

Impacts and Challenges of Teaching and Learning Centers: a first overview

Impatti e Sfide dei Centri di Insegnamento e Apprendimento: una prima panoramica

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This contribution aims to propose a first literature review on the topic of Teaching and Learning Centers (TLCs). By analyzing a series of selected papers published between 2019 and 2024, this article focuses on two themes frequently appearing in the current academic debate. On the one hand, the role of TLCs in supporting and promoting innovation in educational and teaching practices during the pandemic and, on the other hand, the link between these institutions and the Faculty development issue. By comparing case studies and national and international experiences, the analysis of the existing literature thus provides an opportunity to reflect on the function of TLCs in the contemporary context.

KEYWORDS: TEACHING AND LEARNING CENTERS; HIGHER EDUCATION; FACULTY DEVELOPMENT; INNOVATION; EDUCATION CHALLENGES.

Il contributo propone una prima rassegna bibliografica sul tema dei Teaching and Learning Centers (TLCs). Tramite l'analisi di alcuni studi pubblicati tra il 2019 e il 2024, si sono individuate nello specifico due tematiche: da un lato, il ruolo che i TLCs hanno svolto nel supportare e promuovere l'innovazione delle pratiche educative e didattiche durante la pandemia, dall'altro il legame tra queste istituzioni e il Faculty development. Tramite il confronto tra casi di studio ed esperienze nazionali e internazionali, l'analisi della letteratura consente di individuare spunti di riflessione sul profilo e sulla funzione di queste istituzioni nel contesto contemporaneo.

PAROLE CHIAVE: CENTRI PER L'INSEGNAMENTO E L'APPRENDIMENTO; EDUCAZIONE TERZIARIA; FACULTY DEVELOPMENT; INNOVAZIONE; SFIDE EDUCATIVE.

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Introduction

As the national and international scientific literature points out, «in recent years, the globalization of higher education combined with the dissemination of digital technologies generated a strong political and social pressure for universities to continuously innovate their teaching and learning practices» (Pérez-Sanagustín et al., 2022, 3). From this point of view, Teaching and Learning Centers (TLCs) – the first of which was created at the University of Michigan in 1962 by Wilbert McKeachie (Lotti et al., 2022, 76) – play a crucial role, as highlighted by several scientific studies.

In the Italian national context, also at the policy level, the importance of Teaching and Learning Centers (TLCs) has been particularly emphasized, as demonstrated by the National Recovery and Resilience Plan (NRRP). Indeed, the fourth mission of this strategic program focuses on improving educational services from pre-school to university, in order «to mitigate the COVID-19 socio-economic impact and make Italy a fairer, greener and more inclusive country, with a more competitive, dynamic and innovative economy». In particular, a key aspect of this mission is the improvement of teacher training: indeed, as is well known, the creation of three TLCs – planned for each geographical macro-area of Italy (North, Central, South and Islands) – is functional to the promotion of teacher skills, with a particular focus on digital innovation and pedagogical competencies.

According to the additional information provided in the annexes to the National Recovery and Resilience Plan, each Teaching and Learning Center will offer courses to support all teaching staff, including professors, tutors, and postgraduate students, in promoting new educational programs and integrating digital technologies into everyday school and university teaching. Specifically, this document emphasizes the significance of exploring new teaching methods that meet the needs of 21st-century learners, including interdisciplinary and problem-solving approaches. It also stresses the importance of ensuring that access to higher education is fair and inclusive, overcoming socio-economic, geographical, and cultural barriers.

Given the importance that these institutions are assuming today, this paper aims to present a preliminary analysis of national and international studies published in recent years on Teaching and Learning Centers, covering a period from 2019 to 2024.

A series of scientific contributions have been selected, focusing on two specific issues, frequently mentioned in national and international literature¹: innovation in higher education and faculty development, with the aim to provide a first exploration of recent publications related to Teaching and Learning Centers, rather than a systematic review of the existing literature (Ghirotto, 2020).

Indeed, this paper is structured around two main sections that are closely related. The first one is dedicated to the key role of Teaching and Learning Centers during and after the pandemic, highlighting the challenges and innovations in higher education. The second section emphasizes the importance of supporting university professors to provide quality education for all students, illustrating the impact of TLCs from this point of view.

