



Teacher education is a deeply pedagogical process rooted in values, ethics, and the social purpose of schooling. Globally, it sits at the core of educational quality and fairness, as research in comparative and international education demonstrates: the training of teachers directly influences students' learning chances, social inclusion, and the democratic aims of schools. Teachers are not simply transmitters of curricula, but active professionals whose convictions, reflective skills, and ability to manage the complexities of classroom life give shape and substance to the educational experience itself.

The pedagogical dimension of teacher education frames teaching as a relational, context-aware, and ethically grounded profession rather than just a set of procedural skills. From a research perspective, this demands robust research methodologies that can critically examine the complex realities of schools and inform evidence-based policies. Equally important is the connection between theory and practice, which helps to bridge the persistent gap between universities and schools.

The contributions gathered in this volume reflect the richness and diversity of experiences showcased during the ATEE Spring Conference 2024, held at the University of Bergamo from May 29 to June 1, 2024. The volume presents 70 selected papers out of more than 300 presented by researchers representing over 40 countries.

This broad spectrum of studies highlights promising directions that can inspire renewed inquiry and concrete proposals aimed at improving contemporary educational systems.

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Teacher education research in Europe: trends, challenges, practices and perspectives

May 29th – June 1st, 2024
S. Agostino, Bergamo



Edited by Nicole Bianquin and Francesco Magni





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BOOK OF PROCEEDINGS

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FOOTT PRINTTS: Advancing Quality Standards in Teacher Training

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Abstract

The ERASMUS+-project FOOTT PRINTTS (Focus on Teacher Training – Practical Guidelines for In-Service Teacher Trainers) provides theoretical research and practical insights from which possible conditions of success for quality assurance systems in European in-service teacher training will be generated.

In a collaboration of seven countries empirical data is generated across Europe to represent the diversity of regional, national, public and private training institutions.

By combining research with practical needs, the project seeks to establish international frameworks, proven methodologies, and a sustainable peer-learning network. Key milestones of the project so far include completing the literature review, advancing the mixed-methods data collection, and laying the groundwork for the creation of an adaptable framework for teacher trainers.

Keywords: teacher professionalization; continuous professional development; internationalization; quality standards; in-service teacher training.

1. Introduction

The FOOTT PRINTTS (Focus on Teacher Training - Practical Guidelines for In-Service Teacher Trainers) Erasmus+ KA2 project plays a crucial role in addressing contemporary challenges faced by the European education sector. The demand for Continuous Professional Development (CPD) has grown significantly in recent years, as teachers face new challenges, such as adapting to rapidly evolving educational technologies, addressing diverse student needs, and ensuring inclusive education (Petar, 2024; Awang-Hashim et al., 2019; Pramastiwi et al., 2018). The project, a cooperative initiative involving seven countries – Austria, Denmark, France, Germany, Greece, Poland and Portugal – was designed to enhance CPD for teacher trainers and consequently educators.

Teacher training institutions are now focusing on innovative approaches to ensure that CPD is accessible, relevant, and practical. The FOOTT PRINTTS project responds to these needs by generating empirical data on CPD in six European countries (AT, DE, DN, GR, PL, PT). The need for effective CPD is particularly critical considering the global teacher shortage, with many educators leaving the profession due to burnout or lack of support (Craig, Hill-Jackson, & Kwok, 2023). FOOTT PRINTTS aims to create evidence based practical guidelines that empower teacher trainers and ensure they are equipped to address these evolving challenges.

The mapping of partner countries in the FOOTT PRINTTS project¹ provides valuable insights into how CPD quality is influenced by various contextual conditions. For instance, centralized CPD systems in Austria and France contrast with more decentralized, regional and school-driven approaches in Denmark and Portugal, demonstrating how governance structures shape the design and delivery of CPD. Similarly, participation requirements, such as mandatory CPD in most countries versus the optional model in Denmark, highlight differences in policy priorities. Funding models also vary, with national budgets, municipal co-financing, and EU-supported initiatives playing significant roles in different contexts. These differences underscore the importance of adapting CPD to local needs while maintaining a commitment to high-quality standards. This diversity reflects the strength of the FOOTT PRINTTS project, which brings together public, private, and university stakeholders to create a reliable and inclusive framework for European CPD.

