Active learning: Challenges for the information professional

Iliana Artiles Olivera
Universidad Central Marta Abreu de Las Villas, Cuba.
Email: iliao@uclv.edu.cu

Carlos Alexander Mendoza Jacomino
Universidad Americana, Nicaragua.
Email: calexmj2013@gmail.com

Dianelys Martínez Paz
Universidad Central Marta Abreu de Las Villas, Cuba.
Email: dmpaz@uclv.cu

ABSTRACT
Active learning in continuing education empowers reflective teachers who practice new knowledge and skills in order to develop future information professionals, long-term memories, and deeper understanding; connect different ideas with each other; and think creatively. The Information Sciences career of the Universidad Central "Marta Abreu" de Las Villas in this endeavor and in the activity of continuing education for teachers aims to design learning situations in continuing education actions for teachers who train information professionals. These situations are linked to active learning, considering the experience as an opportunity to learn and integrate it into their performance as innovative teachers. The qualitative methodology followed the course of the pedagogical experience and was based on discussion groups with teachers. The course, which was implemented as a function of continuing education, showed that participants integrated experiences based on active methodologies into their daily classroom practice. This integration facilitated the training of thinking to create and rethink ideas, using imagination, creativity, strategic and ethical, critical and constructive reflection within the innovation processes. Additionally, it awakened the willingness to learn, to risk, and to face uncertainty. Active learning situations achieved controversy, agreement and/or disagreement, and the satisfaction of an innovative teacher.

Keywords: active learning, good practices, innovative teacher, continuing education

How to cite: Olivera, I. A., Jacomino, C. A. M., & Paz, D. M. (2024). Active learning: Challenges for the information professional. In M.J. Peralta González (Ed.), Generation and Transfer of Knowledge for Digital Transformation, II International Symposium, SITIC 2023, Santa Clara, 15-17 November 2023, proceedings. *Advanced Notes in Information Science, volume 6* (pp. 144-150). Pro-Metrics: Tallinn, Estonia. DOI: 10.47909/978-9916-9974-5-1.98.

1. INTRODUCTION

In the last two decades, research in the area of education, cognitive psychology, and neurosciences has generated an important advance in the knowledge and explanation of the teaching–learning process in learners of different ages, social classes, and cultures. This fact has allowed the impulse and development of teaching models and learning theories, focusing their attention on the human development of people, their welfare, and basically the expansion and enhancement of the capacities to learn how to learn.

Consequently, more than ever, it is necessary to have an active learning proposal that is coherent, progressive, and aligned with the main international references. This proposal helps students acquire transformative competences that will allow them to succeed in the society in the coming decades. The loss of significance of the contents promotes criticism everywhere, acquiring theoretical status since the emergence of the new school as an opposition and alternative to the traditional school. "Hearts not heads" was a premise that permeated deep into teachers' consciousness. "Don't fill my head" and "enough of expositions" were some of the allegedly progressive slogans of the past years (Zariquey, 2020).

This concern is also based on the teachers' own experiences. Criticism of the class reduced to the informative lesson has not only strong theoretical foundations but also abundant practical examples of the lack of functionality of didactics based on this model. Those who have been in contact with university students affirm how discouraging a university is based on anomie, the lack of innovative methodologies, and few strategies that challenge intelligence and reasoning.

Several authors (Díaz & Hernández, 2010; Montoya, 2018; Ortiz-Colón et al., 2018; Zariquey, 2020) emphasize a methodological and practical foundation to plan, develop, and evaluate active methodologies that allow contrasting the educational benefits of each one according to its purpose and philosophy.

Consequently, the Information Sciences career of the Universidad Central "Marta Abreu" de Las Villas (UCLV) proposes courses for the training of teachers that focus on effective learning and innovative teaching. These processes are seen as mutually enriching in various social, cultural, and formative environments. Therefore, the conceptual discussion will focus on both the learner and the teacher.

In this sense, the general objective is to design learning situations in continuing education actions for teachers who train information professionals. This will be achieved through active learning, where experience is seen as an opportunity to learn and integrate into their performance as innovative teachers.

