Innovation as socially shared practice: the contribution of the Teaching and Learning Center

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Abstract

The contribution describes a study on the organizational devices and the professional development programs carried out at the Teaching and Learning Center (TLC) of the University of Siena and at the Teaching and Learning Lab (TLL) of the University of Macerata. The focus is on systemic actions capable to elicit innovation at an organizational level, starting from the work of the institutional centers for research, professional training, and digital enhanced learning embedded in the university. In the final paragraph, future developmental trajectories for constituting an inter-universities network of TLCs are discussed.

Keywords: *Teaching and Learning Center; faculty community of learning; research; didactics; MOOC.*

1. The role of the Teaching and Learning Centers

The Teaching and Learning Centers (TLCs) are academic centers that provide support services for faculty for improving their teaching and to design professional development programs. The TLCs also equip undergraduate and graduate students with skills useful to prepare for their future careers. In this sense, TLCs function as innovation hubs and as cognitive apprenticeship "laboratory," where didactic and digital innovation is configured as a process that goes beyond the development of the practices of individual professors, placing itself, instead, at a level of organizational change and cultivation of professional learning communities (Cox, 2004; O' Meara, 2008; Fabbri & Romano, 2019). Frantz et al. stated, "For decades, American institutions of higher education have established Teaching and Learning Centers (TLCs) to help faculty members develop, assess, and refine their teaching skills" (Frantz et al., 2017, p. 73). These institutional centers not only offer instructional development activities, including basically intangible services such as faculty consultation services, resource rooms for faculty, workshops, seminars, instructional technology support, media production facilities, multicultural teaching and learning assistance, but also artifacts and material supports, such as guidelines, toolkits, MOOC (Massive Online Open Course), and newsletters (Wright, 2000; Frantz et al., 2017). Accordingly, over the past 50 years, centers for teaching and learning (CTLs) have gained a reputation for advancing academic quality in universities across the world (Hines, 2017).

Inheriting the consolidated knowledge diffused all over the world, in Italy also, dozens of university TLCs have been funded in the last 5 years. In this regard, it is worth to mention the Teaching for Learning project at the University of Padova (Fedeli, 2019; Bolisani et al., 2021), which was one of the first (and the most important) experiences of faculty development in Italy. Nevertheless, several projects for faculty development were disseminated in many universities along the country; even if they did not have the institutional formalization in research and training university centers, these projects contributed to the widespread renovated "sensitivity" to teaching and digital innovation.

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[1] The article is the result of the fruitful collaboration among the four co-authors. Only for scientific reasons, sections *1. The role of the Teaching and Learning Centers, 2. The experience of the TLC of the University of Siena,* and *4. Future research strands: toward an inter-universities network of TLCs* are contributed by Loretta Fabbri and Alessandra Romano, while section *3. The Teaching and Learning Lab of the University of Macerata and the faculty development PRO3 program* is contributed by Piergiuseppe Rossi and Lorella Giannandrea.

Among the centers described so far, we have selected two centers for organizational and didactic innovation, the TLC of the University of Siena and the Teaching and Learning Lab of the University of Macerata. The criteria for the selection of these two cases were (a) the interest in searching for centers which combinate implementation of new teaching methodologies and the development of inter-institutional projects and (b) the need to have centers which had promoted peer-support mentoring, faculty community of learning, and bridge faculty innovation with curricula changes in the academic programs. This restrictive selection relies on the authors' previous studies investigating the innovation practices and struggles experienced on a range of 20 international and national CTLs (see in this regard, Fabbri & Romano, 2019; Romano, 2020). The purpose is to produce information-rich descriptions of the organizational and systemic actions taken to cultivate faculty professional development (Patton, 1990). The focus of the analysis is on the mission of the two centers, their evolution, and the design of peer support-based programs for the didactic innovation. This groundwork serves as the basis for exploration of the organizational and institutional conditions for the creation of an inter-universities network of TLCs, outlined in the final section[2].

