know how to create an evaluable worksheet and the impact (positive and negative) that it may have among the students.' 'We did not know how to balance the Linguistic and Motor contents in the assessment of the PE subject.'

Table 2. Excerpts of summaries of the focus group discussions related to gaps in participants' CLIL-related knowledge prior to their in the project

Teachers reported having had two big gaps in what they wanted to know when they started the AR process. The first gap, which was reported by English and music teachers, involved knowing how to include physical games in their regular lessons. To address this particular need, educators provided them with an article by Tomlinson and Masuhara (2010) which describes concrete methods for solving their doubts. Note was also made to cover this topic more thoroughly in future versions of the summer course. The second gap, reported by both primary and secondary PE teachers, revolved around the practicalities of not only designing and programing CLIL tasks but also measuring their effectiveness. It was from these reflections that the idea first emerged of creating a tool to guide the design of effective CLIL tasks.

GAPS IN PARTICIPANTS' KNOWLEDGE THAT HAD BEEN FILLED IN THE COURSE OF THE AR PROJECT.		
ENGLISH AND MUSIC TEACHERS	PRIMARY PE TEACHERS	SECONDARY PE TEACHERS
'We have learned how to choose the activity/game which creates a balance between motor skills and language skills. Also, We have also learned how to adjust the activity appropriately to the students' level of language and how to motivate students to communicate in English.'	'We have learned how to find the correct balance between linguistic and motor content.'	'We have learned how to get students to communicate among themselves and with the teacher in English, no matter their level.' 'We have learned how a PE teacher can make him or herself understood by students during the class.' 'We have learned how a PE teacher can communicate in English to students that off-task behaviour is not acceptable so that the student clearly gets the information.' 'We have learned how to find reliable resources to prepare CLIL tasks although we have also realised how long it can take a teacher to prepare CLIL material.'

Table 3. Excerpts from summaries of the focus group discussions related to gaps in participants' knowledge that had been filled in the course of the AR project

As can be seen in some of the summary extracts in table 3 regarding whether the AR project had filled these gaps or not, it is clear that the process was largely successful with regard to issues such as how to teach physical games and PE activities in English, that is, how to find the proper balance between linguistic and motor content, how to adapt the teachers' discourse to the level of the students and how to motivate pupils to use English in game settings. Though teachers reported success in designing tasks, however, they pointed out that this required considerable time, thus confirming again the need to develop a tool to facilitate the designing of CLIL tasks.

GAPS IN PARTICIPANTS'S KNOWLEDGE ABOUT CLIL THAT THE AR PROJECT LEFT UNFILLED		
ENGLISH AND MUSIC TEACHERS	PRIMARY PE TEACHERS	SECONDARY PE TEACHERS
'The most difficult thing to manage is making pupils communicate in English. Combining both oral communication and PE contents is, from our point of view, a difficult goal to achieve.'	'We still do not know exactly what the best sentences are to work with and what activities are most suitable to improve pupil's English skills. We are still working with a trial and error methodology.' 'We still do not know how to determine, in advance, the English level of the pupils.' 'Sometimes it is difficult to include all the language that is required without slowing the pace of the game.'	'We still do not know exactly how to a good use of the English in the PE class, when the students are playing as if it was their mother tongue.' 'Pupils do not seem to be clear about how to communicate with the teacher and classmates in English as if it was normal and natural.' 'We still are not sure how to create a task that fits into the time that you have planned for it.' 'We still do not know how to include the language without jeopardising the amount of real time spent on physical activity.'

Table 4. Excerpts from summaries of the focus group discussions related to gaps in participants's knowledge about CLIL that the AR project left unfilled

Regarding the gaps which the project failed to fill, the feedback from participants suggests that more language teaching techniques (e.g. paraphrasing or reformulating) should be included in in-service CLIL teachers' education (when they are not English teachers too) to help them to promote oracy efficiently in physical activities. Although such techniques can be learnt in specific language training courses, experience has demonstrated that in order for CLIL teachers to master them they must be put into practice in subject-oriented activities. It is also confirmed that more collaboration between English and content teachers is needed to know pupils' level in advance and to reach an agreement on which language structures can be used in tandem. Additionally, unlike English and music teachers, PE specialists wondered if the inclusion of a foreign language in their subject might not have the undesirable effect of reducing the amount of physical activity in their lessons. This is a point to be considered since compulsory PE in

primary and secondary school is the only way to guarantee that regular physical activity is performed in childhood and adolescence. And not surprisingly, the official state curriculum also mandates that all PE classes must provide healthy physical activity. So the point raised by teachers was not a trivial one and suggested the need for formal research in this area.

