

Building Teaching and Learning Centers for Latin American Universities in the 21st Century

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Abstract. The COVID-19 pandemic revealed the need to adequately train university faculty in digital competencies and the use of technology to support educational processes, including content generation, teaching instruction and assessment, among others. This training must be adapted to the context of each educational institution and to the rapid evolution of technologies that can be used to support academic processes. In this context, it is important to have proper structures within the educational institution, such as the so-called Teaching and Learning Centers (TLCs), which are pillars of innovation, support teacher training, serve as spaces for experimentation and guide teachers in redefining their courses and generating the corresponding content. This article presents the work carried out for more than three years to build TLCs in Latin American universities, taking two universities in Guatemala and two in Colombia as examples. As part of this process, a Cooperation Network has also been created in relation to TLCs in Latin America to share contents and training actions and to serve as an observatory of trends in educational innovation.

Keywords: Teaching and Learning Centers, Latin America, Educational Innovation. Higher Education.

1 Introduction

PROF-XXI¹ is a project co-funded by the Erasmus+ program of the European Union, and developed between January 2020 and July 2023 with the objective of building capacities for the development of Teaching and Learning Centers (TLCs) in Latin American universities, taking into account the context of the region, and taking four

¹ <http://profxxi.org/?lang=es>

Latin American universities as models (2 public and 2 private universities of different sizes in Guatemala and Colombia) (Delgado Kloos et al., 2021). The PROF-XXI project takes place at a very timely moment in which the COVID-19 pandemic and the forced shift to emergency remote teaching (and the subsequent adoption of online and hybrid teaching models) highlight the need to adequately train teachers in digital competencies and in the appropriate use of the most relevant educational technologies (García et al., 2022). This article presents the main milestones and results of the PROF-XXI project so that they can serve as a reference for other institutions in the region; all these results are published openly on the project website.

2 Main results

The PROF-XXI project is developed in two phases. In the first phase (first year and a half of the project) capacities are built with a focus on the four Latin American institutions that serve as models. In the second phase (last two years of the project), the capacities built are demonstrated and an impact is sought to be generated in other institutions in the Latin American region.

The first phase begins with a series of actions that serve as preparation, including a diagnosis of institutional practices in relation to teaching and learning in the four universities in Guatemala and Colombia (Oliva-Córdova et al., 2020), the development of a state of the art and a directory² of TLCs (de la Roca et al., 2020) and the proposal of a reference framework on the university teacher of the 21st century in Latin America (Jaramillo et al., 2020). After that, the guidelines for the implementation, management and evaluation of TLCs are developed (García et al., 2021) as well as the PROF-XXI Framework, which is designed to support the diagnosis, evaluation and strategic planning when installing a TLCs (Figure 1) (Pérez-Sanagustín et al., 2021); the PROF-XXI Framework contains five dimensions (A-E) and six levels (1-6) for each dimension (Pérez-Sanagustín et al., 2022). Then, the 4 TLCs that serve as models in Guatemala and Colombia are created and the necessary equipment is installed (Saavedra et al., 2021). Finally, the training of the TLC staff is carried out through 8 open webinars³ aligned with the European Framework for Digital Competence of Educators, DigCompEdu, (Redecker, 2017) (Figures 2 and 3), and 5 complementary practical workshops⁴ targeting the four universities in Guatemala and Colombia (Alario-Hoyos et al., 2021a). In total, the webinars had 21,964 participants, while the workshops had 442 participants.

