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Dirección: Marieta de Veintimilla E4-142 and Pizarro, Quito
Código postal EC-170522
editorial@uisrael.edu.ec - Phone: (02) 255-5741 ext. 113

EDITORIAL

PhD. Yolvy Javier Quintero Cordero
Editor Revista Científica UISRAEL
https://orcid.org/0000-0002-5773-2574

Dear readers, it is once again a pleasure to share with you the third issue of our scientific journal **UISRAEL** for the year 2025. On this occasion, our journal is pleased to present for your consideration ten (10) articles which will undoubtedly provide interesting reading material for the scientific community and the general public.

The greatest challenge faced by humankind is, without a doubt, education. This statement, attributed to Kant (1985) in his work *"Treatise on Pedagogy"*—written around 1903—asserts that man becomes who he is solely through education: a demanding and difficult process in which each generation strives to perfect itself. In this sense, pedagogy transcends the very foundations of history. Education prepares human beings to be free and to act autonomously.

For Aristotle (1985), the educational praxis is revealed when the human being—in this case, the teacher—is free and engages in reflection. This is what Touriñan (2019) calls the *"pedagogical gaze"*: that internal scrutiny carried out by the pedagogue regarding his or her professional actions, methods, techniques, and strategies, as well as their role as researcher—in short, how they exercise their pedagogical work. This work has both meaning and purpose: to shape the individual according to the cultural characteristics of each society. Each society contains needs inherent to its own condition, which in most cases are different; thus, they construct individuals suited to their particular purposes.

Now, regardless of what each society upholds as its model of the individual, in order to preserve its cultural thread, there are certain premises that must be considered in relation to the meaning of education. In this regard, Touriñan (2016) explains that these premises are: content, form, use, and balance. There is an educational process of *content* when there is an axiological foundation; that is, something should only be considered educational when it reflects a way of life inspired by values that affirm the quality of being human. At the same time, there must be an *ethical socialization of form*—meaning that praxis must be characterized by respect for the freedom and dignity of learners, not only because they are persons, but also because they are the ones who construct their own learning.

Furthermore, every educational process must motivate students to develop critical thinking that allows them to organize ideas, reflect upon them objectively in the form of questions to be analyzed, and subsequently make value judgments. This helps them construct their own mental framework and propel themselves as thinking beings. Otherwise, what occurs is rote, repetitive learning, which only impacts the grades obtained. Education must also follow a principle of *balance*—no single area should overshadow the others in terms of content. The goal is to develop the individual through a holistic, well-rounded education.

It is essential to highlight the importance of the teacher in the university educational process: to promote critical thinking among students, instill in them a love of lifelong learning, and be an innovative and research-oriented educator. All of this makes them qualified, talented, and committed—characteristics that define them as professionals of excellence.

Regarding the perception of learning, Briceño (2021) points out that it consists of "the capacity to capture, process, and actively make sense of the information that reaches our senses." (p.1). This process allows the individual to interpret reality and their environment. Perception is unique—different for every person—and is shaped by the intensity of the stimulus that gives rise to the perceived sensation.

This, of course, applies to the educational process and is closely related to the construct of motivation. Students feel attracted and enthusiastic about learning when the teacher inspires them, when the content presented is interesting to them. In such circumstances, they engage with the learning process. Thus, students' predisposition toward learning largely depends on the teacher's didactic action, and as a result, their perception will be positive.

According to Ramos (2017), didactics should encourage students toward autonomous learning by stimulating their interest in critical thinking and the development of study habits. In this direction, teachers should employ strategies that enable them to achieve their goals with educational excellence. These strategies may include, among others, lectures to transmit knowledge and encourage students to reflect on the topic and clearly perceive the relationships between concepts or content. Brainstorming fosters creativity, debates promote the discussion of ideas, argumentation and value judgments activate critical thinking. Likewise, reading comprehension promotes the correct interpretation of texts, enabling students to express informed opinions about them.

