

21st Century European Teachers

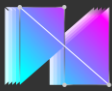
Case studies of the teacher educations
in the five partner countries



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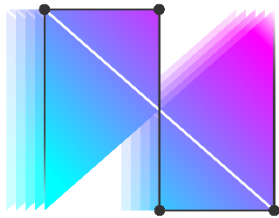
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INTRODUCTION

The 21st century European Teacher Project



The overall objective of the 21st Century European Teachers Project is to gain insight into how European teachers can approach and develop teaching in emerging subject matter areas that arise as a result of large complex upheavals affecting society, e.g., climate change and the ubiquitous digital development.

Learn more about and follow the project at: [21st Century EU Teachers](#)

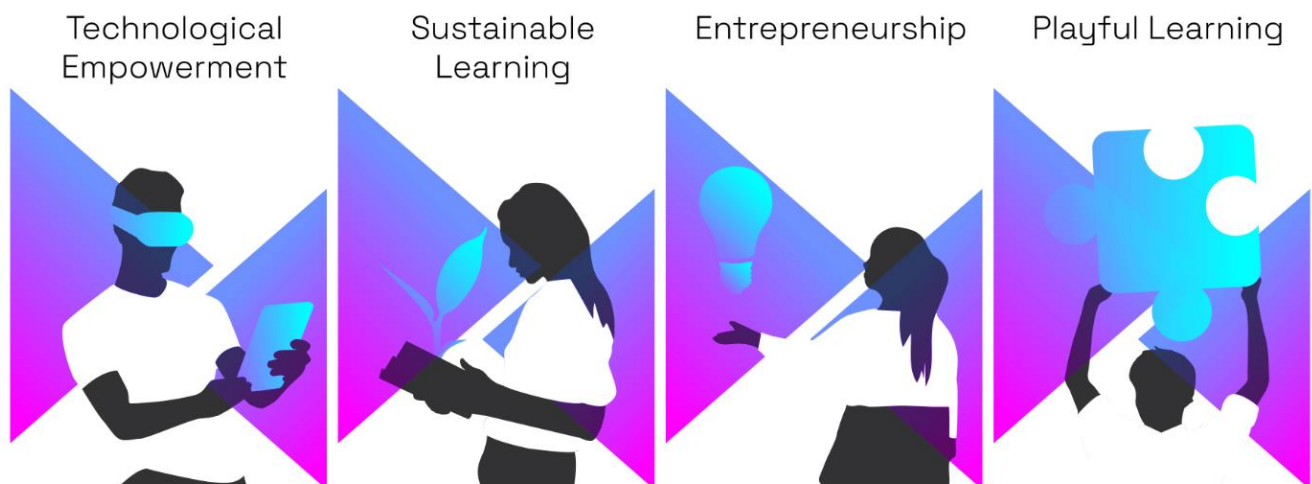


Figure 1 - The four emerging subject areas that the project addresses.

The first step in achieving this ambitious goal is to lay the groundwork for a common understanding of the participating countries' school systems, teacher education, further education options, and teacher training needs within the four subject areas. This includes the options for pre- and in-service teachers to engage in mobility to learn from practices in other countries

The research methodology enacted for this purpose is highly participatory, enabling different educational actors from five European countries – Denmark, Finland, Italy, Romania and Spain – to express their views and reflections, and to showcase academic and professional practices in relation with the four central themes of the project,

concurrently supporting the articulation of initial teacher education and continuous professional development (CPD) in the respective educational contexts.

The brief introduction of the national contexts for teacher education and training in the five countries is followed by a short narrative presentation of the data collected through a two-step qualitative inquiry: one focus group per country conducted by national teams (with teachers, teacher educators and trainers, and educational managers as participants), and one international study visit (which included classroom observations and informal talks with teachers and students, and a co-organized academic event for prospective teachers). The case studies included in the e-book outline in a friendly manner the main coordinates of teacher education and training in the five national contexts, as well as the main findings of the qualitative inquiry on technological empowerment, sustainable learning, entrepreneurship, playful learning and the role of international mobility in supporting teachers' professional development. The full report will be released in February 2025, based on the mixed-method research study in progress.

CASE STUDY – DENMARK

The Danish School System

In Denmark, children begin their formal education at the age of six. The Danish primary and lower secondary school system, known as "Folkeskolen," covers the first ten years of education and is mandatory for all children. Folkeskolen consists of grades 0 to 9, with the option of an additional year in 10th grade, which some students choose to enhance their skills and clarify their future educational choices. In Denmark, students can also choose to spend a year at an "efterskole," which is a boarding school that typically focuses on creativity, sports, and music.

The purpose of the Danish school system is to promote students' academic and personal development, make them active and responsible citizens, and prepare them for further education.

The primary and lower secondary school, "Folkeskolen," is structured with a broad and varied curriculum aimed at providing students with a solid foundation of knowledge and developing their personal and social skills. Students begin in 0th grade or what is called kindergarten, where they start with basic skills in language, mathematics, science, music, and physical education.

As students grow older, they are introduced to a wide range of subjects such as science/technology, English, history, social studies, physical education, music, and visual arts. In the upper grades, subjects like physics/chemistry, biology, and geography are added to the curriculum.

The Danish Folkeskole
10 th grade – not mandatory
9 th grade
8 th grade
7 th grade
6 th grade
5 th grade
4 th grade
3 rd grade
2 nd grade
1 st grade
0 grade

Figure 2 - The primary and lower secondary school in Denmark

Teaching in the primary and lower secondary school is organized based on "Fælles Mål" (Common Goals). Fælles Mål consists of a set of mandatory objectives outlining what students should be able to achieve in various subjects at different grade levels in the primary and lower secondary school. Municipalities, schools, and teachers are responsible for organizing the teaching. As a general rule, students are taught as a class and remain together throughout their primary and lower secondary education. However, students may be grouped into teams for some of the teaching time.

The primary and lower secondary school is an inclusive institution that works purposefully to create a learning environment where all students, regardless of their backgrounds and abilities, can thrive and learn. General education includes special initiatives and support for students with special needs, allowing them to fully participate in school activities. Therefore, only very few students are offered a place in a special school.

The Danish primary and lower secondary school focuses on students' active participation and involvement, which means that teaching emphasizes variation, differentiation, group work, and project-based learning, encouraging students to think critically and creatively. Teachers often work in teams and collaborate closely with each other to create an inclusive and community-building learning environment.

Evaluation of students occurs continuously throughout their schooling. At the end of 9th grade, students conclude their primary and lower secondary education with the folkeskolen exit exams, which assess their skills in key subjects and prepare them for further education.

The primary and lower secondary school is considered a cornerstone of Danish society, where children and young people not only learn but also develop as whole individuals, ready to contribute to society and their own lives in meaningful ways. Finally, it is worth noting that education in Denmark is free, allowing all children and young people to receive an education without financial barriers.