Chapter 2 discusses the different quality dimensions with a focus on trainer competence. Chapter 3 will explain the methods used and present key topics addressed in the FOOTT PRINTTS survey. The final chapter provides a summary of the quality dimensions investigated in this project.

2. The different quality dimensions of CPD

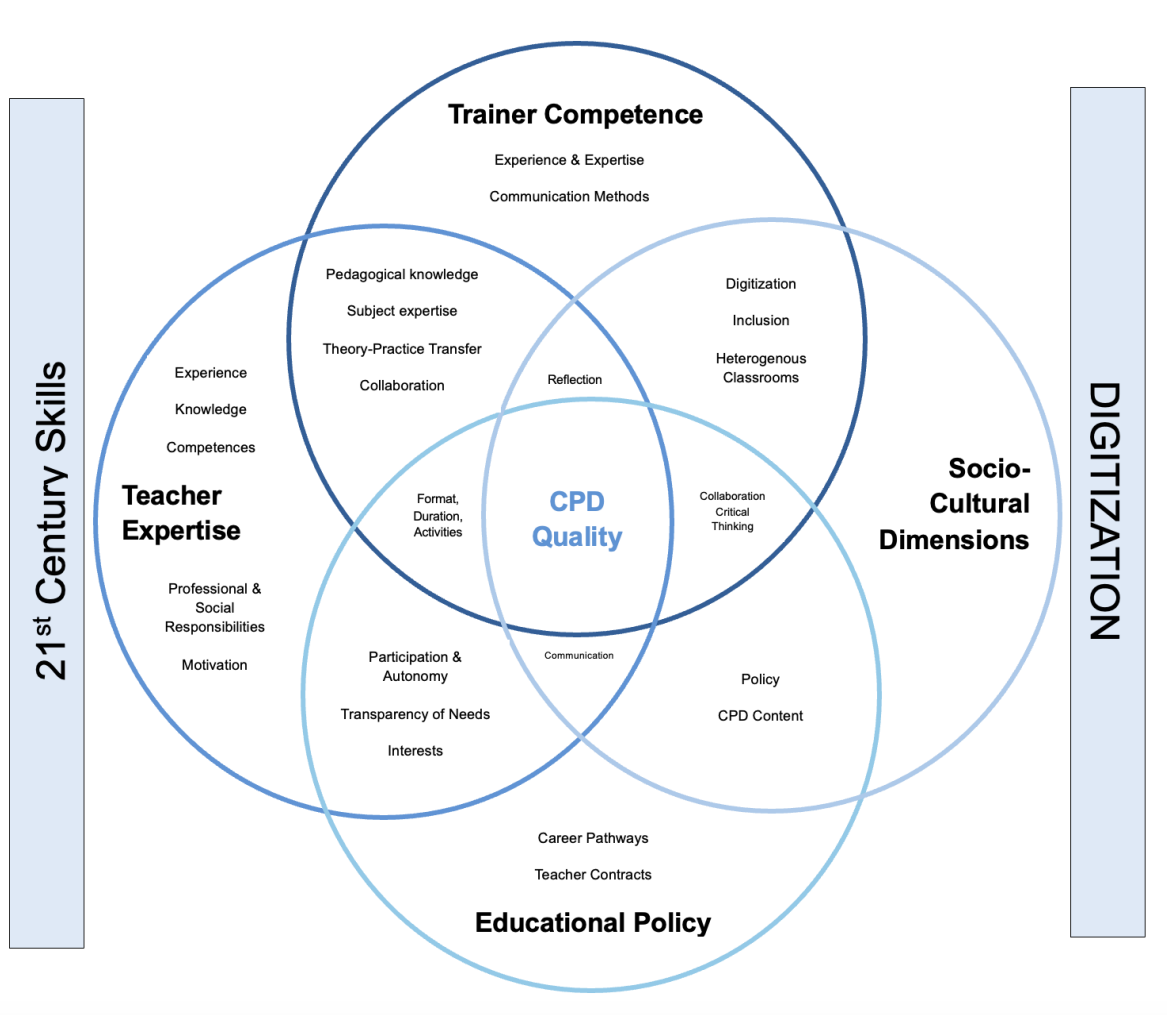
Defining the quality of Continuing Professional Development (CPD) depends largely on the scope of analysis. Some studies define CPD quality by examining its *outcomes*, such as the impact on student achievement, transformations in pedagogical practices, or the enhancement of school and institutional quality (Gümüs & Bellibas, 2019; Balmer, 2017). Other studies emphasize *process quality* of CPD, focusing on content, trainer competence, adult learning, network facilitation, digitization, and collaboration (OECD TALIS, 2018/2020; Darling-Hammond et al., 2017; Lipowski & Rzejak, 2017; Meyer, Kleinicht, & Richter, 2020; Stoll et al., 2006).