HOW THE AR PROCESS HELPED PARTICIPANTS TO APPLY CLIL EFFECTIVELY IN THEIR CLASSES		
ENGLISH AND MUSIC TEACHERS	PRIMARY PE TEACHERS	SECONDARY PE TEACHERS
'Planning the lesson while thinking about the creation of the scaffolding was very helpful because we had to think about a content session through English language.' 'It was very useful to share our experiences with our fellow teachers.' 'The feedback provided by our students was extremely useful.' 'The process of designing the task, carrying it out, getting feedback from the students, sharing the experience in the meetings, reading the diaries of our peers and then repeating the task again with changes—all this has enriched us a lot.'	'The template was really helpful to structure our mind and then design the task.' 'The process helped us to focus our attention on important aspects of the planned activity.' 'The process helped us understand how to adapt the language content to the children's level and try to simplify it.' 'Good advice: few rules make the activities easier and more attractive.' 'It was very helpful to make video recordings of pupils carrying out the tasks we had designed.'	'It was very useful to reflect on and assess the effectiveness of the PE class after applying CLIL approach.' 'The process helped us in the creation of useful and understandable scaffolding for the students so that they could follow the PE class in English.' 'The interviews that we carried out with the students greatly helped us to improve our work.' 'Recording the activity to assess our way of teaching in English was very useful.' 'It was very helpful to keep a diary where we wrote down everything that happened before, during and after the execution of the class.' 'Modifying the initial design of our classroom task and then implementing it in class again with improvements was a great way to learn.'

Table 5. Excerpts from summaries of the focus group discussions related to how the AR process helped participants to apply CLIL effectively in their classes

With regard to how participants felt the AR process had helped them apply CLIL effectively, participants emphasised the utility of trying out an activity in class, then revising it and applying it again (in other words, stages three and four of the AR process).They also placed a high value on using written and recorded documentation as the basis for reflection, because it allowed them to learn from their own practice and improve their teaching. These findings reinforce the need to include this type of inquiry-based professional learning in CLIL teacher education.

WAYS IN WHICH THE AR PROCESS FAILED TO HELP PARTICIPANTS APPLY CLIL EFFECTIVELY IN THEIR CLASSES		
ENGLISH AND MUSIC TEACHERS	PRIMARY PE TEACHERS	SECONDARY PE TEACHERS
'Our lack of experience in including physical games in our lessons was a problem.' 'We found it very difficult to combine motor skills and oral communication skills.'	'We had considerable difficulty transcribing the first group discussion recordings because we were not familiar with such procedures.'	'We were negatively affected by the lack of English publications regarding applying a CLIL approach in PE classes.' 'We suffered from a lack of collaboration from our English department colleagues.' 'We faced difficulties related to PE vocabulary in English because of its specificity.' 'It was a challenge to find the proper balance between linguistic content and motor content to make the activity interesting and motivating for the students.'

Table 6. Excerpts from summaries of the focus group discussions on ways in which the AR process failed to help participants apply CLIL effectively in their classes

When it came to the features of the AR process that participants felt did not help them apply CLIL in the classroom, differences emerged among the three groups. Although lack of experience is obviously something that can only be remedied by doing, it is understandable that English and music teachers experienced more difficulties in applying physical games than PE teachers. As for transcribing the group discussion recordings, the feedback from the primary PE teachers suggests that perhaps a bit of previous training should have been

included in the programme. However, it was the secondary PE teachers that seem to have encountered most difficulties. First, with regard to pre-existing validated PE-in-CLIL materials, while such materials are available and have been published for primary level teachers (Coral, 2013a, 2013b), at present secondary level teachers have only a few on-line materials at their disposal[5]. Additionally, the feedback from participants suggests that more specific language resources (e.g. websites links, glossaries) should be included in the summer course and in the first field work cycle. Second, the structure of secondary schools tends not to facilitate collaboration among departments, unlike what is generally the case in primary schools, where teachers are more accustomed to working together despite having different areas of specialisation. By the same token, secondary teachers seem to have more trouble motivating pupils than primary teachers. This is consistent with research by Cecchini, Méndez and Contreras (2005), who reported that interest in physical activity tends to diminish in teenagers, some of whom even give up sport altogether. They recommend making activities as participatory and enjoyable as possible. Additionally, if teenagers can be made to understand the value to them of a task, teachers will have less difficulty motivating them to do it. Letting them participate in the decision-making process, explaining to them the value that using a foreign language will add to the activity and presenting an assessment system that rewards the use of English in their PE lessons are examples of things that can increase teenagers' motivation in CLIL settings.

