Active methodologies in the training university students from the Pedagogy faculty

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ABSTRACT

The professional performance of university teachers in pedagogical careers has limitations due to the poor use of active methodologies to achieve better results in the initial training of future teachers. Therefore, this article aims to define this concept and to identify and characterize some of these new methodologies, as a premise to contribute to the continuing education of these professionals. Methods such as analysis-synthesis, content analysis and document review were used. The results of the systematization allowed the identification of active methodologies that are considered beneficial for the preparation of teachers.

Keywords: Active methodologies; Pedagogical training; Continuing education; University teachers

Introduction

The constant social demand to improve the quality of education is expressed in numerous documents that are generated as national, regional and international policies. An example of this can be found in the world conferences on higher education. Likewise, the United Nations General Assembly, in its Resolution 70/1 called "Transforming our world: the

2030 Agenda for Sustainable Development", contains, among its objectives, that of "Ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all" (United Nations General Assembly, 2015, p. 8)

To achieve such quality improvement, relevant training of the university teacher is decisive, so it is vital in this regard to overcome traditional methodologies "... devoid of technologies and where students play a passive role, have less and less impact on cognitive factors linked to learning, such as attention or motivation. To alleviate this situation, active methodologies are promoted..." (Heredia *et al.*, 2024, p. 91)

In any case, the successful performance of the university teacher is an essential condition for the improvement of educational results. In this order, the training of university teachers, and especially those who work in the faculties of Pedagogy, must be assumed as a directive process (intentional, conscious) and for this "...it will be necessary to inquire into the conceptions and training of future teachers to conceive this methodology as an alternative in the search for active methodologies focused on learning" (Campos, 2017, as cited in Heredia *et al.*, 2024, p. 92).

This rethinking of the teaching role of university professors involves moving from the role of transmitter of knowledge to one in which it becomes a learning guide and although it allows the acquisition of knowledge, the important thing will be to know how to locate, interpret and apply it. That is why "the incorporation of a professional into university teaching is a responsible and complex decision, because it requires not only mastering the science of which he/she is a graduate, but also mastering specific knowledge of how to get another person to learn, but in specific and diverse conditions." (González, 2020, pp. 292 and 293)

One cannot overlook the fact that "the student in front of is completely different from the traditional student, and if this is not taken into account, the class can become a useless confrontation." (González, 2020, p. 295) On the other hand, it is recognized as a tendency "... that the work to be exercised by the university professor is centered on the fact that he/she must encourage the student to "learn to learn". To achieve that purpose, "...a prior acquisition of certain skills by the teacher is required, which can be improved through teacher training." (Perez *et al.*, 2014, p. 7)

It is interesting, regarding teacher training, to take into account initiatives such as those proposed by the (Ministry of Education and Science, 2006, as cited in Pérez *et al.*, 2014),

among which training on specific methodologies and research on teaching methodologies are highlighted. (p. 8). In this sense, the so-called active methodologies can be very relevant.

Based on the recognition, by managers and teachers of the Faculty of Pedagogy of the Technical University "Luis Vargas Torres" of Esmeraldas, Ecuador, of difficulties in the performance of the students of the pedagogical careers, a causal analysis was made that allowed identifying the following problem: Insufficiencies in the university teacher's training for the recognition and use of active methodologies, limiting their professional pedagogical activity. Consequently, the objective of this article is to conceptualize the active methodologies and identify some of those proposed by the consulted authors as tools to contribute to the training of university teachers of the Pedagogy Faculty of this institution.

In line with the objective of the work, materials were selected that address the background of the object of research related to active methodologies, as well as others related to the training of university teachers, which appear in texts published in scientific journals indexed in SciELO and other relevant databases, in the last five years.

Theoretical methods such as analysis-synthesis, induction-deduction and content analysis were used to achieve the objective, with the support of documentary review as an empirical method. These methods made it possible to delimit the features that define active methodologies as a concept, and some of the proposals made by the authors consulted were identified, in order to contribute to the training of university teachers of this School of Pedagogy.

Development

The bibliographic exploration aimed at locating proposals related to the so-called active methodologies made it possible to systematize the works of: Ávalos *et al.*, 2021; Bilbao-Goyoaga *et al.*, 2023; Bilbao-Quintana *et al.*, 2021; Cárdenas *et al.*, 2022; Daher *et al.*, 2022; Gómez-Hurtado *et al.*, 2020; Leal *et al.*, 2024; López-Alegría and Fraile, 2023; Morales, 2022.