The Danish Teacher Education

The Danish teacher education program is a comprehensive bachelor's degree programme that prepares future teachers to teach in primary and lower secondary schools (which in Danish is collectively referred to as "Folkeskolen") for students aged 6 to 16 years. The programme lasts four years, takes place at one of the six University Colleges, and combines theoretical instruction with practical experience. It is divided into various general subjects that all students are taught and subject-specific teaching areas such as Danish, mathematics, science, and foreign languages, that all students choose three of. The general subjects include pedagogy & general didactics, pedagogical psychology and life enlightenment.

Teacher Education Programme, Semester Structure 2023				
Subjects and Modules	1st Year	2nd Year	3rd Year	4st Year
Subject 1 (Danish/Mathematics/English)	25			
Subject 2		15	20	
Subject 2			15	20
Practicum	10	10	10	10
Pedagogy and General Didactics		10		
Pedagogy, Inclusion and Special Education	10			
Life Enlightenment	5		15	
Danish as a Second Language				5
Courses				5
Bachelor's Thesis				10
ECTS	60	60	60	60

Figure 3 - Structure of the Danish teacher education

A central component of the programme is the practicum, where students spend time at various schools during their studies to test their teaching skills and gain insights into everyday school life. This practice-oriented focus ensures that students have the opportunity to bridge theory and practice, developing their abilities in i.e. classroom management, lesson planning, and evaluation.

The Danish teacher education programme works with three tracks of progression as a way to work with coherence during the educational programme:

- A practical-pedagogical track that focuses on preparing students for classroom teaching and handling core teaching tasks.
- A professional development track that combines subject knowledge, didactic competence, and teaching skills to foster growth in both students and classes. The teacher aims to fulfil the school's purpose.
- A research and development track that requires continuous development of teaching theory and practice, contributing to colleagues and school growth. Teachers must acquire new skills, theoretical perspectives, and analyse data for ongoing improvement.

There is a strong tradition of integrating modern teaching methods and technology into the curriculum, preparing teachers to meet the evolving demands and needs of a dynamic educational system.

Continuing professional development for teachers in Denmark

In Denmark, there are several opportunities for further education and training for teachers who wish to broaden their professional horizons or specialize in a particular area. Here are some of the most common options:

- 1) **Pedagogical Diploma Program:** A diploma program in pedagogy or teaching is a popular choice for teachers looking to develop their pedagogical skills and gain new knowledge about teaching theory and practice.
- 2) **Master's Programs:** Several universities offer master's programs in the field of education, where teachers can specialize in topics such as didactics, pedagogy, special education, or leadership.
- 3) **Continuing Education at University Colleges:** University colleges also offer a range of continuing education options for teachers, including courses and programs in subject didactics, classroom management, inclusion, etc.
- 4) **Courses and Workshops:** There is a wide range of shorter courses and workshops available for teachers to participate in to improve their skills in specific areas, such as the use of technology in teaching, differentiated instruction, assessment, etc.
- 5) **Conferences and Seminars:** Teachers can attend professional conferences and seminars where they can gain new knowledge, network with other professionals, and exchange experiences.

These opportunities may vary depending on the teacher's professional background, interests, and needs. Continuing education activities for teachers are not mandatory, and they are not officially regulated. Often, schools, municipalities, or teachers themselves finance continuing education activities.

Teacher training needs according to 21st Century European Teacher Profile

Regarding the profile of the 21st century teacher, both the perspective of in-service and pre-service teachers highlight qualities such as: creativity, adaptability, empathy, technological competences, rethinking expertise and responsibility. In this context, the opinions inventoried within the 21st Century European Teachers Project come to contextualize the data and projections in this field: the perspective of the in-service teachers emphasizes aspects such as: selecting / understanding the technology and being able to use it in the right contexts, having technological competencies, understanding how technology works to help children navigate well and also to enhance the quality of teaching; in addition, pre-service teachers' perspective highlights the responsibility as a teacher to impart to the student the immense power of technology and the many consequences that can accompany it, signalling, at the same time, the insufficient information that the teachers have in the field of technology. Sustainability, on the other hand, is considered by pre-service and in-service teachers as "the most challenging concept to work with", involving learning about resources, about the fact that everything is in a cycle of development. The field of entrepreneurship is associated in the school space with coordinates such as: collaboration, group work, focusing on a project, valuing

the process, not just the result, anchoring in practice, usefulness in real life, associating theory with practical aspects, in order to fulfil a certain purpose. In the opinion of pre-service teachers to these elements is added the imagination and the freedom to create something, starting from given elements, referring also to examples like Lego or Mærsk. The idea of the need for entrepreneurship to be more integrated into the regular curriculum is also noted. The teachers' perspective on playful learning is nuanced, by reporting, on the one hand, the advantages of such an approach (playful character, creativity, learning through play, etc.) and, on the other hand, the challenges that such an approach implies: time and material resources to prepare the activity, class management, the “courage” to interpret a certain role etc.

In the current teacher education, the four subject areas are integrated into the subjects, meaning they are not subjects in themselves. However, it is pointed out that as digital technologies become increasingly prominent in schools and society, technology comprehension will become a subject both in schools and in teacher education.

Mobility

At the teacher education programme in Denmark, mobility opportunities enable students to gain international experience, enhancing their cultural understanding and broadening their teaching perspectives. At the teacher education program in Denmark, there are two different mobility options: studying a full semester abroad and/or undertaking a 6-week practicum period at a school abroad.

At the teacher education program in Aarhus, students can choose to spend a semester at a partner university in a foreign country during the 5th semester of their studies. They can select from a broad variety of destinations as long as their individual combination of courses can be satisfactorily matched at the receiving university. This experience allows them to learn new teaching methods, understand different educational systems, and develop language skills. Additionally, they have the opportunity to establish an international network and bring new ideas back to Denmark.

The practicum period at a school abroad is possible during the 6th semester. Students from Aarhus can choose from a broad variety of countries. For example, the teacher education program in Aarhus sends many students to Tanzania, where they encounter a school system very different from the Danish one. Aarhus also sends many students to destinations in the Nordic countries such as Norway, the Faroe Islands, and Greenland, where the school systems are more similar to the Danish, but the cultural context is still different. These experiences provide students with valuable insights into diverse teaching environments and cultures.