Within this context, the study entitled *"Gamification (ta-tum application) to Generate Interest in Children's and Young Adult Literature"* is presented. The objective of this research was to propose gamification (through the ta-tum application) as a strategy to spark students' interest in children's and young adult literature. The results

obtained help to determine that gamification is an effective strategy to foster literary interest.

Secondly, we have the article entitled *"The Learning Train: A Strategy for Reading and Writing in Elementary Basic Education Students."* This research aimed to demonstrate that this strategy improves reading and writing skills among elementary-level students in General Basic Education. After applying the strategy, improvements were observed in fluent reading, phonological recognition, and text comprehension. In addition, parents were motivated and interested in their children's learning process. The "learning train" enables children to acquire meaningful knowledge to function effectively in their social, academic, and family lives.

Thirdly, the study entitled *"Educational Inclusion in Initial Teacher Training"* is presented. The objective of this research was to determine the approach to educational inclusion in the initial teacher training of the Language and Literature Pedagogy, Mathematics Pedagogy, and Psychopedagogy programs at the Faculty of Philosophy, Letters, and Education Sciences of the Central University of Ecuador during the 2022–2023 academic period. The results show a significantly higher emphasis on inclusive education in the initial training of the Psychopedagogy program. Nevertheless, it was recognized that each program demonstrates strengths in addressing diversity according to the nature of its professional practice.

Fourth, the scientific article entitled *"An Approach to Anglophone Literature in the EFL Classroom: A Proposal for Collaborative Reading through Frankenstein"* is presented. This research examined the issue that, in higher-level English courses, linguistic comprehension tends to be prioritized over literary appreciation. The proposed didactic approach highlights, however, the importance of awakening students' interest in English-speaking culture and narratives. The aim is to encourage contextual reading and foster other transversal competences, such as emotional well-being.

Fifth, the study entitled *"The Piropo: Between Compliment and Harassment. A Case Study at Universidad Laica Eloy Alfaro de Manabí"* is presented. This research aimed to analyze the perception of gender-based violence expressed through *piropo* (street remarks or catcalling) within higher education institutions. For this purpose, Universidad Laica Eloy Alfaro de Manabí (ULEAM) was chosen as the case study. The study concludes that 38% of the university community at ULEAM has been a victim of verbal sexual harassment through *piropo* on campus, which caused discomfort. Nevertheless, *piropo* is sometimes mistakenly perceived as an attempt at flirting, which hinders its visibility as harassment.

Sixth in the sequence, we have the article entitled *"Attitudes and Research Capacities Regarding Artificial Intelligence: Challenges for University Professors."* The central idea of this research is to examine the prevalence of artificial intelligence (AI) and its

transformative capacity in the educational field, addressing both the challenges and opportunities it presents. The rapid evolution of AI demands that professors engage in continuous professional development to acquire the research and technological competencies essential for adapting to an increasingly digital environment. The objective was to analyze scientific evidence regarding university professors' attitudes and research competencies in the face of the AI challenge. The study concludes that AI emerges as a versatile tool that facilitates the automation and optimization of education. However, its effective adoption requires ongoing training for both faculty and students, as well as institutional support. It is essential to develop policies that integrate AI into academic practice, ensuring that professors are adequately trained to face the challenges of the digital society and to promote good research practices.

Next, the study entitled *"Differentiation in the Academic Management of Military Training Programs: A Comparative Study at the Universidad de las Fuerzas Armadas ESPE"* is presented. Its objective is to examine differentiation in the academic management of military training programs at the Universidad de las Fuerzas Armadas ESPE, Ecuador, using a comparative approach between focused and non-focused programs. The research analyzes the structure and characteristics of these programs, highlighting the relevance of the Military Sciences program. The study emphasizes that this differentiation in academic management is fundamental for training competent officers capable of facing contemporary challenges in various military and civilian contexts. It also suggests that this differentiated approach to academic management could serve as a model for other higher education institutions interested in combining academic training with practical skills.