The focused research stage

This stage was to carry out specific research focused on two of the important issues that had arisen in the second fieldwork cycle: a) the need for an easy-to-use tool to evaluate CLIL tasks and b) the need to explore in depth whether the teaching of PE in CLIL approach necessarily implies a reduction in the amount of class time devoted to physical activity in comparison with a PE class taught in the pupils' native language.

To pursue these separate tracks, participants joined one of two research teams. One of them was composed of primary teachers of English, PE and music while the other consisted of secondary PE teachers. Each research team was supported by an educational researcher and CLIL expert. The goal of the study carried out by primary teachers was to design and validate a user-friendly tool to evaluate CLIL tasks for teachers as well as CLIL teacher educators. In particular, the study explored three research questions:

[5] http://srvcnpbs.xtec.cat/cirel/cirel/index.php?option=com_content&view=article&id=181&Itemid=212

- What variables and indicators can be used to evaluate the effectiveness of CLIL tasks?
- Of the various common validation procedures available, which one is most appropriate in the context of this study?
- Once applied, does the proposed validation procedure confirm the reliability and validity of the CLIL task-evaluation tool presented here?

First, a preliminary version of the CLIL task-evaluation tool was created based on the collective experiences of participants and the expertise of the advising CLIL expert. The team then conducted a data base search, which revealed that a validated version of such instrument had not been yet published. Next, after reviewing the existing literature, a process was devised which was intended to ensure the reliability and validity of the tool. This process involved having five judges (experienced CLIL practitioners) independently apply the tool to the same CLIL tasks to check its content validity. Next, a further pilot testing of the tool by 20 trained CLIL teachers on 30 CLIL tasks confirmed its internal consistency as an instrument of measurement. All the procedures were confirmed using statistical procedures and the results obtained—to be published shortly (Coral, Benito & Esquerda, forthcoming)—suggested that the new tool was fully valid to evaluate CLIL tasks.

Regarding the second research question about the impact of CLIL on physical activity time in PE classes, at present work is not yet complete. Team members are using observational methodology to analyse video recorded lessons to later compare with the results of existing studies regarding activity versus inactivity times in PE classes taught in the pupils' L1. Results thus far seem to suggest that such a reduction in physical activity time does indeed occur in some PE-in-CLIL classes, caused either by lengthier explanations/examples given by teachers when they use a foreign language or by the need for extra language scaffolding. Once final results are available, the team should be able to make recommendations regarding how to compensate for the shortfall in physical activity time by allocating greater time to these classes, or possibly by making adjustments in the methodology applied by PE-in-CLIL teachers.

Conclusions

This case study has illustrated how a collaborative AR project might lay the foundations of a five-stage inquiry-based professional learning process where teachers evolve from being receptors of information in a formal course to practitioner researchers who are able not only to improve their own practice

Figure 6. Process followed during AR-based in-service CLIL professional learning

but also to add to the body of theoretical knowledge. The process followed through AR establishes a model of in-service CLIL professional learning where teachers transform theory into practice, and then use that practice to enrich theory (Figure 6). In this case, participants applied the 4Cs theoretical concept by designing CLIL tasks adapted to the competence-based curriculum while incorporating the appropriate language scaffolding. Teachers also 'enhanced the quality of their own teaching' (Zwozdiak-Myers, 2012, p. 145), by first applying the tasks they had designed in real classroom contexts then reflecting on their teaching practice and sharing their conclusions with their peer group and finally creating a new version of the task. During the process teachers also resolved 'the theory-practice problem by theorising from the standpoint of the agent in a situation they feel to be unsatisfactory' (Elliot, 2007, p. 212), learnt different research methods for the pragmatic purpose of validating the findings that had emerged from their practice, and in so doing enriched CLIL theory. We strongly believe that CLIL inquiry-based teachers' professional learning programmes promoted by the educational authorities are vital to the success of CLIL evidence-based teaching. During the process teachers experience different ways to enhance their knowledge—through both traditional teacher training and advanced research—while improving their own classroom practices, thus enabling them to gain strength from their own personal learning journey. By participating in an AR professional learning approach, teachers were also able to make the changes they needed while at the same time giving legitimacy to these actions through extended research. We believe that this framework should be instituted on a regular