VIA University College offers: an International Class in Teacher Education for international students interested in acquiring relevant professional competences, studying new innovative teaching approaches in an international study environment and doing fieldwork in Danish Schools. Read more about the exchange here:

<https://en.via.dk/programmes/exchange/international-class-and-teacher-education>

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CASE STUDY – FINLAND

The Finnish School System

In Finland, a variety of teacher education programs address different levels of education, including early childhood education, primary school, and subject-specific teaching, reflecting the structure of the Finnish schooling system. Education in Finland begins with early childhood education, offering a holistic curriculum and teacher-led approach for children aged 10 months to 5 years old. The pre-primary years serve as a crucial transition phase between early childhood and basic education. Recent legislation (Kangas & Ukkonen-Mikkola, 2021) extended pre-primary education to two years for children aged 5 to 7. Finnish early childhood education is based on holistic pedagogical approach where education and care form Educare process and children spend their full days in ECE centers or pre-schools (Harju-Luukkainen, Garvis & Kangas, 2022). In early childhood education, teachers with bachelor's or master's degrees in early childhood education or socio-pedagogy oversee the learning of groups of 12-21 children, supported by two assistants with at least a college degree (Kangas & Ukkonen-Mikkola, 2021). The Finnish comprehensive school spans nine years and includes primary education (grades 1–6) and junior secondary education (grades 7–9). In primary schools, class teachers typically remain with the same group of students for multiple years. Some teachers specialize in the early learning phase (grades 1–2), while others focus on teaching the remaining four grades. Class sizes vary from 18 to 30 students. Junior secondary education follows a subject teacher model, with each class (25–30 students) assigned a mentor teacher. Both primary and junior secondary phases are part of a unified comprehensive school system with a shared curriculum.

In national core curriculum for basic education (NCCBE, 2014) and core curriculum for early childhood education (2022) are revised every 10 years. The core curriculum includes all main instructions for organizing schooling at local level.

Also, content and assessment for all subjects at all levels included in general. However, there is number of educational decisions must be made at local and school level. Thus, there might be differences for example in using teaching materials, teaching methods or teaching environments between localities. Teaching and learning transversal competencies are guided by core curriculum and included in every subject taught, also school are



Photo 1 - Elementary teacher is demonstrating to project partners how math can be taught with help of playful methodologies. (by Merike Kesler)

recommended to organize multidisciplinary learning modules twice a year. During those modules' teacher from different levels, different subjects and local actors working together to provide pupils meaningful learning events.

EDUCATION SYSTEM IN FINLAND

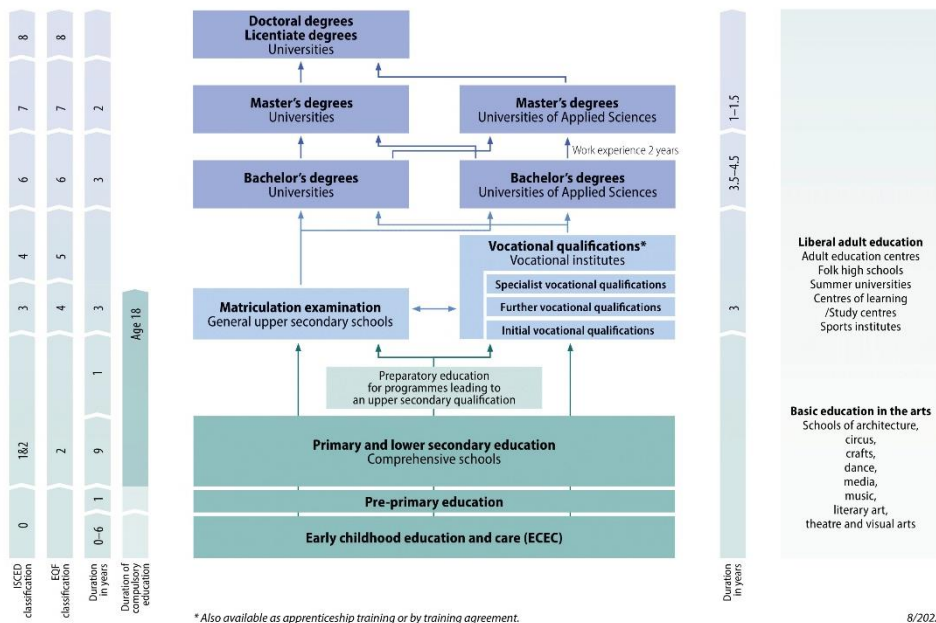


Figure 4 - Education system in Finland. (<https://okm.fi/en/education-system>)

The Finnish Teacher Education

Teacher education in Finland is conducted across 8 universities strategically located throughout the country, ensuring coverage across all geographical regions from south to north and from west to east. There are different ways to get teacher profession. In basic education most teachers' have a class teacher or subject teacher qualification. All teachers' must complete at least master's degree and studies have to include as minimum 60 ECTS credits of pedagogical studies (Jyrhämä, 2021). Class teachers complete master in pedagogy and subject teachers in some subject, etc. mother tongue, biology, or history. Most subject teachers are recommended to study additional subject to teach. Class teachers are prepared to teach all subjects taught at grades 1–6.

Teacher education in Finland places significant emphasis on pedagogical studies, concentrating on educational theory, teaching methodologies, and practical teaching exposure. This encompasses understanding child development, curriculum design, and assessment techniques. Finnish teacher education programs incorporate extensive practical training components, enabling students to acquire hands-on experience in authentic classroom environments. Pedagogical content knowledge is highly valued, and training is provided by subject departments. Teaching practicum is taking part in teacher training schools. Mentors in teacher training schools have additional speciality needed for mentoring teacher students. Practical training is seamlessly interwoven throughout the program to ensure that aspiring teachers are adequately prepared for the rigors of the profession. Collaboration

between subject departments, teacher training department and teacher training schools are fundamental tenets of teacher education in Finland. Teacher students collaborate closely with seasoned educators and mentors, fostering a culture of teamwork and cooperation among educators. Moreover, teacher education in Finland underscores the significance of continuous professional development. Certified teachers are expected to engage in ongoing learning and skill enhancement to remain abreast of emerging best practices and advancements in educational research.

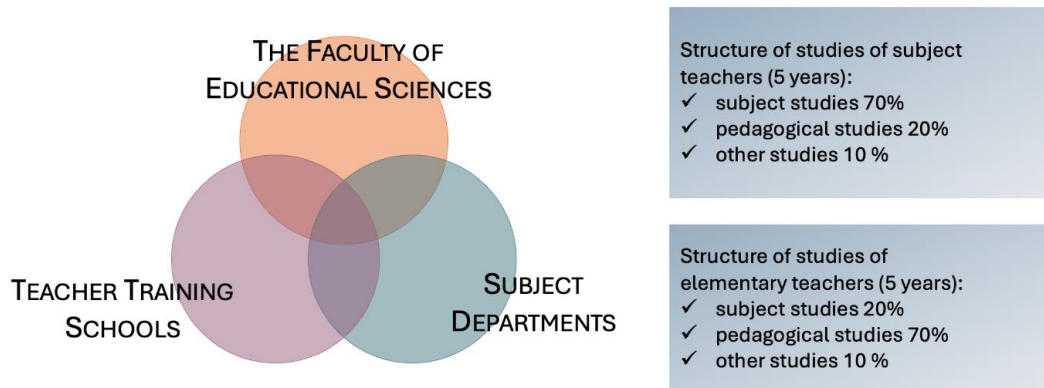


Figure 5 - Teacher training is organized in tight co-operation with teacher training department, subject departments, and teacher training schools. (by Merike Kesler)



Photo 2 - Project partners get to know how coding can be taught with help of play for early childhood educators. (by Merike Kesler)

Teacher education is constantly developing following research-based understanding of the needs of society and educational sector (Toom & Husu, 2016). Transversal competencies, the phenomenon-based approach, and playful approach have been current themes for preparing teachers for the 21st century society (see Kangas, Maununmäki, Maunula & Harju-Luukkainen, 2024; Niemi, Toom & Kallioniemi, 2016).