In each section, the most relevant contributions, published from 2019 to 2024, are discussed, focusing on the main elements the authors have pointed out. Indeed, it is only by comparing national and international experiences that it is possible to gain a broader view of the issue, identify the best practices adopted in different contexts and examine how educational institutions - both Italian and international - deal with similar challenges in order to improve teaching and learning processes.

Challenges and innovations in higher education: the key-role of Teaching and Learning Centers *during and after* the pandemic period

As mentioned above, a first issue frequently highlighted in national and international literature is the key role played by TLCs during the COVID-19 pandemic, when academic institutions were faced with the need to review and modify their teaching methods, due to the long-lasting closure of schools and universities.

In this context of emergency, the importance of TLCs has increased and been more widely recognized, as several authors have pointed out. Among them is Schlesselman (2020), who illustrates the fundamental support that the Teaching and Learning Center of the University of Connecticut (USA) has provided to

¹ This research was carried out through the portal <https://bigsearch.unibg.it> (date of last access: 20th January 2024) entering "Teaching and Learning Centre" as a term in the search string, with specific criteria such as "contains the phrase", and selecting publications dated between 2019 and 2024. This research produced 118 publications, including 88 articles, 15 book chapters, 8 books, 3 journal articles, 3 web resources, 1 dissertation and 1 review article. However, many of these papers were not strictly relevant to the purpose of our research. Therefore, reviews, dissertations and online resources were not included in this study. Indeed, this article does not aim to provide a systematic review of the existing literature, but rather an initial exploration of recent publications related to teaching and learning centers (Ghirotto, 2020).

faculty members, helping them to develop a flexible model for planning online courses.

The issue of the transition to online teaching and the significant assistance that TLCs offer to teaching and learning processes also emerges in the contribution written by Eaton (2020), who extends the horizon of analysis to TLCs in the Canadian academic context, highlighting how these structures have assumed a particular relevance in supporting the continuity of teaching activities at a time of profound instability for academic education. Writing in “University Affairs”, known as «the most influential source of information on and for the Canadian university community», she highlights the central role that TLCs played in the Canadian context during the pandemic’s emergence, ensuring the continuation of teaching activities. Thanks to the technological support that the TLCs were able to provide to faculty and university staff – for example, at Simon Fraser University, the University of Calgary, Brock University and Concordia University – the TLCs proved not to be mere «support units» of the university institutions, but rather, as the author defines them in the title of her contribution, true «academic heroes», thanks to whom it was possible to provide lessons and exams in a way that had never been imagined before. In particular, the author emphasizes that the TLCs allowed the transition to distance learning, thanks to the presence of adequately trained staff able to meet the multiple educational challenges posed by the emergency. On the other hand, offering distance learning to their students was more complicated for institutions without TLCs. Considering these elements, it is therefore necessary to underline the fundamental role that TLCs play from an educational and training point of view, for both teachers and students: indeed, as the author writes, «they are crucial to the value proposition of higher education institutions».

Similarly, in a different geographical context, De Klerk, Krull and Maleswena (2021) have investigated students’ adaptation to distance learning caused by the COVID-19 pandemic, by analyzing an online program specially designed by the University of the Witwatersrand in South Africa. This program was developed to support students during the lockdown period, by providing them with the resources they needed to make the transition to online learning. It was based on Gilly Salmon’s (2002) five-stage model, which was used as a guiding framework for the development of the content offered. This model allowed the program to be organized progressively, starting from basic ideas about the use of digital technologies to strategies for improving the effectiveness of distance learning

and managing one's psychophysical well-being during the emergency period. The aim was to provide students with the necessary tools to face the new online learning environment successfully. As the authors illustrate, student feedback was good, with many expressing appreciation for the program and recognizing it as a key factor in alleviating the anxiety associated with the transition to a fully online learning environment. This initiative, sponsored by the Teaching and Learning Center, was seen as a crucial intervention to support students during great uncertainty and change.

