



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.

FRANCESCO MAGNI is an Associate Professor of General and Social Pedagogy (PAED-01/A) at the Department of Human and Social Sciences, University of Bergamo, Italy. He is a member of the board and Deputy Director of CQIIA (Center for the Quality of Teaching, Didactic Innovation, and Learning). He is also a member of the ATEE - Association for Teacher Education in Europe.

NICOLE BIANQUIN is an Associate Professor of Didactics and Special Education (PAED-02/A) at the Department of Human and Social Sciences, University of the Aosta Valley, Aosta, Italy. She is a member of the ATEE - Association for Teacher Education in Europe.

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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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The Impact of Teaching and Learning Centers (TLCs) on Initial Teacher Education Programs in Italy

Virginia Capriotti, *University of Bergamo*, virginia.capriotti@unibg.it

Abstract

Teaching and Learning Centers (TLCs) are specialized facilities established in many universities and higher education institutions to support and enhance the quality of teaching and learning. Over the past fifty years, TLCs have undergone significant evolution, shifting from traditional pedagogical approaches to innovative models that address the changing demands of education. In Italy, the development of TLCs has been strongly influenced by the strategic initiatives of ANVUR (National Agency for the Evaluation of Universities and Research Institutes) and MIUR (Ministry of Education, University, and Research). This paper seeks to examine the role of TLCs with a particular focus on TLC of University of Bergamo.

Keywords: Teaching and Learning Centers; teacher education; Italy; reform; CQIIA.

1. Introduction

The fast-paced transformation of educational paradigms in the 21st century has prompted a reimagining of traditional approaches to teacher education. Higher education institutions worldwide increasingly acknowledge the need to prepare educators with the skills to navigate diverse classroom environments, integrate digital technologies effectively, and create inclusive learning spaces. In this evolving landscape, Teaching and Learning Centers (TLCs) have gained prominence as critical hubs for pedagogical innovation and professional development.

TLCs serve as dynamic platforms bridging the divide between academic research and teaching practice, fostering a mutually beneficial relationship for educators and learners alike. They provide focused support in areas such as faculty education, curriculum development, and the implementation of forward-thinking teaching methodologies. Evidence from global contexts highlights TLCs' capacity to elevate the quality of education by encouraging interdisciplinary collaboration and the adoption of evidence-based practices (Lieberman, 2005; Coryell, 2016). In Europe, the pivotal role of TLCs has been emphasized by the European University Association's initiatives to strengthen the teaching mission of universities (Lotti et al., 2022).

Initially, TLCs focused on enhancing traditional pedagogical techniques, but their scope has since broadened. Today, they address diverse challenges, including integrating digital tools into teaching, promoting inclusive education, and supporting educators in adapting to hybrid and online learning environments. For instance, the development of Massive Open Online Courses (MOOCs) and blended learning frameworks are often spearheaded by TLCs (Austin, 2023).

In Italy, the growing relevance of TLCs aligns with the country's ongoing efforts to modernize its teacher education system. Recent reforms, influenced by European policies such as the Next Generation EU initiative and Italy's National Recovery and Resilience Plan (NRRP), underscore the necessity of integrating theoretical knowledge with hands-on experience. These reforms highlight the need for adaptability in teacher education to meet the demands of evolving educational contexts (Bertagna & Magni, 2022).

One of the primary goals of TLCs is to bridge the gap between academic disciplines and practical teaching by providing interdisciplinary platforms. These Centers offer services such as personalized consultations, workshops, and curriculum development support. They also facilitate collaborative research projects that align with institutional teaching missions, thus fostering a culture of continuous improvement in educational practices (Lotti et al., 2022).

Moreover, TLCs play a critical role in supporting professional development through structured programs that enhance teaching competencies. By facilitating knowledge sharing and collaboration among educators, these Centers help create professional learning communities. These communities encourage the exchange of best practices, thus elevating the overall quality of teaching and learning (Kowalczyk-Walędziak et al., 2019).

A particularly significant development in this area is Italy's Law no. 79/2022, which introduced a revamped framework for initial teacher education. Within this framework, TLCs are emerging as instrumental in advancing professional competencies, promoting reflective practices, and supporting the alignment of pedagogical strategies with contemporary educational goals. These Centers not only enhance the academic and practical education of future teachers but also encourage the adoption of inclusive teaching practices that address the needs of increasingly diverse classrooms.