2. The experience of the TLC of the University of Siena

The TLC of the University of Siena is a research and training center founded in the Santa Chiara Lab, a hub space for supporting the mutual influence between multidisciplinary research projects among students, faculty, and entrepreneurs. In 2016, the University of Siena was among the first Italian universities to establish a TLC to support students in building their professional soft skills with methodologies, instruments, and tools, while also featuring strategies to support the faculty.

The TLC of the University of Siena (henceforth Unisi) is the research and professional development center that supports the faculty development of Unisi community. It offers an array of support to help them measure, improve, and reflect on their teaching practices and professional epistemology. Faculty that took part in the TLC's programs and services have developed instructional practices that are oriented to learner-centered, transformative, and inclusive approaches (Weimer, 2013; Sorcinelli, 2020; Taylor, 2012; McGuire, 2015). The mission is as follows:

a. to provide professional development for undergraduate and graduate students and help them express their soft skills required for raising their employability once they will enter the labor market;

b. to offer training course for the faculty who want to engage in supportive community of peers and in reflecting on their teaching practices; and

c. to conduct action-oriented research to explore the purposeful use of media and digital tools to translate into teaching improvements.

Since its constitution in 2016, the TLC is dedicated to supporting academic excellence by awakening, nurturing, and empowering all faculty members who voluntarily participate in the activities to ensure quality learning by students and effective teaching (Fabbri & Romano, 2019). The constitution of the TLC took place following formal discussions with the TLCs of US universities: privileged institutional interlocutors were the CTL, Columbia University, and the International Transformative Learning Association. Thanks to the connection with this institutional network, the TLC of Unisi has been characterized by the attention paid to two macro-areas of action as follows: a) experiential activities aimed at the professional development of university teachers, faculty, and researchers, with a specific focus on didactic innovation practices and b) laboratories for the development of soft skills for students, such as distributed leadership, communication skills, creative team working, complex problem-solving, and intercultural skills necessary to work in highly multiethnic contexts. Each laboratory is characterized by the facilitation through active developmental methodologies (Watkins, Eileen, & Lodge, 2007), and was designed as a coworking space from where the transversal skills necessary for their employability into the current work scenarios can be learned.

2.1. The organizational learning as a strategic leverage for academic innovation

The methodological assumption from which the Scientific Coordinator Unit started more than 5 years ago was that sustaining faculty, professors, and researchers in their professional development could happen in peer learning paths in which they are solicited to critically reflect on their own experience and on the disorienting dilemmas encountered inside and outside the classroom (Fabbri & Romano, 2019). Consequently, the conceptual and methodological anchors not only consist of the consolidated international literature on faculty development (Steinert, 2019; Weimer, 2020; Fedeli, 2019), but also of the community of practice and practice-based approach (Wenger, McDermott, & Snyder, 2002; Kennedy, Billett, Gherardi, & Grealish, 2015; Bolisani et al., 2020) and informal transformative learning (Watkins & Marsick, 2021; Brookfield, 2017).

Accordingly, the TLC adopts a transdisciplinary approach that allows different points of view to be used to analyze problems and elicit the interaction between "professional knowledge" and "learning from practice" for building that complex experiential knowledge that cannot be reduced to single disciplinary sectors (Kennedy, Billett, Gherardi, & Grealish, 2015).

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[2] Methodological note: The authors of this paper bring an insider perspective to the study of those experiences: they all are scientific responsible of faculty development programs and teaching innovation projects in their universities. Despite this, no potential conflict of interests is reported.