For (Luelmo, 2018, as cited in Ávalos *et al.*, 2021) active methodologies come to be "...a conglomerate of actions in which, in a systemic way, the person-teacher-student-ecosystem-teaching material-media and resources participate integrally, in order to propitiate development and training opportunities to the learner in his environment." (p. 121)

For their part, Bilbao-Goyoaga *et al.* (2023) consider them "...teaching methods suitable for giving students a leading role in the teaching-learning process. The implementation of these methodologies draws learning situations in which activities are presented that allow students to identify problems and try to solve them." (p. 2).

Likewise, Cardenas *et al.* (2022) assume that this is a constructivist learning approach in which one learns by doing, a real-world problem, in which students can begin to think like professionals." (p. 346). Similarly, (Serna and Diaz, 2013, as cited in Daher *et al.*, 2022) define active methodologies as "...a process where the student is the protagonist of their learning making it meaningful." In its application, "...the teacher acquires a mediating character that allows focusing on deep learning, through activities that enable student participation, cooperation, creativity and reflection on the task." (p. 2)

Also, Labrador & Andreu (2008, as cited in Leal *et al.*, 2024) offer a definition of the concept of active methodologies, understanding them as "...methods, techniques and strategies that the teacher works in his pedagogical practices to convert the teaching process into learning situations that enhance the active and dynamic participation of the student." (p. 33)

As can be seen, several terms are used to define these methodologies, which qualify them as a process, a conglomerate of actions, a constructivist learning approach, methods, techniques and strategies that teachers work on in their pedagogical practices and the less protagonist role of the teacher and more active role of the student to operate with knowledge, increasingly more utilitarian, more focused on the professional problems that the future teacher will face in the classroom, according to the authors of this article.

On the other hand, among the proposals of active methodologies that can be included in the training of university teachers to contribute to improve their professional performance and, consequently, the learning of future teachers in the School of Pedagogy, the following were identified in the literature consulted:

a) Phenomena-Based Learning (PBL): The starting point of this active methodology is the observation of a holistic real-life phenomenon that is studied as a complete entity, in its real context. Among its advantages the students obtain an integral perspective of a real-world problem and learn to apply their theoretical-practical knowledge to it; it also prepares them to see the world in its complexity and shows them the need to work in multidisciplinary teams (Bilbao-Goyoaga *et al.*, 2023).

b) Challenge-based learning (CHBL): this is a pedagogical approach based on problem-based learning, but which goes a step further, since the teacher presents students with big ideas associated with real-world problems, so that students, with the help of guiding questions provided by the teacher, can narrow them down to a closer context and, from that reality, pose a challenge to be faced, and with which at least a partial solution to the initial problem can be found.

Among its advantages are those mentioned above for PBL and an additional one is added: students do not have to wait to finish their training so that, starting from a global problem, they can focus on the search for local solutions and thus begin to contribute to solving the small problems of their environment (Ávalos *et al.*, 2021; Bilbao-Goyoaga *et al.*, 2023; Torres *et al.*, 2021, as cited in Leal *et al.*, 2024).

c) Inquiry-Based Learning (IBL): it is applied in undergraduate final projects in all university degrees (Ávalos *et al.*, 2021; Bilbao-Goyoaga *et al.*, 2023), the latter, in their proposal, are committed to linking the research carried out in these projects to one of the Sustainable Development Goals (SDGs) proposed by the 2030 Agenda.

d) Escape room: The term seems to have its origin in the video game environment and refers to games in which the action takes place in a variety of closed environments (prisons, dungeons, mansions, laboratories...) but always with a common goal: to be able to escape from the place where one is locked up. Finding an object, discovering the name of a character or discovering a date can be the ultimate goal. Ignorance of what one is trying to discover is an imaginary space from which one wants to escape through achievement and obtaining the answer (Bilbao-Quintana *et al.*, 2021; Ávalos *et al.*, 2021).

e) Case-based learning (CBL): it is student-centered, ideas and experiences are shared, and can be applied in any area (Ávalos *et al.*, 2021; Cárdenas *et al.*, 2022; Gómez-Hurtado *et al.*, 2020; Daher *et al.*, 2022; Torres *et al.*, 2021, as cited in Leal *et al.*, 2024).