Continuing professional development for teachers in Finland

In Finland, continuous teacher training is an integral part of the professional development of educators. The Finnish education system emphasizes lifelong learning and encourages teachers to continuously update their skills and knowledge throughout their careers. Continuous teacher training in Finland is designed to support educators in staying updated on the latest educational research, teaching methodologies, and curriculum developments. Continuous teacher training programs in Finland cover a wide range of topics, including pedagogy, subject-specific teaching methods, educational technology, assessment strategies, and classroom management techniques. These programs are often offered by universities, teacher training institutions, educational organizations, and professional development providers. Teachers in Finland have access to various forms of continuous training, including workshops, seminars, conferences, online courses, and peer collaboration opportunities. Many of these programs are tailored to meet the specific needs and interests of teachers at different stages of their careers and in various subject areas (Guiden & Brennan, 2017). One distinctive aspect of continuous teacher training in Finland is its collaborative and participatory nature. Teachers often engage in reflective practices, peer observation, and collaborative inquiry as part of their professional development activities. This collaborative approach fosters a culture of continuous improvement and innovation in teaching practices (Li & Dervin, 2018). However, teachers' have freedom to choose the in-service training they attend, and the participation is built on trust. It means teacher where not assessed or evaluated by external actors.

Teacher training needs according to 21st Century European Teacher Profile

Current challenges in teaching encompass factors such as the growing diversity among students and families, evolving working environments influenced by the availability and utilization of knowledge and digitalization, and an instructional focus on learning (Toom & Husu, 2015). Regarding technological empowerment, sustainable learning, entrepreneurship and playful learning thought as training needs for the 21st Century Teacher (Profile), some of pre-service Finnish teachers highlighted the need for teachers to possess strong ICT skills and digital literacy to enhance versatility in teaching methods. They emphasized the role of technology in facilitating research-based learning and creating engaging learning experiences for students. Additionally, sustainable learning practices were emphasized as essential for fostering students' curiosity and creativity (Kangas, Maununmäki, Maunula & Harju-Luukkainen, 2024). Participatory teaching methods and research-based learning were highlighted as effective approaches for sustaining curiosity and inspiring students to take an active role in their education. Moreover, entrepreneurship was identified as a valuable skill for students to develop, requiring teachers to possess versatile expertise and innovative approaches. Integrating entrepreneurship into education can empower students to take responsibility for their learning and develop functional skills for the future. Lastly, playful learning emerged as a powerful method for engaging students and fostering a love for learning (Kangas & Harju-Luukkainen, 2022). Students advocated for a shift towards more playful and exploratory learning experiences, with teachers serving as

guides to support students' curiosity and discovery. Embracing playful learning approaches can create dynamic and enriching learning environments that cater to diverse learning styles and interests.

Mobility

The role of international mobility in the context of teacher education programs and teacher continuous professional development was equally appreciated by pre-service and in-service Finnish teachers. The former expressed a strong desire for increased opportunities for international mobility, emphasizing its meaningfulness and potential for personal and professional growth. They highlighted the importance of experiencing teaching methods and school cultures from other countries, which broadened their horizons and enriched their understanding of effective practices. They viewed international visits as amazing opportunities for gaining new perspectives, fostering collaboration, and motivating pupils. Overall, there was a consensus among pre-service Finnish teachers on the significant impact of international mobility on their education and development. In-service Finnish teacher considered that international mobility offers invaluable opportunities for personal and professional growth. Experiencing diverse cultures fosters empathy, tolerance, and a deeper understanding of global perspectives. It cultivates cultural competence and self-awareness, allowing individuals to recognize their strengths and weaknesses as educators. Through exchanges, educators gain insights into effective teaching practices, enhancing their pedagogical skills. Policymakers' involvement in such initiatives can further enrich decision-making processes, ensuring the integration of diverse perspectives.

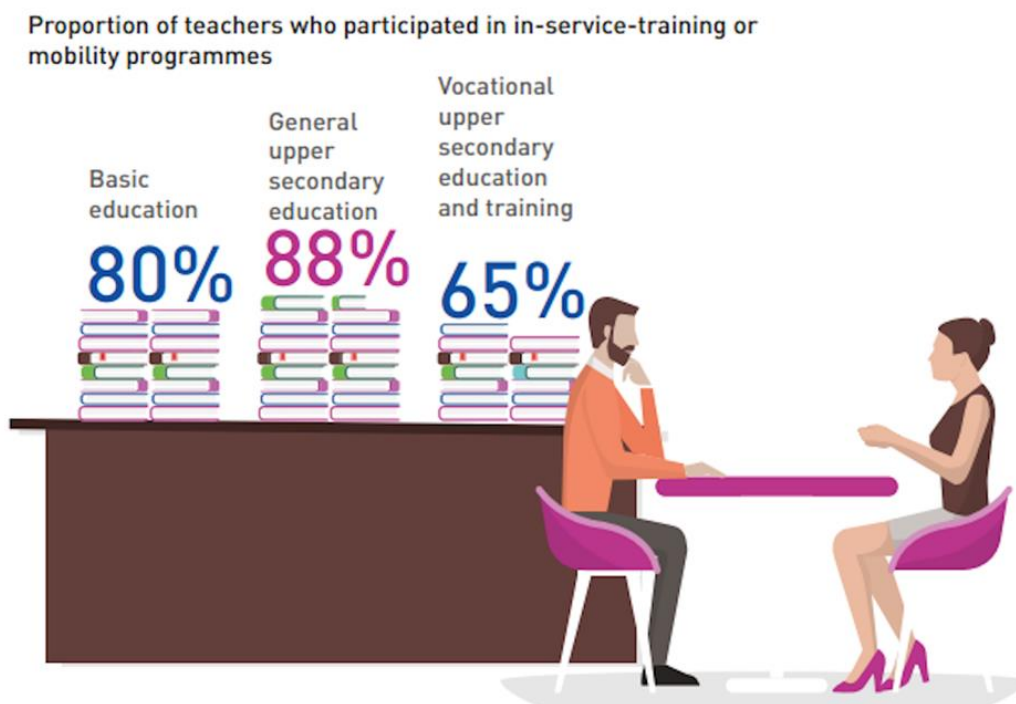


Figure 6 - Graph of Finnish teachers taking part in CPD.