While the study by De Klerk, Krull and Maleswena (2021) highlights the strategies adopted by the University of the Witwatersrand to support distance learning students during the pandemic, the analysis by Pérez-Sanagustín and colleagues (2022) broadens the perspective by emphasizing the need for a sustainable transformation of Teaching and Learning Centers. Indeed, the authors point out the difference between "transformation" and "metamorphosis" – the latter referring to a sudden and profound change – and highlight how Teaching and Learning Centers can play a central role in sustaining the metamorphosis that has taken place in higher education since the pandemic period. To guide higher education institutions in the design and implementation of TLCs to meet the challenges of the 21st century, the authors describe a model, the PROF-XXI framework, which includes, from a holistic perspective, a set of competences that TLCs should be able to develop. In fact, each TLC should be organized as «a complex, multi-layered, and multipurpose unit» (Pérez-Sanagustín et. al., 2022, 4). The PROF-XXI framework – structured in five dimensions (A. Teacher support; B. Student support; C. Leadership, culture and transformation; D. Technology for learning; E. Evidence-based practices) and five levels of competence (1. Development; 2. Innovation; 3. Value generation; 4. New challenges and opportunities; 5. Public accountability of impacts for continuous improvement) – can be used as «a self-assessment tool to help institutions understand their overall competence level, as a reference for strategic planning definition to identify the strategic aspects to develop, or as an accreditation framework to certify the innovation competence level of their TLC» (Pérez-Sanagustín et. al., 2022, 4).

The literature also highlights the role that TLCs have played in providing concrete support for the creation of digital platforms. This is the case of the project described by Ginty and Cosgrove (2023) in their paper "Building Digital Capabilities with DigitalEd.ie: Learnings from the Digital Transformation Journey at ATU 2023". In describing the project that led to the creation of the DigitalEd.ie

platform, the authors highlight the leadership role of the Teaching and Learning Center at Atlantic Technological University (Galway-Mayo, Ireland) in the development of this tool, which was particularly valuable to teachers, especially during the pandemic period. Indeed, in 2019, Atlantic Technological University (ATU), where digitization and the use of technology in education is a priority, received funding from the Higher Education Authority (HEA) to promote digital capacity building in higher education. As the authors point out, «the DigitalEd.ie knowledge platform and associated COVID remote teaching and learning services implemented in Atlantic Technological University 2020-22, has accelerated the rate of teacher engagement with digital education and technology enhanced learning tools» (Ginty and Cosgrove, 2023, 20). These aspects had an impact not only on teachers, but also on students, who benefited from greater involvement in classroom activities.

The importance of the support provided by the TLCs to universities and teachers during the COVID-19 pandemic is also emphasized in the Italian context, as shown by Bernardo and Bontà (2023). The authors focus on the Teaching and Learning Center of the University of Urbino (Italy), which played a crucial role in supporting teachers and students in the transition to online teaching and assessment, which required not only methodological reorganization but also the updating of teachers' technological skills.

Therefore, the University's TLC, renamed "Centro Integrato Servizi Didattici ed E-Learning (CISDEL)" in 2015, represents an emblematic example of how ICT investments can facilitate the adoption of effective online solutions to provide flexible and accessible education for all, in times of uncertainty and otherwise. Thanks to the CISDEL, the University of Urbino has been able to meet the challenges of the pandemic, ensure the continuity of education and support the academic community.

Therefore, while these contributions analyze case-studies, strategies and experiences undertaken in different contexts to address the challenges of the pandemic, they also reveal some similarities. Indeed, they recognize the centrality of TLCs in encouraging the improvement of teaching and learning practices and in fostering pedagogical innovation. As Lotti highlights (2022), these institutions have some crucial macro-objectives, that need to be taken into account, such as «promoting the quality of university teaching; encouraging the training and self-training of teachers through forms of collaboration and participation; developing a professional collaborative environment and the individual and collective

professional growth of an inclusive academic community focused on student success; promoting innovative and alternative research practices in teaching» (Lotti et al., 2022, 78).