f) Cooperative Learning (CL): confrontation of points of view, modification of previous concepts, involvement and participation of all, learning social skills (Cárdenas *et al.*, 2022; Daher *et al.*, 2022).

g) Problem-based learning (PBL): uses reflection through self-inquiry of reasoning strategies and synthesis of information about a problem or situation, which allows the development of explanatory hypotheses aimed at building knowledge collaboratively. In this methodology, responsibilities are assumed, levels of understanding are increased, self-evaluation and self-criticism are made, and the level of involvement is high (Ávalos *et al.*, 2021; Cárdenas *et al.*, 2022; Daher *et al.*, 2022; Torres *et al.*, 2021, as cited in Leal *et al.*, 2024).

h) The inverted classroom: is an innovative pedagogical model characterized by the change in the traditional order of learning activities: from a classroom-study-assessment to a classroom-study-assessment-classroom. It has a great potential to foster the development of creativity and critical thinking, which contributes to the formation of critical, reflective and autonomous subjects (Hernández, 2018, as cited in Ávalos *et al.*, 2021; López-Alegría and Fraile, 2023; Morales, 2022)

i) Gamification: this is an innovative didactic strategy in which learning is achieved from game dynamics, as these do not constitute a game as such, but integrate the game to produce certain behaviors according to the educational objectives. They offer immediate feedback to students since, at the end of the activity, the student can know their results, as well as states of progress and rewards that motivate such achievements (Morales, 2022; Hernández, 2018, as cited in Ávalos *et al.*, 2021).

Although they will not be characterized in this work, other active methodologies were identified such as: service-learning, peer tutoring, workshops, project work and the use of new technologies (Daher *et al.*, 2022; Torres *et al.*, 2021, as cited in Leal *et al.*, 2024), in addition, readings and exhibitions (Gómez-Hurtado *et al.*, 2020). Others are considered techniques, such as: thinking-based learning, learning by doing, design thinking, narratives, learning journals, reflective portfolio (Hernández, 2018, as cited in Ávalos *et al.*, 2021, p. 122).

Likewise, the proposals of active methodologies that were identified in the literature consulted should be characterized by:

- To motivate the development of spaces that generate a sense of belonging in the students with their learning ecosystem, that involve them directly to take responsibility with a protagonist participation and generate autonomy in their training, self-taught learning and cognitive self-regulation (Ávalos *et al.*, 2021).

- To encourage them to challenge future teachers to "...implement the contents to increasingly realistic and experiential experiences, where they learn by doing, exploring, building to offer solutions, collectivizing and analyzing." (Avalos *et al.*, 2021, p. 121)

- To materialize the intentions of a new and flexible educational curriculum, supported by a formative evaluation, conducive to actions leading to collaborative work, effective communication, critical thinking, creativity, innovation, inquiry capacity, solution thinking and adjustment to changes (Hernández, 2018, as cited in Ávalos *et al.*, 2021, p. 122).

- To guide the student body towards the appropriate use of material and technological resources, in order to raise awareness and educate populations on the subject of information and media literacy, to form independent, integral, critical and responsible digital citizens (Aguaded, Jaramillo and Delgado, 2021, as cited in Ávalos *et al.*, 2021, p. 122).

To promote the transition from the transmission of knowledge to training in certain competencies, fundamental ways of doing things so that students can be transforming agents of the development model (Bilbao-Goyoaga *et al.*, 2023).

Conclusions

The challenges and demands of a globalized society imply for teaching professionals in current times to take advantage of all opportunities to transform the way of teaching and learning. It is true that the current educational curriculum can no longer be described as rigid, far from innovative purposes that guarantee attention to diversity and allow for the educational inclusion of all learners. The "toolbox of every teacher" must therefore be filled with variety and this can be achieved through active teaching-learning

methodologies. The teacher must move to the "theater stage" and the future teachers to the "stage" so that "rehearsals" ensure the success of each real presentation.

Active methodologies can contribute decisively to the continuing education of university teachers in the Faculty of Pedagogy, in the face of the new demands that are presented socially, in order to achieve the development of the competencies required by future teachers. These methodologies are characterized by a collaborative and dynamic participation of students in their formative process, instead of being only passive recipients of knowledge. In addition, they are conducive for them to experience the contents in the practice of their professional pedagogical activity, which undoubtedly increases the levels of motivation and, consequently, the quality of education.