Between 2016 and 2021, 480 h of top-down training interventions were organized to promote (a) the awareness of the teaching choices and (b) the ability to analyze the impact of teaching methods on student learning. Starting from 2018, longitudinal paths were designed and implemented in the modality of workshops with a participatory nature and in small groups, held by well-known international and Italian faculty developers, through the facilitation of active development methodologies, such as Action Learning, Action Learning Conversations (O' Neil & Marsick, 2009), and the analysis of Critical Incidents in the Classroom (Brookfield, 2017). From a transformative informal perspective to innovation in teaching and learning (Marsick & Neaman, 2018; Watkins & Marsick, 2021), supporting faculty and researchers in their professional development did not translate into lectures or monologs of "experts" who teach someone something, but in the construction of learning paths in which group of peers make their own experience object of shared collective reflection, diagnosing the disorienting dilemmas encountered in face-to-face and virtual classrooms, the critical incidents, and the discomforting situations perceived as such by the faculty themselves (Fabbri & Romano, 2019).

In line with this framework, the establishment of an institutional TLC represented the institutional space for the birth of professional learning communities, whose members share a commitment to disseminate participative teaching methods and to act as innovation leader in their departments (Fabbri & Romano, 2019). In 2018, the *Faculty Community of Learning@Unisi*, a project designed to cultivate the educational innovation processes, was funded, thanks to the engagement of insider professors from each of the major departments. The Faculty Community of Learning was made up of full and associate professors and newly hired professors. The mission of the Faculty Community of Learning can be summarized into five key points, graphically outlined in Figure 1:
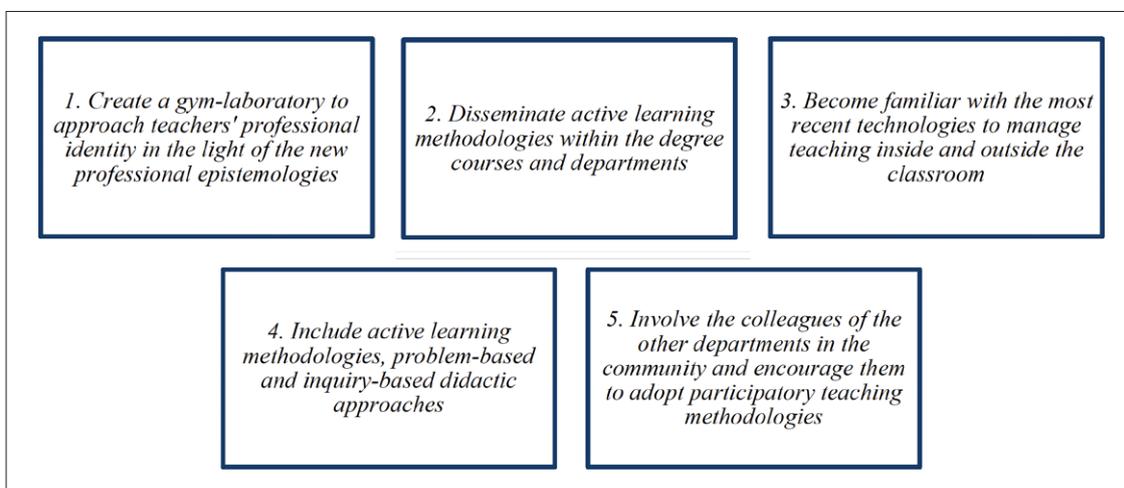

Fig. 1. The key principles of the Faculty Community of Learning at the Teaching and Learning Center of University of Siena
(source: original elaboration of the authors)

The Faculty Community of Learning@Unisi is co-facilitated by the members of the community with the role of facilitators: in 2019, at its initial stage, an associate professor in chemistry and an associate professor of special education were named faculty coordinators and had to hold up the launch and evolution of this interdisciplinary group. A bottom-up sociocratic approach has been settled for the community management (Buck & Vilines, 2017; Lieberman & Miller, 2008; Fabbri & Romano, 2017). Through this sociocratic group management structure (Buck & Vilines, 2017), faculty community members learn how to change their syllabi, assessment strategies, and classroom activities to foster students' engagement. Intensive summer schools had been organized in 2019 and 2020, conceived as opportunities to showcase the accomplishments of innovative experiences that have advanced the innovation ranking in those departments.