² <https://www.galileo.edu/page/directorio-profxxi/>

³ <https://www.galileo.edu/page/webinars-profxxi/>

⁴ <https://www.galileo.edu/page/profxxi-formacion/>

LEVEL OF COMPETENCE	OBJECTIVE	DIMENSIONS (A-E) AND COMPETENCES (1-5)				
		A. Teacher support	B. Student support	C. Leadership, Culture and Transformation	D. Technology for Learning	E. Evidence-based practices
1	Development	A1. Identify innovative good practices with high impact considering the institutional educational project and local, national, and international trends and good practices. A2. Design a model and/or actions for teacher training and counselling based on good practices and the characteristics of the disciplines. A3. Initially implement actions designed considering different scenarios and contexts.	B1. Diagnose student characteristics and needs to enhance teaching and learning processes. B2. Develop actions to support students considering the diagnosis, the educational project, and the characteristics of the disciplines. B3. Implement actions or initiatives, considering emerging situations, and adjustments for continuous improvement.	C1. Identify stakeholders, considering characteristics, socio-cultural scenarios, leadership, and cultural particularities within the institution. C2. Analyse previous experiences within the institution, linked to organizational cultural changes, identifying strengths, weaknesses, and challenges. C3. Conceive a plan for the TLC adapted to the University's strategy, considering international reference models and good practices.	D1. Systematise prior learning in digital education and TEL, implemented within the institution. D2. Design a pedagogical model for quality digital education and TEL. D3. Implement digital education and TEL actions, in an initial way, considering the contexts and available resources.	E1. Identify available evidence and good practice in relation to teaching and learning at higher education level and disseminate these findings within the education community. E2. Collect initial results and effects on the actions taken, considering feedback from stakeholders and external non-participating peers.
2	Innovation	A4. Set up benchmarking and innovative experiences. A5. Promote innovation processes among teachers that have an impact on learning. A6. Encourage the coverage of teachers who implement innovations.	B4. Promote meaningful practices and tools for learning among students in the various disciplines. B5. Foster the articulation of teaching innovation with the effective learning experience of students.	C4. Promote groups of innovative teachers and support their transformational dynamics. C5. Generate collaboration and work networks among the various members of the university community.	D4. To train the various actors of the university community for the development of innovative practices with the use of digital technology. D5. To observe new TEL trends at international level.	E3. Use available evidence on teaching and learning. E4. Promote peer exchange related to innovative practices in teaching and learning.
3	Value Generation	A7. Disseminate innovative internal models and experiences of excellence for teaching practices. A8. Generate changes in teaching practices and their effects on the student experience.	B6. Contribute to increasing the quality of learning. B7. To bring about positive effects on the student experience	C6. Actively participate in the generation of an institutional culture of sustainable transformation and quality. C7. Position the unit as relevant within the educational process.	D6. Encourage the increased implementation of TEL in everyday learning. D7. Model TEL best practices among the educational community.	E5. Generate evidence on results, outcomes, and impacts. E6. Share the evidence collected among the different levels and actors of the organization.
4	New Challenges and Opportunities	A9. To visualize new horizons on teaching practice, capable of fostering transformative pedagogical practices.	B8. Visualize new challenges and scenarios in student learning as lifelong practice. B9. Ensure the overall increase of student learning outcomes.	C8. Define metrics and indicators to evaluate the impact of pedagogical innovation. C9. Contribute to the process of transforming the University into a learning and innovative organization,	D8. Sustainable involvement of the teaching staff in TEL pedagogical practices	E7. Systematise the new challenges arising from the work, the available evidence, and the good practices in actions for the institutional strategy.
5	Public accountability of impacts for continuous improvement	A10. Ensure tools to monitor and report on the quality of innovative teaching practices. A11. Support institutional decision-making based on challenges and good practices.	B10. Implement evaluation surveys on the university and student learning experience. B11. Support institutional decision-making based on the student experience.	C10. Evaluate the transformative impact of innovative teaching practices. C11. Generate spaces for dialogue and meetings that foster co-responsibility for results, effects and impacts among the different actors in the educational community.	D9. Implement public reports that account for the effects of TEL on educational practice.	E8. Communicate scientifically in different formats and external academic communities, the processes implemented within the unit.

Fig. 1. PROF-XXI Framework with the five dimensions (A-E) and six levels (1-6) for each dimension

Title	Date	Organization
1. Digitization of education and OER.	2020-06-11	uc3m Universidad Carlos III de Madrid AbERTA
2. Production of educational content at home Light, camera... education!	2020-06-18	UNIVERSIDAD DE SAN BENAVENTURA CALI Universidad del Cauca
3. Activate, invest and have fun, strategies for remote education	2020-06-25	UNIVERSIDAD DE SAN BENAVENTURA CALI
4. Learning activities and Web 2.0 tools: The key to active and dynamic learning.	2020-07-02	Getho uc3m Universidad Carlos III de Madrid
5. How to evaluate online effectively	2020-07-09	UNIVERSITÉ TOULOUSE III PAUL SABATIER Getho
6. Communication and feedback for students	2020-07-16	UNIVERSIDAD DE CHILE USAC
7. Digital learners. Competencies and experiences	2020-07-23	USAC TRICENTENARIO UNIVERSITÉ TOULOUSE III PAUL SABATIER
8. Digital competencies and development of online distance teaching: Models of training and university practices.	2020-07-30	AbERTA UNIVERSIDAD DE CHILE

Fig. 2. Webinars organized as part of the training of TLC personnel, including title, date and organizing entities.

