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# Encourage Educational Innovation through the implementation of Active Methodologies.

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**Abstract.** Active methodologies within the student-centered educational paradigm have been one of the most effective tools to promote meaningful learning, the design of integrated learning experiences, strengthening collaborative work and communication among actors. To determine how educational innovation is favored by incorporating active methodologies in the training of university students, the mixed research conducted in 2022 in a private university in Guatemala entitled Active methodologies in the university is taken as a basis: Teaching and student experiences in emergency remote teaching and b-Learning modalities; and through a systematic review of literature on the definition, characteristics and central elements of educational innovation at the higher level, it has been possible to link the findings and conclude by pointing out how educational innovation processes are benefited.

**Keywords:** Active learning, student-centered learning, learning experience, educational innovation.

## 1 Introduction

Innovation is the key tool that sustains and guarantees the educational quality of university students' education. Developments generated within the learning process that enhance research and directly contribute to co-knowledge are also considered innovation and can be: scientific-technological, social and educational. A private university conducted mixed research, and the main active methodologies that are implemented were identified and it was easy to recognize the role they play in opening spaces that favor educational innovation. Therefore, through a systematic review of the literature on educational innovation, it was possible to link the research findings with the trends and models for innovation in the educational field.

## 2 Theoretical Framework

### 2.1 Learning in Higher Education

The current challenges of higher education include the promotion of teacher rethinking to transform classrooms, the design of learning experiences, the construction of

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knowledge and promote the formation of autonomous, self-regulated students, capable of facing the challenges posed by the context and social reality.

## 2.2 Competencies of the XXI Century

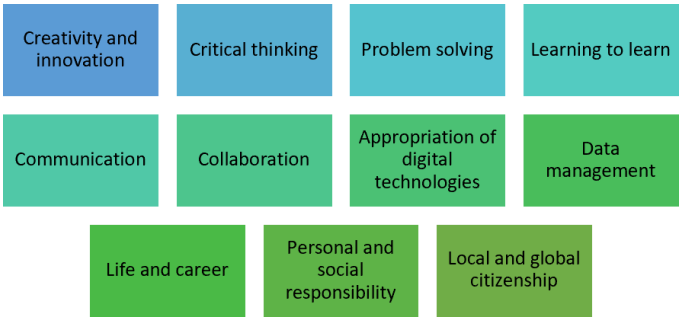


**Fig. 1** 21st Century Competencies. Note: Based on Competencias del Siglo XXI: Guía práctica para promover su aprendizaje y evaluación; Fundación Omar Dengo, (2014).

## 2.3 Active Methodologies in Higher Education

To ensure quality learning, education has focused its efforts on finding effective ways of learning and it is through active methodologies that three fundamental ideas have been taken up: a) the student becomes the active protagonist of his or her own learning; b) learning must be realistic, complex and feasible to achieve relevance and meaningful learning; and c) social interaction will lay the foundations for learning, a learning that is also characterized by the social environment.

For López (2005), cited in Márquez (2021), an active methodology is an interactive process based on teacher-student, student-student, student-teaching material and student-medium communication, which enhances the responsible involvement of the latter and leads to the satisfaction and enrichment of teachers and students (para.3).

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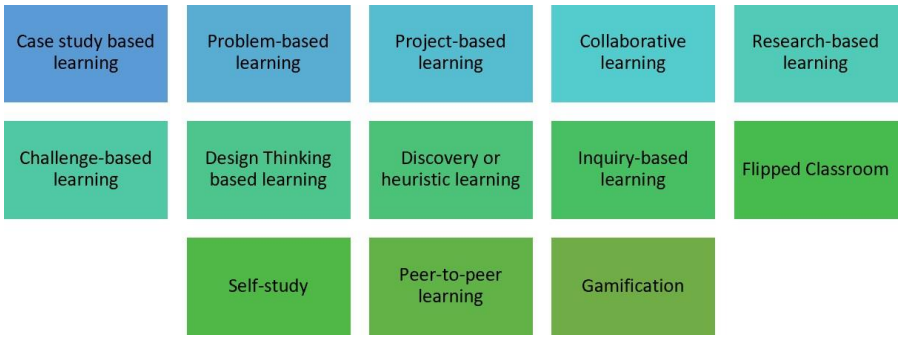


**Fig. 2** Active methodologies frequently implemented in Higher Education.

### 2.4 Educational Innovation

The director of the UNESCO International Institute for Higher Education in Latin America and the Caribbean (UNESCO IESALC), Francesc Pedró, affirms that for the OECD:

> Educational innovation is a dynamic change that adds value to the processes that take place in the educational institution and that translates into improvements in learning outcomes or in the satisfaction of educational actors or both at the same time. This definition contains an operational component that states that only changes in processes that lead to measurable improvements, particularly in the field of learning, deserve to be called educational innovations. (Pedró, 2015).

### 2.5 Relevance of Educational Innovation at the Higher Education Level

Ruiz et al. (2010) define guiding principles that favor the development and transformation of institutions: Permanent renewal; curricular flexibility; student and teacher mobility; the definition of fundamental knowledge and skills; the promotion of multidisciplinarity, interdisciplinarity and transdisciplinarity; the promotion of interculturality; accreditation; the strengthening of teaching; tutorial activity; the incorporation, use and constant updating of Information and Communication Technologies; distance education.

Rinaldi et al. (2021) explain that, within higher education, there are at least four levels at which innovations can be developed: in teaching practices, in the curriculum, in the institution and in the culture of innovation; and those institutions can prioritize innovation in certain areas: didactics and andragogy; evaluation; design of training plans; research; learning environments and teacher training.

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## 3 Methods

The research, Active methodologies in the university: teaching and student experiences in the emergency remote teaching and b-Learning modalities, was developed under the interpretative paradigm and had a mixed approach; the scope was descriptive. With the systematic literature review, it was determined how educational innovation in Higher Education contributes to the training of future professionals.

## 4 Results

The educational community defines active methodologies as *a route that focuses the learning process on the student and recognizes him/her as the protagonist and main responsible for his/her learning, which facilitates the development of competencies and the construction of meaningful learning based on interaction, communication, inclusion, inquiry and high involvement of the student in the learning process. In addition, active methodologies favor processes of self-evaluation, self-reflection, collaborative work, critical thinking, self-regulation and metacognition. At the same time, they enable innovation and the implementation of new and better ways of learning, so that motivation, creativity and ingenuity give way to authentic learning. The participants, teachers and students, agree that active methodologies were implemented more frequently: Collaborative Learning, Project Based and Case Studies.*

## 5 Discussion

Active methodologies favor the development of educational innovations by promoting and ensuring active, student-centered learning, fostering the development of academic-professional competencies that allow the design of innovative proposals in various areas of knowledge. In addition, the innovations developed by teachers and students are, in many cases, presented and socialized with the educational community in order to provide feedback on the product, processes and learning. These dissemination actions are used as part of the collegial work that is encouraged in the teacher training sessions.

## 6 Conclusions

Active methodologies are effective in both face-to-face and virtual contexts. Prioritizing a student-centered process, the careful selection of materials, resources and applications that facilitated the mediation of content in virtual workspaces will allow the generation of innovative proposals and projects that will strengthen learning by making it possible to take knowledge to various fields of action.

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## 7 Limitations and Future Research

This research favors future investigations in relation to the route or model with which educational innovations are developed.

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