Step by step, the Faculty Community of Learning has moved from in presence to online modality, taking advantage of the facilities offered by the online platforms. This shift has been reinforced by the spread of the pandemic coronavirus disease 2019 (COVID-19), which imposed a massive movement onto learning online platform and has irreversibly changed practically the culture of teaching (Esteves et al., 2021).

The COVID-19 pandemic and the related lockdowns forced teachers of all levels to suddenly turn toward distance learning and ubiquitous forms that literature defines as emergency remote teaching (Hodges et al., 2020; Rivoltella, 2021). New inquiry questions arose: Which models of research and professional development will be most promising for the future? What are the changes in faculty perspectives about their professional identity? How to intercept effective teaching practices even outside the confines of one's own university? To answer these questions, in the 2 years 2020–2021, the TLC of the University of Siena opened collaborative inquiry trajectories involving colleagues from foreign partner universities (such as Columbia University, Florida Gulf Coast University, University of Georgia). Exploratory research was codesigned and launched, with the adoption of a set of methodologies and tools[3]. The researchers of the TLC found that

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[3] Research tools included self-report questionnaires, created in collaboration with the evaluation unit of the university and administered to a nonrepresentative sample of 110 university teachers, ethnographic observations, focus groups, and narrative interviews with professors and researchers beyond the faculty communities of learning.

the emergency remote teaching experienced during the COVID-19 pandemic had impacted on different levels of faculty professional epistemology. According to the emerging findings, it has solicited

- *change in teaching practice*, galvanizing the need to codesign the online and blended course in collaboration with other colleagues and to increase faculty pedagogical competences;
- *change in students' learning*, imposing to embed new tools to enhance students' engagement, such as students' response systems, polls, transforming types of assignments toward more formative than summative assessment procedures; and
- *institutional change*, with the totalizing shift in faculty/staff engagement in online teaching, highlighting the presence of significant cultural biases (such as skepticism and criticism) toward technology-enhanced learning and weaknesses in the organization-driven training area for accompanying faculty and researchers toward digital enhanced didactics.

The analysis of the results allowed the construction of an online methodological path, based on a practice-based and community-based vision. In Summer 2021, the TLC of the University of Siena inaugurated a comprehensive innovative professional development program entitled "The Art of Teaching@Unisi." This program lasted 36 h and was designed as 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. The program offered a space for sharing and re-elaborate resistances and polarization against the blended learning as a prevalent modality of teaching, accused to be much more like a dual system of carrying on the lesson than a digital integrated teaching. According to the customer satisfaction surveys and follow-up interviews with the participants, the program promoted different types of reflective practices and conversational processes to support faculty in their transition from a passive adaptation to the new work-related experience to learning from this (Marsick & Neaman, 2018; Fabbri & Romano, 2019) and from polarized positions toward integrated digital teaching (*technoskeptics* vs. *technoenthusiasts*) to more flexible, creative, and imaginative perspectives. These outcomes could reinforce the stabilization as systemic innovation of the technology-enhanced teaching practices gathered through blended teaching modality.