Although there are different types of TLCs - which can take the form of either a «university center with internal staff who plan and deliver training and research services and activities», but also an «office that plans training activities delivered by external parties», or a «faculty development committee» and a «faculty development training programme» (Lotti et. al., 2022, 81) - the difficulties experienced during the pandemic period offer an opportunity to reflect critically on the importance of fostering the development of TLCs, as several authors have pointed out. Indeed, given the support they have provided to higher education in times of crisis, the contributions considered here argue for the valorization of these institutions as an essential resource, in order to ensure their effectiveness in meeting the evolving needs of higher education in the 21st century.

Faculty Development, Teaching Innovation and Teaching Quality

The national and international scientific literature on TLCs emphasizes not only their centrality during the COVID-19 pandemic, but also their crucial role in supporting the professional development of teachers. As several articles illustrate, strategies like the creation of interdisciplinary teams or the promotion of new teaching methods aim to address contemporary challenges such as technological advances, the adoption of student-centered pedagogical approaches and the improvement of graduates' employability.

In national and international contexts, the importance of reflecting on the issue of teachers' professional development has received particular attention. A recent publication represents an example of this aspect, the "Palgrave Handbook of Academic Professional Development Centers", edited by Neisler and colleagues (2023). This book provides an overview of the design, implementation and evaluation of Academic Professional Development Centers and offers opportunities for critical reflection and exploration of case studies worldwide. In the first part various contexts are considered, such as Australia, Latin America, China, and Africa. The second part identifies the features that ideally characterize an Academic Professional Development Centre, including a mission, organizational structure and planning, precise evaluation strategies, etc. The Handbook highlights the significant role of faculty development in improving student outcomes and preparation.

It emphasizes the importance of well-trained and reflective teachers in enhancing the quality of education. The Handbook draws on national and international sources and includes examples and case studies that illustrate the impactful work of TLCs in faculty development.

In the American context, for example, several TLCs have recently introduced faculty development initiatives to promote inclusivity in response to discriminatory incidents on campus. Hengesteg and colleagues (2021) conducted a study at Iowa State University, investigating the institution's response to racism and homophobia episodes. These events increased student demand for the university administration to take more effective measures against discrimination. In response, the Centre for Excellence in Learning and Teaching (CELT) of Iowa State University introduced a mandatory training program for teaching staff, called *Inclusive Classroom Annual Training*. The study investigated the faculty's reflections on the training they received. It revealed that they appreciated the new perspectives they gained on viewing students not just as "knowledge vessels" but as complex and unique individuals in a state of development.

Remaining within the American context, Jacobs (2022) presents another example of faculty development promoted by a TLC. The contribution describes the results of the "Auxin Project"², an initiative aimed at enhancing the Centre for Teaching and Learning activities at Stellenbosch University (USA). The program is designed to create a community of teachers who pursue academic excellence and adapt their teaching to the specific needs of students. The Auxin project aims to improve teaching effectiveness by balancing theoretical and practical aspects and supporting teachers' professional development in a contextualized and targeted way. At the root of the project, there is, as the author writes, the desire «to create occasions for educators to talk, to find colleagues, to be part of a community of practice», in the knowledge that «good things happen when teachers talk».

Regarding the role of TLCs in advancing educational methodologies, Watts' (2019) essay explores the challenges and evolution of TLCs in small private colleges in the United States. The analysis emphasizes the transformation of TLC roles, which moved from a traditional focus on faculty professional development to becoming facilitators of traditional and online teaching and learning (in particular during the pandemic emergency). Watts analyses the role of these TLCs in curriculum development, integrating teaching technologies, and supporting faculty development.

² The project's name refers to the Greek verb "auxano", meaning "to grow".

The research identifies TLC leaders as “strategic facilitators” who use various leadership styles - administrative, adaptive, and facilitative - to promote initiatives that ensure teacher training and active participation.

Moving to the Italian context, the literature analysis presents interesting case studies of faculty development. These studies provide valuable insights into the approaches and challenges in the Italian academic landscape.

Specifically, Fabbri and Romano (2019) provide a detailed analysis, showing how the Siena TLC embodies the ideals of innovation and pedagogical support that are fundamental for adaptation to contemporary educational and professional needs. The authors note that «one of the dilemmas European higher education systems faces is how to support the acquisition of strategic skills to enhance student employability and faculty professionalism» (Fabbri-Romano, 2019, 53). TLC activities at the University of Siena aim to develop transversal competences in teachers and students, aligning their professional identities with the workforce's needs. Students are encouraged to see themselves as active participants in their learning. At the same time, teachers are invited to experiment new teaching methodologies and share innovative projects that encourage reflection on their professional identity.