2. METHODOLOGY

The courses developed for teachers of the Information Sciences career of the UCLV constituted methodological

didactic actions aimed at raising awareness and improving understanding and application of the cultural-historical approach. In the development of the courses, discussion groups predominated as a form of formative feedback and in which examples of learning situations were designed with an active approach. Therefore, the methodological approach was assumed to be qualitative, which becomes an interpretative proposal oriented to describe and interpret the phenomena in their natural context.

The selected context is the Information Sciences career, with intentional sampling consisting of 17 teachers of the career. The exploratory study was carried out with the professors of the Information Sciences career, accompanied by the department head and the career coordinator, as participants in the activities developed based on the discussion groups.

3. RESULTS AND DISCUSSION

During the development of the course, activities based on active learning emerged, favoring simulated learning situations, active environments, activities, and accompaniment to develop skills for searching, analyzing, and synthesizing information. These activities also focus on solving real problems in the classroom and promoting dialogue and expression, which are essential in an innovative pedagogical process and active learning.

The following is an example of cooperative learning, implemented in the graduate course entitled "Innovative Didactics in Information Sciences." The topic was developed from the cooperative technique of Aronson's Puzzle with the purpose of sharing and reflecting on the findings of each innovative methodology selected.

- First moment (base group): Each individual teacher will research the selected innovative methodology guided by the following questions: How is each of these methodologies defined, and what are their main characteristics? What does the current scientific evidence show us about the results of the implementation of these methodologies in different educational levels and contexts? What factors related to their implementation contribute to the success or not of learning? What opportunities and limitations do they present according to contexts, modalities, and educational levels? and What research proposals would you make to further deepen the contributions of this methodology in the educational context of Information Sciences? They are informed that there is an organizational table in the Moodle Platform where the reading material on the innovative methodology to be studied is distributed by teachers. The individual constructions should be uploaded to the platform.
- Second moment (group of experts): The members of each group who have the same assignment of the content of the innovative methodologies will meet in this group of experts to discuss and comment on the content with a greater level of depth. It is recommended to systematize the information using a collaborative tool (WikiSpaces, Google Drive, Wakelet, BounceApp, and collaborative PowerPoint). Doing this exercise will help to delimit the scope of innovative methodologies and prepare to share learning with heterogeneous groups.
- Third moment: Go back to the teachers of the initial core group and present individually what has been learned in

order to demonstrate the learning that has been built and to facilitate the appropriation by everyone of the different innovative methodologies analyzed in the expert groups. Subsequently, the group should hold a discussion session on the central elements of each innovative methodology and make a decision on how to organize the collective presentation through the Padlet digital mural by accessing https://es.padlet.com/.

The digital mural should be uploaded to the platform. Each group will present its presentation in 30 minutes, followed by a question and comment session. At the end of all the presentations, the teacher will make a presentation to complement the work done by the groups and address those innovative methodologies that were not worked on.

From the analysis and to facilitate the understanding of the learning of the course, the teachers recommended the following reflective ideas as a novel action: do not fully agree with all the ideas expressed by the authors in the documents, think that your ideas can enrich what you read through your experience, reflect on each proposal, and solve the problems posed in order to see the relationship between what is expressed in theory and what you can execute in practice. Do not be afraid to disagree; this will help you to assume an attitude of change, imagine, fantasize, think, and postulate scientific hypotheses regarding your teaching and the way in which you design, execute, and evaluate your teaching strategies so that you can create your own theory. If you feel conflicted, it will be the best symptom that you are learning, observing, listening and relating the opinions of others with your own, and admitting that others think differently. This contributes to the development of your own theory; while you read the

recommended materials of the program, you carry out a metacognitive dialogue with yourself and with your colleagues from your own references and challenge yourself to rebuild your mental schemes, to self-motivate yourself, and to build your learning itinerary. At the end of each session, you should hetero-evaluate, co-evaluate, and self-evaluate yourself thinking about the improvement process.

4. CONCLUSIONS

Encouraging active learning in teachers enhances active listening skills; therefore, they learn to summarize the points of view of others and to think critically and reflectively. Teachers who use these strategies tend to have a distinct, and even surprising, improvement in the quality of thinking of their students, the future Information Science professionals. Students develop better critical thinking skills when they are explicitly taught how to think about their thinking.

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