Finally, in Fall Semester 2021, the Scientific Coordinator Unit of the TLC of Unisi developed a model of co-teaching practices for six classes held in the Department of Social, Political, and Cognitive Sciences: this was a pilot experiment capable of mixing teaching observations methods with co-facilitation techniques. Six faculty carried out these co-teaching practices in their classes: they were two young researchers, three associate professors, and one full professor. They belonged to different disciplines, such as sociology, general pedagogy, and didactics. The co-teaching provided a couple or a trio of teachers/professors for a 2-h-long lesson per week: the matching of the couple or trio should follow the criterion of enrich active learning and valorization of diversity in class, with, for example, one (or two) young age professors with a senior one, or one young researcher with two senior professors. The process consists of an initial goal-setting stage with four/five meetings for course codesign. Then, an iterative cycle of facilitation leading and in-class observations follows for one lesson per week. In contrast to what is usually expected with peer/teaching observations, the facilitation leading and the peer observation roles rotate alternatively between the senior professor and the young researcher. This rotation system permitted both the members of the couple or the trio to have the role of facilitator/observer. For each lesson, a post-observation collaborative consultation was mandatory, including a verbal summary of the experience for collective reflections, feedback, and resources sharing for planning future lessons. In this pilot experience, the co-teaching practice provided individualized feedback on the clarity of teaching, students' inclusive engagement, and on strategies to improve session goals. The next steps encompass to furnish more structured grid for peer observers and to define an assessment system to evaluate the impact and efficacy of the co-teaching practices upon students' learning and proficiency.
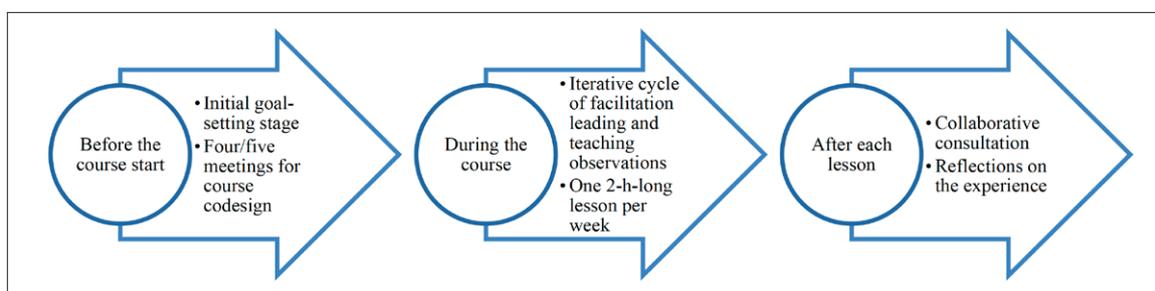

Fig. 2. The co-teaching practice model at the TLC of University of Siena (source: original elaboration of the authors)

3. The Teaching and Learning Lab of the University of Macerata and the faculty development PRO3 program

The reflection on university teaching at the University of Macerata (henceforth Unimc) began at the end of the first decade of the 21st century, when the relationship between teaching and research was analyzed, also with reference to the reform that took place in those years and required to redesign a new organization capable of overcoming the dichotomy between faculty and departments.

In the conference on "*The future of pedagogical research and its evaluation*" held in 2011 in Macerata, some interventions focused on the relationship between research and teaching and connected it to the professionalization (Rossi, Magnoler, & Marcelli, 2011). The contribution started from the international research on the subject, particularly from

the Anglo-Saxon area, for some time much more attentive to the professional development of university professors than the Italian context. Some reviews were considered as points of reference, including Halliwell's report (2008), Haley's annotated bibliography (2004), and the studies by Giffits (2004) and Haley (2005), from which emerged three ways for connecting teaching and research, which are as follows:

- Research-lad (the results of the research are communicated in the classrooms);
- Research-oriented (the curricula are structured according to the logic and the processes of research in the sector, but the students are not involved in the courses themselves); and
- Research-based (students collaborate with research; the curriculum is set up for problems on the inquiry-based research model).

From these inputs, it emerged that working on university teaching could not be just reflecting on transposition and mediation of cultural objects, but always keeping in mind that the professor, certainly in nontelematic universities, is also a researcher, and that academic didactics, even that of the 3-year bachelor's degrees, must reflect on the research methods.