By analyzing their roles, operational challenges, and future potential, the study sheds light on how TLCs can shape a teacher education system that is adaptive, inclusive, and of high quality. Furthermore, it explores the ways TLCs can serve as catalysts for bridging gaps in teacher preparation, ensuring that educators are well-equipped to thrive in an ever-changing educational landscape.

Educational Activities	Consulting Activities	Research Activities	Teaching Support Activities
Develop and deliver workshops on	Provide guidance to faculty on integrating	Conduct studies on the impact of teaching innovations	Assist in creating effective course

innovative teaching methodologies.	technology into the classroom.	on student outcomes.	materials and lesson plans.
Design and run professional development programs for educators.	Offer one-on-one consulting to improve teaching strategies.	Publish findings in academic journals and present at conferences.	Support faculty in using learning management systems (LMS).
Facilitate collaborative learning initiatives among educators.	Provide strategic advice on curriculum design.	Collaborate on interdisciplinary research projects	Organize peer observation programs for faculty development.
Create education sessions on inclusivity and diversity in education.	Offer expertise on assessment and evaluation methods.	Conduct research on student engagement and learning efficacy.	Develop resources for faculty on best teaching practices.

Table 1: types of activities/actions of Teaching and Learning Centers

2. Educational Reforms in Italy. A brief overview

As mentioned in the paragraph below, law no. 79/2022 marked a turning point in Italian teacher education, aligning with European initiatives like the Next Generation EU and the National Recovery and Resilience Plan. These reforms introduced a comprehensive restructuring of teacher education to better address the challenges of the modern classroom. Central to this initiative was the establishment of a new one-year, 60 ECTS initial teacher education course, designed to provide a balanced integration of theory, pedagogy, and practice.

The new program emphasizes practical placements, constituting 20 of the 60 ECTS, including 15 CFU for direct classroom teaching and 5 CFU for related activities. This hands-on component ensures that future educators gain invaluable real-world experience under the guidance of experienced mentors. Alongside this, the curriculum incorporates 16 CFU for subject-specific didactics and methodologies, 10 CFU for pedagogical disciplines, 3 CFU for language and digital competencies, 2 CFU for school legislation, 3 CFU for inclusive education, and 4 CFU for psycho-socio-anthropological disciplines (Lotti & Serbati, 2022).

The reforms also introduce strategic partnerships between schools, universities, and Teaching and Learning Centers to facilitate a seamless transition for new educators. By leveraging the expertise of TLCs, these collaborations ensure that teacher education programs are aligned with contemporary educational needs and standards. The curriculum's design reflects a deliberate effort to integrate interdisciplinary approaches, equipping teachers to navigate complex classroom environments effectively (Connelly, 2023).

Additionally, these reforms aim to address long-standing systemic issues in teacher recruitment and retention by creating a streamlined education pathway. This pathway is intended to attract motivated individuals and accelerate their entry into the teaching profession. The inclusion of digital literacy and inclusive education modules further underscores the program's responsiveness to evolving societal and technological demands. Local experimentation and feedback mechanisms are also integral to this reform agenda, enabling regional adaptations while maintaining national standards. Such flexibility allows for the testing and refinement of innovative teaching practices, ensuring that the education remains dynamic and relevant.

10 CFU Pedagogical disciplines	3 CFU Language- digital disciplines	3 CFU Inclusive education	4 CFU Psycho-socio- anthropological disciplines	2 CFU Teaching methodologies	2 CFU School legislation
16 CFU Didactics of the disciplines and methodologies referring to the class					
20 CFU internship Direct: 15 cfu (180 calssroom hours) Indirect: 5 cfu					

Table 2: the new initial teacher education courses

3. The Role of TLCs in Initial Teacher Education

Teacher education is fundamental to ensuring effective student learning, as strong teaching practices directly influence educational outcomes. Over time, the traditional teacher-centered approach has evolved into a student-centered model, emphasizing the active role of learners in the educational process. Today, learning is viewed as a continuous and dynamic process that leverages students' personal potential, with the ultimate goal of holistic development—not only academic but also personal and professional. This objective aligns with the “third mission” of universities, which extends beyond academia to contribute to societal and cultural growth through education and research (Felisatti & Serbati, 2015; Darling-Hammond & Lieberman, 2012).

The teaching paradigm has shifted from a purely transmissive model, where a good professor is someone well-versed in disciplinary content, to an outcome-based approach that prioritizes student learning. Effective educators are now expected to create engaging and stimulating learning environments, set clear learning objectives, and employ diverse teaching methods to bridge prior knowledge with new content through an interdisciplinary approach (European Commission, 2017).