In a related context, another contribution by Fabbri and colleagues (2023) further enriches the debate by providing an overview of the Italian national panorama through the analysis of complementary case studies. This study, which focuses on the University of Siena and the University of Macerata, extends the understanding of the organizational strategies used to promote the professional development of teaching staff. Siena's TLC is dedicated to improving the professional skills of students and teachers, proactively responding to the needs of the labour market³, while the University of Macerata, through its Teaching and Learning Lab (TLL), illustrates a parallel commitment to promoting critical reflection on teaching practices⁴.

The choice of an innovative didactic approach centered on the development of transversal competencies promoted by the University of Siena's TLC reflects the broad movements in the field of Faculty Development (FD), as also illustrated in Antonella Lotti's (2020) contribution titled “Faculty Development: A Brief History

³ In the summer of 2021, the University of Siena promoted the project “The Art of Teaching@Unisi”. It was designed like «a mosaic of microteaching modules that allowed Unisi faculty to cultivate, document, and reflect on teaching development across the technology-enhanced learning modality provided in the Spring Semester of 2021» (p. 98).

⁴ The authors describe the “PRO3” Faculty development project at the University of Macerata. The project involved 60 faculty members from five departments, equivalent to 35% of the teaching staff. The project aimed to promote reflection on teaching methods by comparing and sharing experiences.

at the International and National Levels”. Lotti traces the historical evolution and strategies of FD, describing the history of FD, which began in the early 1960s at Michigan State University and was initiated by psychology professor Wilbert McKeachie. Within a few years, more than a hundred universities had established Centers with organizational autonomy, staff, and dedicated resources (Bergquist and Phillips, 1975) to develop programs dedicated to FD. In the context of Italy, where the history and evolution of faculty development is relatively recent, the author highlights that similar to other countries, the origins of faculty development in Italy can be traced back to early efforts to improve teaching effectiveness in academic higher education. In 2014, the PRODID (Preparation for Teaching Professionalism and Didactic Innovation) project was introduced at the University of Padua, making the whole approach relevant in Italy (Felisatti and Serbati, 2015)⁵. The author concludes by stating that after more than six decades of constant evolution, faculty development should now be considered an integral part of all levels of the educational system.

To remain within the Italian framework, Perla and Vinci (2021) present an example of a faculty development initiative. They emphasize the value of interdisciplinary teams in Centers for Teaching and Learning to enhance the professional development of university professors. These interdisciplinary teams collaborate actively in creating curricula to enrich teaching and ensure alignment between educational objectives and student learning outcomes. The University of Bari has been experimenting with this innovative approach since 2016. This culminated in creating the first Teaching Learning Laboratory (TLL) in 2017. The Bari TLL aimed to analyze teaching syllabi to assess their clarity and heterogeneity and examine the coherence between training objectives and learning outcomes, to develop guidelines for effectively drafting syllabi.

Viviana Vinci and Alessia Scarinci's 2022 study emphasizes the importance of improving the competencies of university professors in Italy to enhance student learning. The study highlights the need for lecturers to update their skills, particularly in digital and methodological areas, to address the evolving demands of technology integration and labour market relevance. Despite the crucial role of professional development, it is often overlooked or provided sporadically, as evidenced by the 2017 report on the Modernisation of Higher Education in Europe:

⁵ The PRODID project aims to address the issue of supporting teaching in the innovation and qualification of teaching. The project's ultimate goal is to create the conditions for establishing a University Teaching Learning Centre that will operate in a stable form in the education of university teaching staff.

Academic Staff. Based on a survey of 721 teachers regarding their distance teaching experiences, the research emphasizes the urgent need for continuous professional development. The report recommends that teachers engage in development programs that foster community, experiential learning, and reflective practices to update teaching methods and perspectives. From this perspective, TLCs represent a strategic resource since they help to promote and improve teachers' professional skills: they «provide validation and valorization of academics' competences developed through training» (Vinci-Scarinci, 2022, 279).