The previous considerations highlight how the training of a university professor on teaching requires specific attention to the relationship between research/teaching actions and relationship with students. The change in the role of the university, started after World War II, has certainly changed the role and structure of the university. The relationship with research was in the past connected to the function of the university to form an élite and research was part of this élite. Nowadays, university education should involve an increasing number of citizens, no longer just an élite. Therefore, the reason for connecting research and teaching evolves. Today, this relationship stems from the need to train competent and capable professionals. If earlier, the relationship between research and teaching in the academic world was based on the separation between theory and practice, and between basic and applied research, today, it is precisely the overcoming of these dichotomies that requires the presence of research in teaching. The relationship between them is supported by attention to professionalism and competence that characterizes university teaching.

Against this backdrop, we would like to pay attention to *Pro3 17-19*, a project on university teaching that has been activated in the University of Macerata, promoted by the delegate for teaching, Prof. Ortenzi, and coordinated by Prof. Rossi. The starting points were as follows:

1. Since teaching and research must be connected, teaching strategies must be strongly curved on the disciplines and on the ways in which each professor has set up his/her own research.
2. In the university classrooms, each faculty has experimented and implemented daily strategies that he/she considered effective. A project designed to work on strengthening university teaching must start from the examination, enhancement, and generalization of the methods in place.
3. In many cases, some teachers have experimented with innovative practices, even if they often saw them as not generalizable and connected to specific events and situations. The role of didactic research is to analyze these experiments, grasp their strengths and weaknesses, and identify the common elements to highlight their generativity. Indeed, from the work carried out and from the interviews that accompanied, it came up that numerous teachers have already activate innovative models, but often did not grasp their value and potential. They see those activated as isolated and nonrepeatable cases and attribute the success to elements linked to contingent aspects.

The PRO3 project at Unimc initially involved 60 teachers from five departments, equal to 35% of the entire teaching staff. The work followed four red threads:

1. systematize the modalities operated by teachers on the classic passages of teaching: how to design, how to manage the lesson, how to manage interaction, and how to evaluate;
2. analyze, in particular, experiences of alternation between work and academic paths;
3. analyze didactic strategies that are not very frequent because they are considered unsustainable (seminars, interactions with external parties, project work); and
4. collect experiences made in specific disciplines and explore their potential use in similar topics and paths of related disciplines.

While the first two points comprehended work in large groups with meetings involving teachers from the five departments, small groups of teachers from the specific discipline discussed the third point. The task of these groups was to collect experiences related to their own discipline and investigate whether innovative proposals were activated in other universities, and thematic conferences were organized, in which researchers from other locations were invited to illustrate their experiments. The disciplines covered were law, history, philosophy, geography, and economics.

The project lasted for an entire academic year and at the end, the materials were collected and structured to build a MOOC that contained emerging inputs and the experiences analyzed. The course is organized in thematic modules and each module has a first page/lesson that poses the problem, a second that explains the theoretical or descriptive aspects of the strategy or problem, and a third that collects experiences both in textual and video forms. The videos contain examples of application of the various strategies, interviews with teachers and students who had implemented specific paths, and interventions by external experts.

Many times, the criticism to innovative practices is not on their validity and effectiveness, but on their sustainability with very huge classrooms. The story of a colleague who has a strategy in place is often the most effective communication. The MOOC, created with Moodle, is structured in the following modules:

1. macro planning and organization of the annual curriculum;
2. alignment between students and teachers;
3. plan, implement, and manage the lesson;
4. evaluation;
5. didactic strategies and methodologies: seminar, feedback, co-teaching;
6. didactics of the disciplines;
7. professionalism, apprenticeship practices;
8. technologies;
9. inclusion; and
10. privacy and copyright.

Each module ends with a short questionnaire. The course was first validated by a scientific committee composed of the five directors of the departments and then made public and available for teachers who did not participate in the project. The last year of the PRO3 project was dedicated to testing and validating the prepared materials. The teachers who carried out the courses were traced, and they were asked to judge their usefulness. An effect of the project was also to adapt the didactic regulations to the needs that emerged during the course and to make innovative practices possible and practicable. For example, many of the experiences involved the co-presence of teachers from different disciplines, and this resulted in the regulation of co-teaching and of making interdisciplinary seminars as a documentable practice for the teachers. Furthermore, newly hired teachers should attend the MOOC in the probationary year.