This paper adopts a comprehensive approach by drawing from both perspectives, placing a particular emphasis on elements that require increasing attention in CPD within the 21st century—a period marked by digitization (Montero-Mesa et al., 2023; Petar, 2024; Rzejak et al., 2024) and the emergence of new forms of collaboration and learning. Among these elements, trainer competence is of particular interest, given the central role trainers play in CPD. They serve not only as content experts but also as coaches, network facilitators, and critical friends, fostering an environment conducive to professional growth and peer collaboration.

The FOOTT PRINTTS research project identifies and elaborates on four central dimensions shaping CPD quality: the teacher, the teacher trainer, educational policy, and socio-cultural contexts. These

¹ FOOTT PRINTTS. (2024). *Literature review*. Retrieved from <https://foottprintts.eu/wp-content/uploads/2024/06/FOOTT-PRINTTS-Literature-Review.pdf>

dimensions influence the conditions under which professional development occurs and is subsequently implemented in diverse classrooms and learning environments. Graph 1 illustrates the interdependencies between the four dimensions and underscores the importance of aligning CPD practices with the needs of various stakeholders.



Graphic 1: FOOTT PRINTTS Quality Dimensions of CPD. Author's work.

Recent findings from literature research² and the mapping of partner countries highlight several critical factors contributing to CPD quality:

1. **Teacher-Centric CPD:** CPD programs that align with individual teachers' professional learning needs and career progression pathways enhance motivation and engagement. Tailored support mechanisms, such as diagnostic tools like Portugal's Selfie for Schools, have been particularly effective in addressing specific developmental needs.
2. **Trainer Expertise and Continuous Development:** Ensuring the competence of CPD trainers is a priority across partner countries. For instance, in Poland, national regulations mandate specific qualifications and ongoing professional development for trainers. Similarly, North Rhine-Westphalia (Germany) requires trainers to complete structured training programs to qualify as moderators or school development coaches.
3. **Digitization and Innovative Learning Contexts:** Digitization has transformed CPD delivery methods, enabling blended learning approaches and fostering collaboration within schools as well as across geographically dispersed participants. Initiatives such as NRW's "Digital Offensive"

² FOOTT PRINTTS. (2024). *Literature review*. Retrieved from <https://footprints.eu/wp-content/uploads/2024/06/FOOTT-PRINTTS-Literature-Review.pdf>

underscore the integration of technology into CPD practices, preparing teachers for digitally enriched learning environments.

4. **Socio-Cultural and Institutional Adaptability:** CPD initiatives must consider the socio-cultural contexts of schools and communities. The inclusion of equity-focused practices, such as Greece's integration of diverse learning needs into CPD frameworks, demonstrates the necessity of adapting CPD to varied educational settings. Furthermore, school development efforts that are tailored to meet specific institutional needs emphasize the role of aligning CPD strategies with the unique requirements of educational institutions.