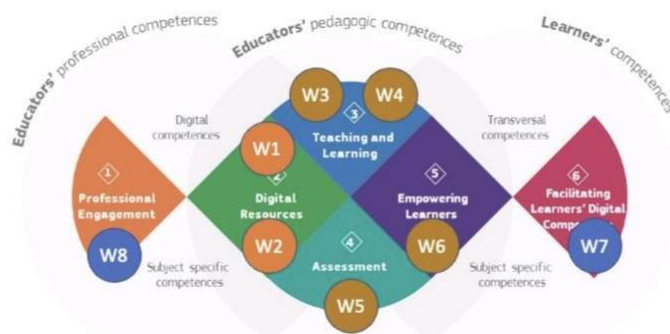


Fig. 3. Alignment of the webinars organized with the areas of DigCompEdu.

The second phase consolidates the capacity building of the first phase by launching the 4 installed TLCs, which must design and partially implement four teacher training plans respectively with at least 5 training actions per TLC (Alario-Hoyos et al., 2021b). These training actions can have different formats (face-to-face, synchronous online, asynchronous online, hybrid) and be carried out multiple times for different cohorts. These training actions were implemented between the end of 2021 and the beginning of 2023 with a total of 2,973 attendees, and more than 100,000 students indirectly benefited from the training received by their teachers (Alario-Hoyos et al., 2023a). These teacher training plans are complemented by the MOOC “The 21st century teacher: Learning to teach with digital technologies” (“El profesor del siglo XXI: Aprender a enseñar con tecnologías digitales”), offered twice in November-December 2022 and February-March 2023. In total, 5,659 participants registered for the MOOC in the two cohorts; 681 of them passed the MOOC (12%) receiving the corresponding certificate (Table 1) (Alario-Hoyos et al., 2021b; Alario-Hoyos et al., 2023b). Guatemala, Colombia, Peru, Spain, Mexico, and Honduras were the countries with the highest number of participants, although there were participants from practically all Latin American countries. This phase closes with the proposal of a TLC accreditation and certification service including a tool⁵ developed in the project for the self-assessment and diagnosis of institutions according to the PROF-XXI Framework (Pérez-Sanagustín et al., 2022).

Finally, it is worth highlighting the efforts to maximize the impact of the project and carry out the dissemination of the results. These efforts include the use of social networks such as Twitter⁶ and Facebook⁷, the regular publication of newsletters (every six months) and digital journal issues (every year)⁸, the publication of a special journal issue (García et al., 2022), the organization of international events, and the creation of a Cooperation Network⁹.

⁵ <http://141.115.26.76>

⁶ https://twitter.com/prof_xxi

⁷ <https://facebook.com/profxxi>

⁸ http://profxxi.org/?page_id=1540&lang=es

⁹ http://profxxi.org/?page_id=1968&lang=es

Table 1. Data on PROF-XXI MOOC participants in the two cohorts conducted to date.

Cohort	First cohort	Second cohort	Total
Registered participants	3734	1926	5659
Number of certificates	426	255	681
Passing rate	11.4%	13.2%	12%

3 Conclusion

PROF-XXI had an important impact in Latin America at a time of great need for training of university professors. This impact is evidenced by the number of participants in the training activities carried out. PROF-XXI has served to lay the foundation for the creation of TLCs by offering four successful examples in public and private universities of varying sizes in Guatemala and Colombia. PROF-XXI has also carried out synergies with other similar Erasmus+ projects, such as the InnovaT project¹⁰ and created a Cooperation Network that continues beyond the duration of the project with activities such as the LatinSoTL Congress¹¹, supported by PROF-XXI.

Acknowledgments

This work has been supported by the H2O Learn project (PID2020-112584RB-C31), funded by MCIN/AEI /10.13039/501100011033, and partly by the Community of Madrid through the Multiannual Agreement with UC3M in the line of Excellence of University Professors (EPUC3M21), and in the context of the V PRICIT (Regional Program for Research and Technological Innovation), a project co-financed by the European Structural Funds (FSE and FEDER). Partial support has also been received from the European Commission through the Erasmus+ Capacity Building in the Field of Higher Education PROF-XXI project (609767-EPP-1-2019-1-ESEPPKA2-CBHE-JP). This publication reflects the views only of the authors and the funders are not responsible for any use that may be made of the information contained herein.

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¹¹ <https://latinsotl.org/>

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