(https://www.oph.fi/sites/default/files/documents/finnish_teachers_and_principals_in_figures.pdf)

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CASE STUDY – ITALY

The Italian School System

In Italy, the right to education for all its citizens is guaranteed by the Constitution, which mandates the state to support a system of public education and the coexistence of both state and private schools.

The State has exclusive legislative competence on the general organisation of the education system. The Ministry of education and merit (Ministero dell'istruzione e del merito – MIM) and the Ministry of university and research (Ministero dell'università e della ricerca – MUR) are responsible for the general administration of education at national level for the relevant fields. The MIM has decentralised offices (Uffici scolastici regionali - USRs) that guarantee the application of general provisions and the respect of the minimum performance requirements and of standards in each Region. (Eurydice, 2023)

Education is compulsory for 10 years from 6 to 16 years of age. Compulsory education covers five years of primary education, three years of lower secondary education and two years of upper secondary education. The last two years of compulsory education can also be spent by attending the vocational education and training courses (Istruzione e formazione professionale – IeFP), organised by the single Regions. (Eurydice, 2023)

The Italian Teacher Education

Programs designed to prepare future teachers are conducted by universities and specialised teacher training institutions. At present following the Law 79/2022, teachers in State pre-primary, primary and secondary schools need to complete a master's programme at higher level and obtain the relevant qualification (ISCED 7). To become a tenured teacher in Italian State schools, both primary and secondary, it is necessary to participate in a public competition (concorso).

Pre-primary and primary school teachers must complete a five-year programme in primary education sciences (Scienze della Formazione Primaria LM-85bis) that includes qualifying traineeship activities. Obtaining the degree diploma qualifies one for the profession; therefore, it is not necessary to take additional exams or acquire more ECTS (CFU), in contrast to the requirements for secondary school teachers as described below. This qualification allows participation in national open competitions (concorso) through which teachers are mainly recruited.

Secondary school teachers, beside a second-cycle qualification in one of the field or subjects taught at secondary level, must acquire cultural, pedagogical, linguistic and technological competences by completing a specific qualifying programme acquiring at least 60 ECTS - European Credit Transfer and Accumulation System (CFU Crediti Formativi Universitari).

Previously, candidates for secondary school teachers were required to obtain only 24 CFU along with a degree to access the open competitions. This procedure and requirements have undergone significant changes with the

introduction of Legislative Decree No. 36/2022, later converted into Law No. 79/2022 (modifying Legislative Decree 59/2017).

Nevertheless, the new standard training program requires the acquisition of 60 CFU, candidates who have already completed at least three school years of service and those who have obtained 24 CFU under the previous system, will need to acquire the equivalent to 30 or 36 credits.

- 30 CFU are needed for teachers qualified in another grade and/or subject area or specialised in support and those who have accrued 3 years of service.
- 36 CFU are needed for those who have already obtained the previously required 24 credits. (Asnor, 2024)

The full course equivalent to 60 CFU is divided into different categories as follows:

- 10 CFU in Pedagogical Area Disciplines;
- 20 CFU in Direct and Indirect Internship;
- 3 CFU in Inclusive Education for Students with Special Educational Needs (Bisogni Educativi Speciali BES);
- 3 CFU in Linguistic-Digital Area Disciplines;
- 4 CFU in Psycho-Socio-Anthropological Disciplines;
- 2 CFU in Teaching Methodologies: Introduction to Teaching Mediation Models for Secondary Education;
- 16 CFU in Teaching of Disciplines and Methodologies of Reference Disciplines (for the competition classes);
- 2 CFU in Disciplines related to acquiring skills in the field of school legislation.

After meeting these requirements, candidates can enrol for the national open competitions (concorso).

These competitions (concorso) consist of a written test, an oral test, and an evaluation of professional qualifications. The result of a school competition is a ranking: a list from which will be recruited candidates needed to fill vacant teaching positions (hired with a permanent contract). Those who have passed the minimum score (and thus passed the competition) but did not achieve a high enough score to secure a teaching position can work in schools on a temporary basis, for example, handling substitute teaching and extra-curricular workshops. As soon as the ranking progresses, they will become tenured teachers. (Orizzontescuola.it, 2024)

Those who pass the open competition (concorso), must then complete and pass a one-year induction phase to be confirmed in their position as teachers with tenure. Teachers in State schools are non-civil servant public employees and work under a private-law contract that can be either temporary or permanent. The national collective and integrative labour contracts regulate teachers' conditions of service. (Eurydice, 2024)

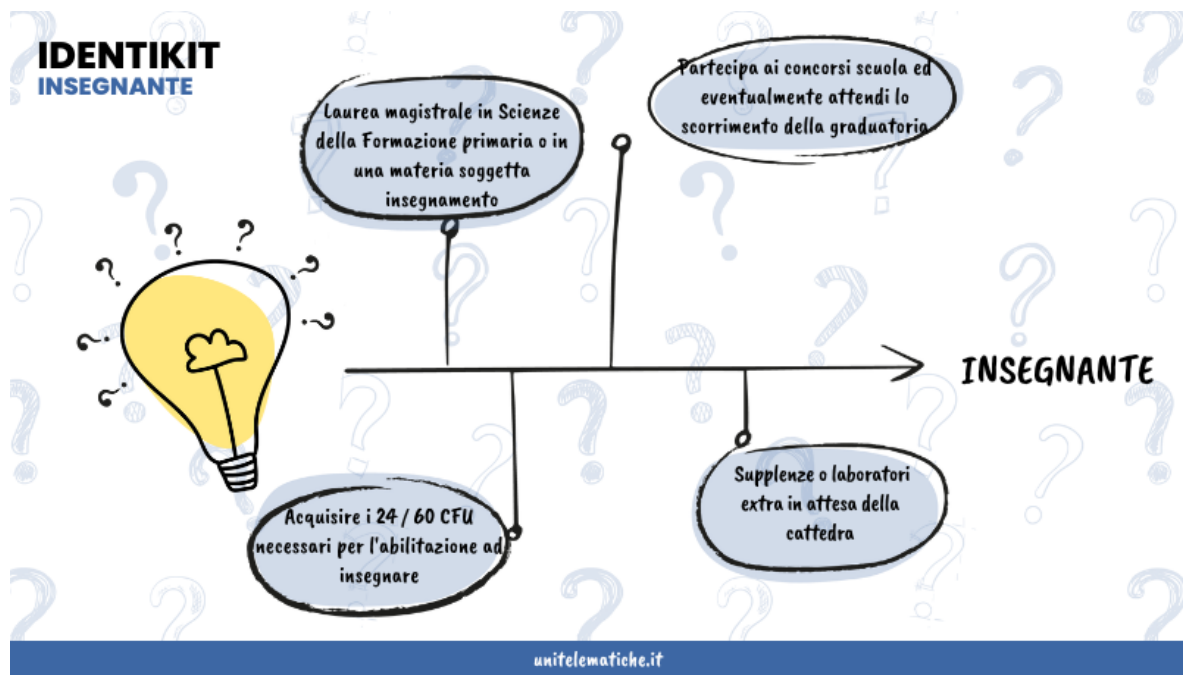


Figure 7 - How to become a secondary school teacher in Italy (Source: unitelematiche.it)

In summary, to become a secondary school teacher in Italy according to the newest reform a candidate must:

- Obtain a master's degree (or bachelor's degree for technical-practical teacher).
- Complete qualifying training programme acquiring 60 ECTS (CFU) or alternatively 30/36 CFU.
- Passing an open public competition (concorso).
- Complete a year of in-service probation with a final test and conclusive evaluation.