Educational policy defines the conditions for educators' professional development. A free choice of CPD content and activities can positively impact educators' interests, motivation and openness to develop knowledge and skills and reflect on routines and educational practices (see Wanitschek et al., 2020: 742). A biased choice, however, may allow development in some areas, while leaving blind spots in other areas. Teacher appraisal (FOOTT PRINTTS, 2024) offers one possible avenue of targeting these blind spots, while acknowledging and appreciating educators' strengths.

Effective CPD contributes to educators' knowledge and competence development, leads to positive changes in instructional and educational practices (OECD, 2020), student achievements and ultimately within teams of educators to raise the institutional quality (Lipowksy, 2009; Balmer, 2017). Additionally, support from the leadership level contributes positively to CPD efficacy (Stoll et al., 2012). CPD quality must therefore be studied by paying respect to both, the role of teacher trainers and educators during CPD and the policy and educational institutions' support educators experience as part of the implementation of positive change. While focusing primarily on the process quality of CPD, this study pays attention to the social, cultural and policy related contexts in the participating partner countries by including it into survey items and data analysis.

The spike of digitization in recent years has altered CPD formats, with an increase of online learning and the use of new technology. Consequently, the types of social interaction during CPD activities can alter from lectures and discussions in online synchronous events to digital interactions in asynchronous CPD formats. Collaboration over longer time spans builds trust which leads the way to exchanging ideas and practices with other professionals and experts in the field (Minea-Pic, 2020; Darling-Hammond et al., 2017). The FOOTT PRINTTS survey examines the role of duration and collaboration of digital CPD formats, to better understand its role in educators' competence development, their ability to reflect upon their teaching practices and build professional communities.

2.1 Trainer Competences

Trainers play an important role in CPD, not only as experts on subject-matter but also as coaches, network facilitators, and critical friends. The comparison of the education systems of the six participating countries in the FOOTT PRINTTS research project highlights how trainer qualifications and professional development vary across partner countries, from university-led standards in Austria³ and Denmark to certification requirements in Poland and Portugal.

In contrast to pre-service teacher trainers, in-service trainers teach experienced professionals in their field. They present new insights into education, society and pedagogy to a group of experts of varying experience who work in varying circumstances (homogeneous versus heterogeneous groups, learners with different family backgrounds and educational aspirations as well as institutions with varying resources). Additionally, in-service teacher trainers serve educators who are handling high levels of uncertainty in their daily professional life: interacting with young learners and their parents/guardians, creates unpredictable pedagogical situations which require teachers' flexibility and high pedagogical professional competences. The social and technological developments of the recent decade have raised questions on the relationship between global trends, such as standardization, digitization and new ways of collaboration and learning, and their local adaptations,

³ In-service teacher trainers must possess the same academic qualifications and professional experiences as pre-service teacher university college lecturers in Austria (BMBWF, 2021: 20).

which is referred to as glocalization (Collinson et al., 2009). Consequently, in-service teacher trainers support teachers in developing both subject-matter knowledge and pedagogical competencies. Trainer competence can be understood as an intricate skill set that is based on subject-matter expertise, experience in pedagogical settings (see OECD, 2021; Balmer, 2017) institutional knowledge and the ability to flexibly adapt to educators prior knowledge and current needs (see Lipowski & Rzejak, 2017). Apart from trainers' knowledge and beliefs, the ability to communicate effectively and motivate participants were identified as key factors for trainer competence (Kunter et al., 2013).

