

# Teaching Innovation through the Laboratory of Teaching Experiences: An Initiative of the Catholic University of the Most Holy Conception

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**Abstract.** Educational innovation is essential for the development of higher education in the digital era. The labCIDD Laboratory of Teaching Experiences, part of the Center for Innovation and Teaching Development (CIDD) at the Universidad Católica de la Santísima Concepción (UCSC), has implemented an innovative initiative to promote and systematize good teaching practices and innovative educational resources that enhance the quality of the teaching-learning process and inclusion. This article presents the details of the initiative, from its conceptualization to its implementation, as well as the results achieved so far and the observed impacts on teaching and learning.

**Keywords:** Teaching innovation, Information and Communication Technologies (ICT), Universal Design for Learning, Teaching-learning, Inclusion.

## 1 Introduction

The labCIDD Laboratory of Teaching Experiences, part of the Center for Innovation and Teaching Development (CIDD) at the Universidad Católica de la Santísima Concepción (UCSC), has implemented an innovative initiative to promote and systematize good teaching practices and the production of innovative educational resources that enhance the quality of the teaching-learning process and inclusion. The initiative focuses on the development of teaching innovation competencies through training, experimentation, mentoring, and support for teachers. In this regard, an annual call for innovation projects has been implemented to effectively integrate ICT into the teaching-learning process, create a teacher community, provide pedagogical guidance to teachers, and promote methodological and technological experimentation for teaching. The selected projects receive technical and pedagogical support from CIDD professionals for the development of didactic resources supported by ICT. This article presents the details of the initiative, from its conceptualization to its implementation, as well as the results achieved so far and the observed impacts on teaching and learning.

## 2 Theoretical Framework

A review of the literature shows that educational innovation has become a pressing need for the development of higher education in the digital era. In this sense, various initiatives have been identified that seek to integrate Information and Communication Technologies (ICT) into the teaching-learning process to improve educational quality and student training (Fullan, 2013). Likewise, experiences where university professors can share their knowledge with other teachers and students, shaping a learning community (Laboratory for Innovation and Learning [EAFIT], n.d.), which aim to stimulate the exchange of good practices and promote publications through face-to-face and online meetings (Teaching Innovation Laboratory [University of Valladolid], n.d.), or that gather open digital resources to enhance educational innovation processes and digital transformation (Higher Education Innovation Laboratory [Ministry of National Education of Colombia], n.d.), demonstrate the interest in creating collaborative spaces to implement this type of initiative.

According to the EDUCAUSE Horizon Report (2019), teaching innovation is a pressing need for the development of higher education in the digital era. The incorporation of emerging technologies in pedagogical practice and the adoption of universal design for learning can significantly improve the learning experience and academic success of students. In addition, teaching innovation can promote greater collaboration and student participation, foster personalized and adaptive learning, and improve accessibility and inclusion.

## 3 Methods

The initiative invites teachers interested in developing educational innovation projects with the application of good teaching practices and innovative didactic resources. The selected projects receive pedagogical and technological guidance from CIDD professionals, who rely on resources and methodologies favored by the labCIDD Laboratory of Teaching Experiences. The process is divided into several stages with defined objectives, goals, and deadlines. The methodological design phase develops the design of the didactic resource, followed by its production with the support of the laboratory. Teachers have a significant presence throughout the process and are trained to produce resources autonomously. Then, the implementation phase takes place in a real teaching-learning environment. Finally, the evaluation phase analyzes the results obtained during the implementation and makes adjustments to improve the resource.

The professionals from labCIDD accompany and advise at each stage of the process to ensure quality and design based on educational and technological trends. Processes, procedures, and protocols are established for the use of the laboratory, and the necessary software and technology resources are provided.

## 4 Results

So far, the results obtained in the initiative have been positive. There has been greater efficiency in the management and monitoring of teaching innovation projects, and significant progress has been made in the production of quality didactic resources. The gradual incorporation of Universal Design for Learning (UDL) stands out, allowing a focus on inclusion and the effective integration of ICT into the teaching-learning process. The collaboration and synergy between advisors (technological and pedagogical) and the teachers in charge of the projects have been key to the success of the initiative. Similarly, the application of a process evaluation has allowed for adjustments with a focus on continuous improvement. Significant progress has been made in the training and motivation of the advisors, enabling greater efficiency and effectiveness in mentoring and support for teachers in pedagogical practice considering new educational and technological trends.

## 5 Discussion

Among the most relevant aspects of the initiative, the importance of generating collaborative processes to enhance teaching innovation stands out, allowing the leveraging of teachers' skills and competencies, incorporating good practices, and systematizing the results obtained. Furthermore, it has been learned that innovation requires a commitment from teachers and is transformative to the extent that initiatives arise from their own interests, contextualized in their curriculum activities and with the support of pedagogical and technological professionals. The interest and willingness of teachers have generated a virtuous circle for CIDD and teaching development. Teachers implement their initiatives, and the Center fulfills its mission within the University. The commitment and motivation of teachers, the quality of the produced didactic resources, participation in training activities contributing to their teaching development, and the ability of the technological and pedagogical advisory team to adapt to the needs and demands of teachers represent the pillars for the projection of this initiative.

Notwithstanding the above, there is a need to improve coordination and communication among team members. As this is a newly implemented initiative in a phase of review and adaptation, CIDD recognizes that it needs to improve the design and implementation of project monitoring tools. Regarding future improvements, the aim is to continue strengthening the systematization of processes and results obtained. Additionally, the exploration of new strategies and technological tools that allow for better integration of ICT into the teaching-learning process is sought, as well as strengthening the identification of teachers' needs and demands to offer more effective and personalized guidance.

## **6 Conclusions**

In conclusion, generating collaborative teams is crucial to produce educational resources adequately integrated into the teaching-learning process. By working as a team, individual knowledge, skills, and competencies can be leveraged. Similarly, it is important for teams to consider, in addition to the effective integration of educational resources, UDL to ensure that the resources are accessible and address the diversity of students. Teaching innovation is another important aspect in the production of effective educational resources. Teachers must be motivated and supported to experiment with new forms of teaching and learning to offer more effective learning experiences for their students. It is important to provide teacher training based on their specific needs so that they can improve their skills in key areas of interest. The systematization of collaboration and production processes is fundamental for the efficiency and effectiveness of collaborative teams. By establishing clear and effective processes, teams can work more effectively and maximize their time and resources. Finally, the evaluation of teaching innovation is essential to ensure that educational resources are effective and impactful. Teachers should be able to assess how their teaching innovation is impacting student learning to adjust and improvements in the future.

## **7 Limitations and Future Research**

CIDD expects to continue with this type of call for proposals to generate knowledge regarding teachers' development interests, the application of educational resources, their proper integration into the teaching-learning process, and procedures related to teaching innovation. While collaborative approaches in the production of educational resources may require a time and resource investment, the development of pedagogical and technological skills and competencies in teachers is vital to foster autonomy in these processes. Similarly, the implementation of UDL requires knowledge and skills from both teachers and advisors, and it is understood that achieving comprehensive integration requires the implementation of guidelines and formats that provide proper guidance.

Finally, the completion of this initial experience in the production process of educational resources will allow for an understanding of the facilitators and barriers that exist in this collaborative process. The study and individual analysis of each implemented educational resource will be very beneficial.

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