Teaching and Learning Centers (TLCs) play a fundamental role in the successful implementation of Italy's reformed teacher education program, serving as essential hubs for connecting theoretical frameworks with practical application. These Centers provide a robust infrastructure that supports the comprehensive development of future educators, addressing key aspects of faculty development, curriculum design, and practical education. In terms of faculty development, TLCs offer targeted professional learning opportunities, including workshops, seminars, and mentoring programs, that equip educators with innovative pedagogical strategies and digital competencies. These initiatives encourage the adoption of evidence-based practices designed to enhance student engagement and inclusivity, while personalized feedback and coaching ensure faculty remain responsive to evolving educational demands (Coryell, 2016; Lotti & Lampugnani, 2020). TLCs also contribute significantly to curriculum innovation by collaborating with academic departments to create interdisciplinary programs that integrate rigorous theoretical content with practical relevance. Through embedding experiential learning opportunities, they enable pre-service teachers to develop critical reflective practices and a deeper understanding of classroom dynamics, ensuring a well-rounded approach to teacher preparation (Connelly, 2023). Additionally, TLCs are instrumental in supporting practical placements, a cornerstone of Italy's new teacher education model. By fostering partnerships with local schools, they organize structured internships where pre-service teachers gain hands-on experience in classrooms, supported by mentorship frameworks that facilitate professional growth and contextualized learning (Lotti et al., 2022). Beyond these contributions, TLCs drive the integration of digital tools and platforms into teacher education. Leveraging data analytics, they assess the effectiveness of teaching methods and adapt education programs to reflect evidence from classroom interactions, aligning with global trends and best practices in education (Austin, 2023). Importantly, TLCs serve as “bridging institutions” within universities, connecting often-isolated departments and disciplines, and fostering interdisciplinary collaboration that is critical in today's interconnected world. At the same time, they strengthen ties between academia and the school system, linking

educational research with classroom practice and creating innovative education pathways that prepare educators to address the complexities of 21st-century teaching. This dual focus on interdisciplinary collaboration and practical integration highlights the transformative potential of TLCs in shaping a more inclusive, innovative, and effective teacher education system in Italy. Their ability to unite stakeholders, including schoolteachers, university researchers, and academics across disciplines, underscores their pivotal role in building a teacher education framework that aligns with the demands of contemporary education while fostering lifelong learning and professional growth.

4. Case Study: TLCs in Italy

In Italy, Teaching and Learning Centers (TLCs) have played a transformative role in reimagining teacher education. Universities hosting these Centers have observed significant advancements in the quality of teaching practices and educational outcomes. By offering an array of support services such as workshops, seminars, and consultations, TLCs guide both novice and experienced educators in adopting effective teaching methodologies (Kowalczyk-Wałędziak et al., 2019). Despite these successes, challenges such as resistance to change and the need for stable funding persist.

The University of Bergamo: CQIIA

An exemplary TLC in Italy is the Centro per la Qualità dell'Insegnamento, dell'Innovazione Didattica e dell'Apprendimento (CQIIA) at the University of Bergamo. Officially inaugurated in 2023, CQIIA builds upon the foundation of the Centro per la Qualità dell'Insegnamento e dell'Apprendimento (CQIA), established in 2005. This center embodies the University of Bergamo's dedication to meeting evolving educational challenges through an innovative, multifaceted approach that prioritizes teaching excellence, professional development, and lifelong learning. The CQIIA operates through three primary sections, each addressing distinct facets of higher education and teacher education:

1. **School and Teacher Education:** Focused on developing, coordinating, and implementing programs for educational institutions across levels, this section promotes collaboration with specialized laboratories. These include IperDEA, which emphasizes inclusion and accessibility, and MatNet, which specializes in mathematics education and its applications.
2. **Educational Innovation and Digitalization:** This section drives the adoption of innovative teaching strategies and digital tools, equipping educators with the methodologies needed to create dynamic and effective learning experiences.
3. **Faculty Development:** Designed to enhance the professional skills of university faculty, this section offers tailored programs and resources to support excellence in teaching, research, and academic management.

The CQIIA serves as a hub for fostering interdisciplinary collaboration, promoting inclusivity, and integrating innovative practices into teacher education. By offering workshops, seminars, and one-on-one consultations, the center empowers educators to adopt research-based teaching strategies and digital tools. For example, education programs on platforms like Moodle and Teams facilitate the creation of dynamic online learning environments that enhance student engagement.