3. Methods

3.1. Research Design

The FOOTT PRINTTS project uses a sequential mixed-methods approach, combining both qualitative and quantitative data collection techniques to ensure a comprehensive understanding of the CPD needs across Europe. From October 2024 to February 2025, a quantitative survey will be conducted in the partner countries Germany, Austria, Denmark, Poland, Greece and Portugal using online questionnaires at three different levels (micro, meso and macro level). Following the analysis of the quantitative data, semi-standardized qualitative expert interviews will be conducted in the partner countries from May to June 2025. These interviews will provide additional insights into regional aspects of CPD delivery to complement the survey results and support their interpretation. Socio-cultural and policy contexts of the participating countries were considered in the development of the surveys and will be included in data analysis and interpretation (Efstathiades & Rudloff, 2024).

Three questionnaires were developed for each partner country. One for the micro, one for the meso and one for the macro level. At the micro level CPD participants are interviewed. At the meso level, trainers are surveyed and at the macro level, decision makers are surveyed. The sample size of the quantitative research for the countries Germany, Austria, Poland and Denmark is 400 CPD participants at the micro level, 150 trainers at the meso level and 50 decision-makers for teacher training at the macro level. In Portugal and Greece, the sample size at the micro level is 310 teachers, at the meso level 70 trainers and at the macro level 20 decision-makers. This results in a dataset of a total of 3200 observations in the European Education Area (EEA). (Efstathiades & Rudloff, 2024)

Quality Assurance

A pre-test took place from May to June 2024 in the partner countries that are participating in the empirical research. The questionnaire was revised on the basis of the evaluation results and individual feedback from survey participants. To finalize the surveys developed by the Austrian team, multiple feedback rounds with all participating countries were held to ensure a consensus on the fundamental elements of the surveys as well as on their thematic, cultural and linguistic accuracy. Guided expert group discussions and reviews with all partner countries ensured relevance, quality, linguistic and content accuracy.

3.2. The FOOTT PRINTTS Survey

The aim of the survey is to gather insights from teacher trainers, educators, and policymakers, to identify the key challenges faced in delivering effective CPD and support teacher trainers in conducting successful CPD. The initial stage of the project involved a literature review, which identified key elements of effective CPD programs with a focus on policy and school quality assurance processes in the respective partner countries. Alongside additional research on quality criteria of CPD, these elements formed the basis for the development of the surveys. In order to minimize the time required to complete the questionnaire, care was taken to formulate the questions as concisely and precisely as possible and to keep their number as low as possible. Different forms of questions, such as rankings, randomization of answer items, and questions using a 5-point Likert-scale, were deliberately used, as variety is intended to keep the participants interested in the survey and focused until the end of the questionnaire. These measures also aim to prevent participants from ticking off answer options at random.

Table 1 presents an overview of the topics covered in the FOOTT PRINTTS survey.

Training Format	Form of CPD delivery Time, Duration, Location, Digital and face-to-face training activities
CPD Delivery	Training elements: e.g. instruction, modeling or analyzing materials Theory to practice ratio
Motivation	Extrinsic: career perspectives, policy, contracts, work hours Intrinsic: connecting with other professional, interests, prior knowledge & competence development
Collaboration	Types of collaboration in digital and face-to-face settings
Participants	Level of involvement Interests and objectives of training Needs
Trainers	Qualifications Professional experience Didactic and communication skills Needs
Policy	Options for selecting training, Contract and career perspectives, Resources and planning Content needs

Table 1: FOOTT PRINTTS Survey Quality Dimension. Authors' work.

The survey, for instance, asks participants to state when they learn most from trainers, such as from trainers' professional experiences; the combination of theory and practice; from showing possible effects on students; or different aspects that contribute to active learning (e.g. creating opportunities for reflection, the practical testing of content, modeling of good practice, and the analysis of pupils' work during the training courses). New ways of learning in digital and face-to-face settings are addressed by investigating the variety of forms of collaboration, including but not limited to: group discussions, peer learning, collaboration with online platforms, practical experimentation and informal exchange. In addition, the methodological diversity of these collaborations is analysed. All levels are asked to assess the role of CPD in addressing inclusion, social inequality, self-competence, digital developments (AI), or the support for children and young people with a migration background and cultural diversity.