basis since it makes an important contribution to the continuing development of CLIL professional learning approaches where teachers, researchers and administrations work together towards a common goal of educational success.

Acknowledgements

The authors acknowledge the collaboration of the teachers that participated in the AR project and the support provided by the Specific Educational Resource Centre for Innovation and Educational Research (CESIRE), a unit of the Catalan government's Department of Education, the research group 'Social and Educational Research in Physical Education and Sport Group' (GISEAFE) ref. 2014 SGR 1240 and the research group 'Language and Education' (LED) Ref. 2014 SGR 1190.

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Epilogue: Curriculum Development Through Professional Inquiry

This text has brought together international teacher educators as authors and as practitioners who demonstrate a commitment to learning through professional inquiry as a core practice of educators. They are building on the foundations of the 'teacher researcher' as an inquiry-based professional leading curriculum development in schools, which were laid by Lawrence Stenhouse and that have been refined over the last 40 years. The challenge remains however, in many national educational systems, for the scaling up of teacher professional inquiry to take its place as the core professional learning activity of educators and as a key driver for curriculum development and change of practice in schools.

A scaling up of professional inquiry as a driver for change in schools requires at least two elements which may be summarised as 'literacy and leadership'. Within the element of 'literacy' we include: building researcher identity and capacity of educators; developing a shared language of professional inquiry; and creating open access to research evidence in manageable formats for practitioners. Within the element of 'leadership' we include: developing collective forms of school leadership that demand critical professional inquiry by teachers; refining research audit, culture and focus of research activity in higher education institutions to more clearly value educational practitioner research as co-creation of knowledge; and for policy makers working at national level to focus on setting out principles and outcomes informed by the evidence base, whilst empowering teachers and other school leaders to develop research-informed practice in their schools.

To accept the challenge of scaling up teacher professional inquiry then it seems necessary to more explicitly engage with the literature on school leadership. There is a need to ask tough questions about collective forms of educational leadership that might be capable not only of tolerating professional inquiry but actually of embracing it as an engine for school improvement through curriculum development. We call for development of theory, empirical research and practice that identifies, investigates and improves 'collective inquiry-based educational leadership'.

Biodata

Fer Boei

Dr. Fer Boei is an educational psychologist who works as a senior researcher and teacher educator at the educational department of Windesheim University. Professionally, his main concern is how to incorporate practitioner research within the curriculum of teacher training institutes in a productive way and how teacher educators themselves are able and motivated to incorporate the demand of conducting research themselves into practice. This latter topic is also his main focus of research. Within his research both more design based approaches as well as empiric analytical approaches are used.

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Pete Boyd is Professor of Professional Learning at the University of Cumbria in England. He has a research capacity-building role, teaches undergraduate Education Studies, supervises educational research by teachers, and works with teacher researchers on collaborative projects. Pete has a particular interest in assessment for learning in school and in higher education. In another strand of his research Pete has focused on investigating the work, identity and expertise of academics and teachers including work on 'becoming a teacher educator'. His most recently published book, with co-authors Barry Hymer and Karen Lockney, is an advanced reader for beginning teachers.

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Leah Shagrir, is the head of the School for Continuing Education & Professional Development in Levinsky College of Education. Since 2011 she has served as Chair of the Research & Development Community for the professional development of teacher educators, within the Association of Teacher Education in Europe. For fifteen years Leah Shagrir has headed The MOFET Institute – a national intercollegiate centre for professional development of teacher educators. In 2009 she was awarded a Distinguished Fulbright Award in Teaching, to conduct research at Vanderbilt University, US. Her fields of expertise include: teacher education; teacher educators; professional and academic development in higher education; professional development of teacher educators; and higher education teaching.

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ISBN 978-83-65644-28-2