Continuing professional development for teachers in Italy

Law 107/2015 on the reform of the education system states that professional development (CPD) for teachers is compulsory and continuous, representing both a right and a professional obligation. Each school defines CPD activities, establishing networks and partnerships with other regional schools. The activities must be carried out in accordance with the legal provisions and the priorities indicated annually by the Ministry of Education. Training initiatives are not part of the teaching programme and teachers are entitled to five days off during the school year to attend training sessions. According to the Eurydice Report (2023), since the 2016-2017 school year, teachers' access to teaching careers is carried out according to the legislative rules introduced by Law 107/2015 according to which schools recruit teachers following competitions organised at local level in each region of Italy. After being assigned to a post, teachers have to undergo a probationary and training period to be confirmed in the post. The probationary period is regulated by law (Ministerial Decree 850/2015) and national collective labour contracts, and training activities are based on the development of personalised projects that provide opportunities to improve ICT skills and language knowledge, including for internationally recognised certification (Eurydice, 2023).

Teacher training needs according to 21st Century European Teacher Profile

In reflecting on the profile of a 21st-century teacher during a focus group held in Italy on October 30, 2023, with 13 primary and middle school teachers (in-service) and one representative of school management from the Istituto Comprensivo Giovanni XXIII – Piazzì in Palermo, several key themes emerged. Teachers emphasise the importance of not only traditional skills like communication and relational abilities but also digital literacy and the capacity to design innovative projects. There's a consensus that teachers must be equipped to understand and navigate new technological challenges comprehensively, enabling them to effectively guide and instruct students. Entrepreneurship is seen as a strategy to empower students, stimulating critical and creative thinking while fostering responsibility for their own learning. Teachers should possess soft skills such as empathy, open-mindedness, and individualised attention to guide students effectively and nurture their talents. This approach encourages students to take ownership of their learning path and cultivates a mindset of innovation and problem-solving.

Teachers need hard skills and technical competencies to empower them technologically and equip classrooms with new technologies, enhancing students' digital competencies. While some teachers feel confident in this area, others may lack the necessary training and skills.

Sustainable learning, according to the participating teachers, involves not only learning how to learn but also learning for life. Teachers play a crucial role in helping students filter, assess, and analyse information through the lens of their knowledge. An interdisciplinary approach, integrating various subjects and transversal topics, is deemed essential for sustainable learning, ensuring students develop critical thinking skills and adaptability to navigate the complexities of the world.

Playful learning is perceived as an old yet complex methodology that requires strong training and preparation for implementation. While some teachers advocate for playful learning as a teaching strategy applicable across different subjects, others express concerns about its generalisation and emphasise the need for a student-centered approach.

Mobility

The focus group participants discussed the potential benefits of international mobility programs for professional training and development. However, most teachers had not participated in such programs; only one teacher in the focus group had been involved in an exchange visit during their in-service years, primarily for observation purposes without specific training for teachers. Despite limited personal experience, all participants expressed their belief in the benefits of international exchange programs. They saw such programs as opportunities to gain insight into foreign educational systems, class structures, and teaching methodologies. Participants viewed international exchanges as culturally enriching experiences that could inspire new teaching methodologies. They highlighted the importance of analysing and applying new practices observed abroad.



Photo 3 - Teachers from Istituto Comprensivo Statale Giovanni XXIII-Piazza in Palermo showing a playful methodology for language learning to visitors from Finland.

Teachers expressed interest in replicating successful practices observed during international exchanges within their own classrooms. They saw the value in adapting foreign lessons and methods to suit their students' needs. Some participants emphasised the importance of professional interaction with colleagues from other countries. They believed that sharing experiences and ideas with international peers could lead to valuable insights and collaborations. Participants recognised international mobility programs as valuable opportunities for professional growth, cultural enrichment, and the exchange of innovative teaching practices. They expressed a desire to leverage such programs to enhance their teaching effectiveness and enrich the learning experiences of their students.

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CASE STUDY – ROMANIA

The Romanian School System

As in all countries around the world, Romania's aspirations to raise learning outcomes and to develop a competency-focused, and student-centered educational approach largely depend on its teachers. However, with almost 30% of school teachers older than 50 and the overall number of teachers expected to decline in line with the student population, any reform of initial teacher education will only affect a minority of the profession in the next few decades (OECD, 2020). This implies that updating and modernizing teachers' competences will primarily be achieved by working with the existing teachers and focusing on the continuous training.

The Romanian Teacher Education

Although a high percentage of Romanian teachers take part in professional development programmes, the content and delivery of courses is not perceived as sufficiently adapted to their current needs, and participation is often restricted by high costs. At the same time, attracting highly motivated teachers to work in disadvantaged schools, including in rural areas, remains a key challenge. The findings from a survey study exploring specific needs for in-service training of Romanian teachers (Enache et al., 2019) highlighted several areas to be addressed in future programs, including inclusive educational approaches for children with special educational needs (SEN), enhancement of digital competencies, and development of management and leadership skills. It is evident that the current teacher education model in the Romanian education system is somewhat outdated, placing excessive emphasis on subject-matter expertise while neglecting teaching competencies. However, high-quality teaching and educators are crucial for elevating the overall quality of education, particularly in light of the challenges posed by the 21st century.

Continuing professional development for teachers in Romania

The initial training of teachers in Romania involves obtaining a university degree in education or a specific subject area, followed by a period of practical training in schools or other educational institutions. This practical training may include observation periods, supervised practice, and teaching under supervision. Initial teacher training is organized within universities and pedagogical colleges, where students learn about the theory and practice of education, as well as teaching and assessment methods. In-service teacher training is structured in the Romanian education system on two main lines: one consists in a succession of exams ending with corresponding advancements in the teaching career, while the other is more open and covers various types of teacher training programs accredited by a national body. The teaching career starts with the exams for acquiring the tenure in education (Titularizare and Definitivat), and then there are two more exams to advance in the teaching career: Second Degree in education (Gradul II) and First Degree in education (Gradul I, based on an action research dissertation). Both programmes are organized within accredited Universities, and aligned with a system of professional credits. The process of continuous teacher training follows strict legal regulations (Ministry of

Education, 2022): each teacher must acquire in a 5 years period of his/her career 90 professional credits by participating to training courses of his/her choice, organized by Universities, County School Inspectorates, NGO's, different professional bodies, and accredited against specific assessment criteria. Continuous professional development among teachers calls for blended training activities, the exchange of good practices with teachers in the country and abroad, and participation to workshops. It also supports the establishment of a networked community, that make practice and professional development possible, which are not exactly a part of the in-service training system but produce deep transformations in teaching and learning.