Moreover, the CQIIA actively supports inclusive education through partnerships with student organizations to develop accessible course materials and adaptive technologies. These initiatives align with broader efforts to ensure equity in education and prepare teachers to address the diverse needs of their students.

Beyond its impact at the University of Bergamo, the CQIIA plays a crucial role in regional and national educational strategies. In the Lombardy region, the center collaborates with educational institutions to promote STEM education, sustainability, and digital literacy. At the national level, the CQIIA participates in networks supported by the National Recovery and Resilience Plan (NRRP), contributing to the development of standardized frameworks and best practices in teacher education.

Despite its achievements, the CQIIA faces challenges such as resource constraints and resistance to pedagogical innovation among some educators. Addressing these issues requires continued institutional investment and strategic partnerships with stakeholders.

Looking forward, the CQIIA aims to expand its influence by integrating emerging technologies, such as artificial intelligence and data analytics, into its programs. These advancements could further personalize professional development and enhance teaching effectiveness. Additionally, the center plans to strengthen its international collaborations, contributing to global discussions on educational innovation.

Through its comprehensive approach and sustained efforts, the CQIIA exemplifies the transformative role of TLCs in shaping teacher education. It stands as a model for how higher education institutions can adapt to contemporary challenges while fostering excellence in teaching and learning.

5. Conclusion

The integration of Teaching and Learning Centers (TLCs) such as the CQIIA into Italy's teacher education framework underscores their transformative potential in addressing the evolving demands of education. These Centers provide a bridge between theoretical knowledge and practical application, fostering interdisciplinary collaboration and enhancing the quality of teaching practices. By promoting professional development and supporting educators in adopting innovative pedagogical strategies, TLCs address critical gaps in traditional teacher education models.

TLCs demonstrate their value not only in improving individual teaching competencies but also in creating institutional cultures that prioritize continuous learning and innovation. Centers like the CQIIA, with their focus on digital tools and inclusive education, exemplify how TLCs can adapt to broader societal and technological shifts, ensuring that educators are well-prepared to navigate diverse and dynamic classroom environments.

However, challenges persist. Resistance to change and limited resources continue to impede the broader adoption of TLC-led initiatives. Overcoming these challenges requires sustained institutional support, increased funding, and strategic partnerships with both public and private stakeholders (Murray et Al., 2019). Building a robust evidence base to measure the long-term impact of TLCs on teacher quality and student outcomes will also be crucial for securing their role in education policy and practice.

Ensuring the long-term sustainability of Italy's TLCs represents a significant challenge, particularly beyond the initial funding allocated through the National Recovery and Resilience Plan (PNRR). While the investments provided by the PNRR have established a robust foundation for the development of TLCs, their continued success depends on strategic measures that promote ongoing professional development and adaptive policy frameworks. A crucial aspect of sustainability is institutional integration, which involves embedding TLCs within the structural framework of universities. This process requires the establishment of permanent funding mechanisms within university budgets and the development of partnerships with both public and private organizations to secure long-term financial stability. Policy alignment is equally vital, ensuring that TLCs remain integrated within national educational strategies, particularly through compliance with ANVUR's quality assurance frameworks and continuous engagement with the Ministry of Education and other regulatory bodies. Furthermore, international collaborations play a pivotal role in enhancing the sustainability of TLCs. Engaging with global networks facilitates access to best practices, innovative pedagogical strategies, and additional funding opportunities. This global exchange fosters institutional resilience and strengthens the role of TLCs in advancing pedagogical innovation. By implementing these strategies, Italy's TLCs can transition into self-sustaining entities, ensuring their continued contribution to teacher education and instructional excellence in the long term.

Looking forward, the expansion of TLCs' scope into emerging areas such as artificial intelligence, data analytics, and global collaboration offers significant opportunities for growth. By leveraging these technologies, TLCs can personalize teacher education, provide targeted feedback, and enhance the scalability of their programs. Furthermore, fostering international networks will allow Centers like CQIIA to exchange best practices and contribute to a global dialogue on education innovation.

In conclusion, the role of TLCs in reshaping teacher education in Italy is both significant and promising. By addressing systemic challenges, adapting to emerging trends, and maintaining a commitment to quality and inclusivity, TLCs stand as exemplars of how higher education institutions can evolve to meet the needs of educators and students alike. Through their sustained efforts, TLCs will continue to play a pivotal role in shaping the future of education, ensuring its relevance and effectiveness in an ever-changing world (Roberts, 2013).

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