4. Preliminary Findings

Based on 5,215 completed questionnaires, the preliminary findings of the quantitative survey provide valuable insights into the factors that participants consider particularly relevant for their professional learning and competence development through continuing professional development. Respondents highlighted the importance of intrinsic motivation, including personal interest and the aspiration for professional growth, as well as structural incentives such as certification, career opportunities and contractual conditions.

In addition, the quality of CPD is perceived to be shaped by participants' satisfaction with training, the availability of professional support in the form of coaching, mentoring, supervision and collegial exchange, and access to external training opportunities. The opportunity to practically test and apply newly acquired knowledge in everyday educational settings, along with the availability and quality of learning materials, was also considered essential.

Moreover, the perceived effectiveness of CPD depends on how training is selected and initiated. Both bottom-up processes driven by educational staff and top-down decisions made by school leadership

and supervisors play an important role in ensuring that CPD responds to actual needs and supports meaningful change.

The findings will be published, and good practice examples from the participating countries will be presented on the FOOTT PRINTTS website in the section titled "FOOTT PRINTTS Framework."

5. Discussion

This article focused on the competence of trainers, acknowledging their central role in the effectiveness of continuing education.

A key innovation of the FOOTT PRINTTS project lies in its multi-level design, which compares the perspectives of participants at the micro level, trainers at the meso level, and decision-makers at the macro level. With a dataset comprising 5,217 responses and the use of a rigorous mixed-methods approach, the project generates new empirical insights into the design and delivery of CPD across Europe. The results will be made available on the FOOTT PRINTTS website and are intended to offer teacher trainers practical guidance for implementing effective and context-sensitive professional development.

The in-service teacher trainers provide learning conditions to educators of varying experience working and needs. The social and technological developments of the last decade require complex skills based on expertise and experience in educational settings, in addition to institutional knowledge (see OECD, 2021; Balmer, 2017). Knowledge, beliefs and the ability to communicate effectively and motivate participants have been identified as key factors for trainer competence (Kunter et al., 2013). A mapping of CPD in seven European countries shows that trainer qualifications and professional development vary across partner countries. The FOOTT PRINTTS survey was therefore developed as part of a cross-country sequential mixed method analysis. The aim of the survey is to gather insights from teacher trainers, educators and policymakers and to identify the key challenges in delivering effective CPD and the types of support that teacher trainers need to succeed. The survey covers CPD format, delivery, motivation, participant and trainer competence as well as educational policy. In regards to digitization, the FOOTT PRINTTS survey explores the role of collaboration in online CPD formats to better understand how learning and network facilitation take place in digital environments.

Effective upskilling contributes to the knowledge and competence development of educators and leads to positive change in the classroom and other educational environments (OECD, 2020). CPD can promote both student achievement and the quality of the educational institution through positive changes within the teaching teams (Lipowski, 2009; Balmer, 2017). Differences in the partner countries underline the importance of adapting training to local needs in order to ensure a high level of quality. The FOOTT PRINTTS project brings together public, private and university stakeholders to create a reliable and inclusive framework for continuing vocational training.

The FOOTT PRINTTS project offers valuable potential to shape future developments in European education policy, particularly in strengthening the quality and consistency of in-service teacher training across national systems. Building on its empirical foundation, the project envisions the development of a digital tool to support the planning, implementation, and evaluation of CPD at both national and international levels. This tool will be complemented by a conference with a strong focus on teacher professionalization, aimed at fostering long-term collaboration and initiating a sustainable international network of practitioners and stakeholders.

To ensure policy impact, further dialogue with EU-level actors is planned to explore how the findings can inform frameworks and quality standards. At the same time, future research should actively accompany the institutional transfer of project results, analysing how insights are taken up in diverse educational settings. A comparative reflection on regional differences will allow for deeper alignment across systems, promoting mutual learning through the diversity of structures and the exchange of proven practices in teacher education.

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