Teacher training needs according to 21st Century European Teacher Profile

In connection to the dimension regarding sustainability, Romanian teacher trainers emphasize the importance of understanding sustainability in relation to the concept of learning. In this sense, both education for sustainable learning and education for sustainable development need to be addressed. Romanian researchers also argue for a 'entrepreneurial mindsets' among all pre-service and in-service teachers, and connects the concept to technological empowerment, education for sustainable learning and sustainable development, and playful learning. They do however stress, that the proposed model should approach the four concepts from two complementary angles: methodological tools for teacher education, and contents of teacher education and training.

Playful learning is often perceived as linked to gamification and gaming in general, while technological empowerment is mostly mentioned in connection to digitalization, or the development of online learning platforms. The importance of adaptability and technology integration in the teaching process is highlighted, along with the need for strong interpersonal relationship skills to manage challenges arising from the uncritical use of technology.



Photo 4 - Preservice teachers in a playful activity



Photo 5 - Preservice teachers in a playful activity

The importance of playful methods in learning and in developing students' critical and creative skills is acknowledged. However, the pressure generated by national exam requirements is noted, along with the need to also focus on preparation for these exams.

Mobility

Most of the participants were involved in international mobility as part of teacher education or training programs, and describe in positive terms their experience abroad, emphasizing direct and unmediated contact with other educational systems and colleagues, as well the opportunity for exchanges and development. They mention the opportunity to make comparisons, analyses, and identify common and different aspects across educational systems. These experiences provided them with the opportunity to directly apply what they learned, observing aspects of school life related to daily activities, children's reactions, and even administrative mechanisms. Some respondents highlight the fact that, due to the experiences gained during mobilities, they have understood the importance of the school community and frequent communication between teachers, parents, and students. Romanian teachers and student teachers reflected on measures to support the gains of international mobilities and suggest increased care for dissemination and sharing of professional practices after the mobility, consideration for the duration of professional mobility (tailored to teachers' training needs), as well as additional support for professional mobility (legal time during the school year, substitute teachers etc.).

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CASE STUDY – SPAIN

The Spanish School System

The National Education Reform aimed, among other issues, at offering a more generalist training in the subjects of primary education (López-Hernández (2021), allowing also students to choose from a number of formative itineraries to specialize in: physical education, music education, science and mathematics or foreign language education among others. For the first cycle of Pre-Primary Education (0-3 years old) teachers are required to have at least advanced vocational training studies in Early Childhood Education and for the second cycle of Pre-Primary Education (3-6 years old) teachers are required to have a university Early Childhood Education Teacher’s Degree. For Primary education teachers are required to have a university Primary Education Teacher’s Degree and for teaching Compulsory Secondary Education (ESO), Higher Secondary Education (Bachillerato), Vocational Training and Official Language Schools teachers are required to have a Master’s Degree in Teacher Training for Secondary Education, Vocational Training and Language Teaching (see <https://eurydice.eacea.ec.europa.eu/national-education-systems/spain/teachers-and-education-staff>).

Spain – 2023/2024

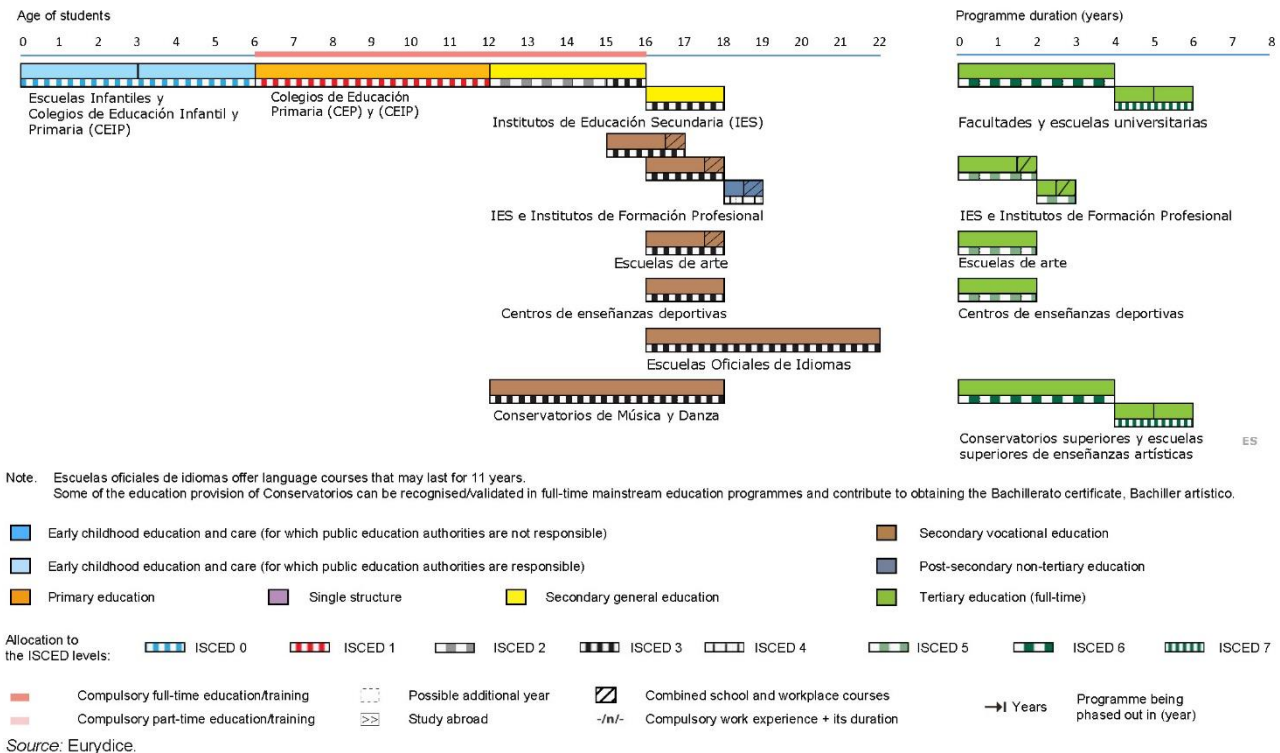


Figure 8 - Structure of the education system in Spain (Source: Eurydice)