In closing, the literature and case studies reviewed in this section collectively reveal the transformative role of TLCs in supporting the professional development of academics. From their early efforts at faculty development to their current strategies for meeting challenges of technology integration, student-centered learning and improving graduates' employability, TLCs are clearly playing a transformational role. The researchers' findings highlight the need for ongoing support for leaders and faculty who are active members of TLCs, emphasizing the importance of interdisciplinary collaboration, innovative pedagogical practices and continuous reflection on professional identity. Improving faculty development and TLC activities is a strategic element for universities that want to respond effectively to the challenges of higher education in the 21st century.

Towards a Preliminary Synthesis

Through this first literature review, this article has outlined the essential role that Teaching and Learning Centers have played both in supporting higher education in times of crisis and in promoting faculty development, especially to meet the various challenges posed by the COVID-19 pandemic and the exponential acceleration of digitization. Today, their role also seems increasingly important in the light of all the other current issues affecting educational contexts, such as inclusion, multiculturalism, sustainability, etc. (Bertagna, 2023). Considering these aspects, it is crucial for teachers to be adequately prepared to provide their students with knowledge that can take root and become meaningful (Bertagna, 2017), both in school and university contexts.

As the analysis of several experiences, good practices and theoretical studies has shown, TLCs are configured as institutions for teachers' professional development, didactic innovation and quality of teaching in order to optimize students' educational success.

Although there is no standard model for these centers - which vary widely in size, mission, organization and available resources depending on the institution to which they are affiliated (Sorcinelli, 2002; Neisler, 2022; Austin, 2023) - the main aim of a TLC is to foster a culture that values teaching and learning and to provide support to the entire academic community, thereby promoting educational excellence (Wright et al., 2018; Dickens et al., 2019).

Indeed, TLCs provide a wide range of services through training and mentoring programs, resource development, support in solving teaching problems, and encourage innovation and continuous improvement in teaching methods, promoting a culture of excellence in teaching (Varma Nelson & Turner, 2017).

As recent studies point out, excellence in teaching must be recognized and valued at different levels, including as part of professional development (EUA, 2019). Following the guidelines of ENQA - European Association for Quality Assurance in Higher Education (2007, 2015, 2020), universities are encouraged to support, recognize and certify the pedagogical, design and assessment skills of teaching staff. Initiatives for the continuing professional development of professors, doctoral students and young researchers need to be intensified by adopting a holistic approach to academic development (Troelsen, 2021).

Considering these aspects, among the many themes that emerge from this initial national and international literature analysis, the emphasis on the role of TLCs from a pedagogical point of view seems particularly interesting. While developing different aspects and issues, most of the contributions highlight, in different ways, the benefits that the actions and programs promoted by TLCs can bring to learning and teaching processes.

In particular, these institutions not only help teachers to use new technologies and promote their digital skills, as happened during the pandemic, but also emphasize the figure of a teacher conceived as a *magister*, able to reflect on his teaching practice and provide students with meaningful knowledge (Bertagna, 2017; 2020). TLCs also relaunched the idea of education seen as self-development (Bertagna, 2017), thanks to the ability to critically analyze one's daily practices.

Furthermore, a common aspect that emerged from several contributions is that TLCs put scholars and students at the center of their work. Indeed, these institutions promote the creation of an inclusive and inspiring educational context by considering teachers and students as whole persons, working in synergy as singularities (Bertagna, 2018). TLCs enable students to participate in their education

and training actively. It is widely acknowledged that an educational process that is not perceived as a mere collection of notions and abstract concepts is necessary to engage the whole person in the learning process (Bertagna, 2020, 90). In accordance with the ultimate goal of education - which is not only to give knowledge but also to develop the potential of each individual and promote their integral development - TLCs aim to provide a comprehensive education for each person (Bertagna, 2020).

In conclusion, although current studies in the national and international context describe a plurality of experiences and show a lack of uniformity of these institutions (e.g. in terms of organization, structure, evaluation...), this initial literature review could provide theoretical reflections, case studies and good practices from which inspiration could be drawn, in order to strengthen the role of TLCs, which have all the potential to be identified as key players in leading institutions towards current and future challenges.

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