Surely, the MOOC was considered useful for bringing teachers closer to didactic problems and for answering the most frequently asked questions that professors pose when preparing and carrying out a lesson. The added value of the project relies on a change of perspective with which today, an increasing number of teachers look at the didactic problems. The project had to initially face some skepticism. Lots of faculty originally reduced teaching to a series of procedures proposed by those who study education and training, which is considered to be the result of an "academic" research that was not very valid in the field and, above all, scarcely applicable to the various disciplines. At the very beginning stage, several professors affirm that each discipline has its own didactics. The work of the project has overcome such a prejudice. It was not so much a question of admitting the independence of teaching from disciplinary epistemologies, but of noting how didactic research, rather than imposing procedures, allowed to emerge from teachers' practice of valid, effective, and sustainable operational methods and strategies. This final perspective, achieved by working side by side among experts from various sectors, has enabled to build mutual trust and interest in sharing the experiments that each teacher carries out over the course of his/her teaching.

4. Future research strands: toward an inter-universities network of TLCs

The aim of this paper was to delve deeply into the organizational strategies for professional development carried out at the TLCs, with a specific focus on two centers selected purposefully. The two centers showcase examples of organizational supports and systemic actions to implement for the integration of research, technology, teaching, and networking. It also pointed out professional development programs that favored the diffusion of a climate of collaboration, stressing the value of the pursuit of so-called "effective" teaching (Engeness, 2021). Future work should include analysis of other institutions, which could help extract further conclusions about the framework for creating an inter-institutional network of TLCs (Richardson et al., 2020). It has emerged that a mixed combined approach with top-down and bottom-up initiatives for joint adventure can be most successful from a long-term standpoint (Frantz et al., 2004; Ableser & Moore, 2018): administrative central governance of the universities should support the alignment among the different centers with a networking mission and should make the bureaucratic process of creating formal alliances easy. Figure 3 shows the framework for the creation of an inter-institutional network of TLCs emerging from the cases analyzed.
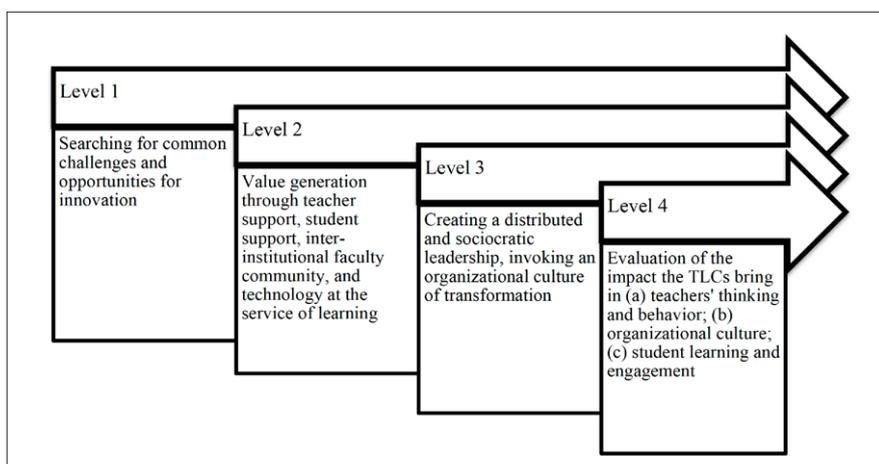
Fig. 3. Toward a framework for the creation of an inter-institutional network of TLCs (source: personal elaboration of the authors)

Concurrently, the faculty directly involved in the TLCs should collaborate for developing shared domain of interests, equal commitment, collective responsibilities, high value and excellent learning opportunities, and sociocratic leadership processes to move forward with these new organizational assets.

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