The Spanish Teacher Education

Pre-service and in-service education are crucial components of teacher training in Spain, specifically for pre-primary, primary and secondary school teachers. Educational policies have also been characterized by bold moves and major shifts to adapt the curriculum to the European context and implement EU-driven reforms (Eurydice España-REDIE, 2019). Among the goals that Secondary Education Programs (12-18) that college students need to acquire are: to design and develop learning spaces with special attention to equity, emotional education and in values; equal rights and opportunities among men and women; civic education and respect of human rights that facilitate life in society; decision-making and the construction of a sustainable future; to acquire strategies to stimulate the effort of the student and promote their ability to learn by themselves and with others; to develop thinking and decision-making skills that facilitate personal autonomy, confidence and initiative; to participate in the evaluation, research and innovation of teaching-learning processes (see Order ECI/3858/2007, 27th of December). (see Order ECI/3858/2007). In Spain, teacher training mainly takes place at university level, and all teacher training degrees in Spain were aligned with the European Higher Education Arena since 2007 following the national education reform (Royal Decree 1393/2007, 29th October, repealed by Royal Decree 822/2021, 28th September). The Ministry of Education, Vocational Training and Sports - Ministerio de Educación, Formación Profesional y Deportes establishes the minimum requirements of teacher training programs offering pre-primary education, primary education and secondary education at university levels (see <https://www.educacionyfp.gob.es/en/contenidos/profesorado/no-universitarios/formacion/formacion-inicial.html> for an updated Spanish educational legislation regarding the minimum criteria), although each higher education institution is free to design their own curriculum. Students gain practical experience through observation and teaching practice in schools. In the specific model of pre-service education for secondary teachers, there is a more focused emphasis on subject-specific knowledge and pedagogy.

Continuing professional development for teachers in Spain

Continuous professional development is a right for non-university teachers and the current legislative framework establishes that the Spanish educational authorities are responsible for planning teacher training activities and need to set a series of guidelines to provide teachers with a diversified offer of training needs and activities in addition to establish teacher training priority guidelines. These priority areas are established yearly by the *Ministerio de Educación, Formación Profesional y Deportes* - Ministry of Education, Vocational Training and Sports (see <https://www.educacionyfp.gob.es/en/portada.html>), through the *Instituto Nacional de Tecnologías Educativas y de Formación del Profesorado* - National Institute of Educational Technologies and Teacher Training (<https://intef.es/>). However, each of the 17 educational administrations in Spain establishes their own priority areas following the recommendation of key competences for lifelong learning such as entrepreneurship, digital or technological competence.

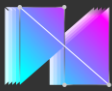
Teacher training needs according to 21st Century European Teacher Profile

If we focus the attention on the main topics of the project: *technological empowerment, education for sustainable learning, entrepreneurship and playful learning areas* one can notice that these could be found in different shapes within the Spanish curriculum for pre-primary, primary and secondary level, either in an explicit or implicit form (see <https://educagob.educacionfpydeportes.gob.es/curriculo/curriculo-lomloe/menu-curriculos-basicos.html> for an updated minimum curricula requirements for pre-primary, primary and secondary education) . The concerns related to the environment, the digital transition are common places within the Spanish educational system, both on national level and local level and both orientations may be connected with parts of the 21st Century Teacher profile.

The Spanish teachers stress the value of digital literacy and the ability to adapt to the demands and challenges of the current era, in addition to more conventional skills like interpersonal and communication skills. They emphasize how important it is to modify these competencies to be successful in the 21st century and to be adaptable in terms of changing curriculum and instructional strategies to meet current demands. In terms of entrepreneurship, the participants agreed that this means to provide the opportunity to the young students to value, test and implement ideas and to think about new opportunities to work on new jobs. Teachers must have a broad understanding of current events, cultural awareness, and sensitivity in order to promote a more students' holistic development. The following themes and actions are associated by Spanish teachers with interventions in the sphere of entrepreneurial competence development: participation in an entrepreneurship competition in Madrid for 5th graders: project-based and problem-solving approach in the competition; children work on creating a machine prototype (analogue, using recycled materials) and present it to external judges, with the possibility of support from the business sector. Playful learning was considered to be very important for teachers because they have to create the environment to motivate the students to learn, not just being in the class. Students create their own games, including using platforms like Kahoot, integrating the "useful learning" into playful activities.

Mobility

Teachers agree that international mobility is essential for both professional and personal development. The interviewed teachers emphasized that participating in such programs contributes not only to becoming a better teacher but also to maturing as a person. They believe that international mobility offers valuable opportunities allowing them to see how educational systems are managed in other countries, understand various teaching methods, and meet colleagues from other cultures. These experiences help them bring back ideas and practices that they can implement and adapt in their own schools. Some of them discuss the participation in the Erasmus program, which involves collaboration with other countries like Finland, Portugal, Greece, Italy, and Spain. This program allows teachers to travel and participate in coordination meetings where they discuss how each school develops common projects. The topics addressed include sustainability and world peace, and the goal is to exchange best practices and improve students' skills through projects like "strengths of students as peacemakers." These



international collaborations offer teachers new perspectives and ideas that they can adapt to the local context, thus improving the quality of education. There are also challenges associated with international mobility. One teacher notes that long-term international mobility can be complicated due to logistical issues, such as the need to move their family. This aspect can discourage teachers with family responsibilities from participating in extended mobility programs. While there are challenges to overcome, the overall sentiment is that international mobility greatly enriches the professional training of teachers, contributing to the development of more effective and culturally competent educators.



Photo 6 - Teacher educators and student teachers from Universidad Rey Juan Carlos (URJC) collaborating with in-service teachers from Colegio Peñalar (Madrid, Spain) at VIA University (Denmark).

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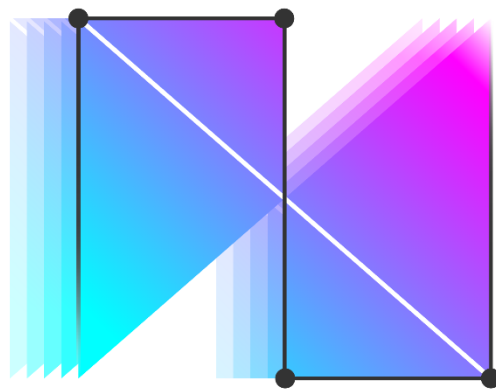
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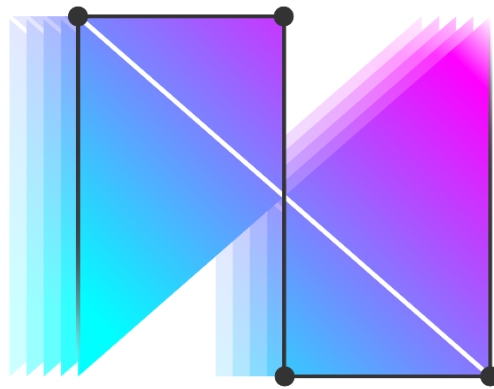
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