Eighth, we find the scientific article entitled *"Reflective Practice through Peer Coaching among English as a Foreign Language Preservice Teachers' Practicum."* The objective of this study was to investigate how peer coaching phases promoted reflective practice among seventh-semester preservice teachers during their teaching practicum. The findings revealed that peer coaching promoted reflective practice among future EFL teachers, particularly during classroom observations, when they assumed the role of observers. This gave them more time to reflect and to recognize both positive and negative teaching events carried out by their peers.

Ninth, the study entitled *"Interculturality and Cultural Identity in Contemporary Peru: Resilience and Transformation in Times of Globalization"* is presented. It is important to note that intercultural education in Peru has sought to recognize and celebrate cultural diversity by creating a space for dialogue and mutual learning across different contexts, with the aim of achieving students' holistic development. This research employed a qualitative approach using the PRISMA method, conducting a search, selection, and analysis of documents related to interculturality, globalization, and Intercultural Bilingual Education (EIB) in the Peruvian context. The results showed

that globalization and education have indeed sought to meet the training needs of students from different backgrounds, preparing them to face the challenges of an interconnected world without losing their cultural identity. This intercultural education has fostered understanding, respect, and inclusion of the identities that coexist in Peru, which in turn has laid the foundation for coping with adverse situations and official events that in some ways hinder intercultural progress.

Lastly, the article entitled *"Educational Management Strategies to Engage Teachers in the Development of Ecuador's Competency-Based Curriculum Framework"* is presented. This qualitative study, with a phenomenological approach, aimed to understand the educational management strategies necessary to effectively implement the MCC in an educational institution in the province of Tungurahua. The findings reveal weaknesses in pedagogical leadership and institutional coordination, which hinder full adoption of the new approach. The study concludes that proactive educational management—focused on teacher support, stakeholder coordination, and investment in resources and training—is key to consolidating the implementation of the MCC and responding to the challenges of the 21st century.

We are confident that reading these insightful articles will provide a comprehensive overview of educational research and generate perspectives that will enrich the theoretical body of knowledge surrounding this area, which is so vital for any society.

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Gamification (ta-tum application) to generate interest in children's and young adult literature

La gamificación (aplicación ta-tum) para generar interés por la literatura infantil y juvenil

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Mayra Carolina Caiza Bautista[1]
Universidad Central del Ecuador, Ecuador
mccaizab@uce.edu.ec
https://orcid.org/0000-0001-5647-1715

Lilian Marisol Chorlango Gallegos[2]
Universidad Central del Ecuador, Ecuador
lmchorlangog@uce.edu.ec
https://orcid.org/0000-0001-6672-232X

Brenda Paola Guillen Rios[3]
Universidad Central del Ecuador, Ecuador
bpguillen@uce.edu.ec
https://orcid.org/0000-0003-3648-6404

Resumen

Gamification (the Ta-tum app) is an adventure game that allows students to develop a genuine interest in literature. It is a digital tool that immerses students in a detective world and allows them to develop a love of reading. Thus, the objective of this research was to propose gamification (the Ta-tum app) to generate interest in children's and young adult literature among students. Regarding the methodology, a qualitative approach was applied, which allowed us to gather the opinions of 25 teachers. A survey was used as the technique and a questionnaire as the instrument, thus identifying that teachers would implement gamified strategies such as the Ta-tum app to generate interest in reading; however, they do not do so due to lack of time. Based on this, statistical methods such as the Chi-square test were applied to determine whether there is a significant difference between the expected results. Additionally, ANOVA was used to determine whether the results obtained would help determine whether gamification is an effective strategy for fostering literary interest. The conclusion was that all 25 teachers believed that the ta-tum app helped spark students' literary interest.

Palabras clave: gamification, ta-tum app, children's and young adult literature

Abstract

La gamificación (aplicación ta-tum) es un juego de aventura, que permite a los estudiantes interesarse de manera genuina por la literatura, pues al tratarse de una herramienta digital en la cual los estudiantes se ven inmersos en un mundo de detectives podrán desarrollar el gusto por la lectura. Es así que el objetivo planteado para esta investigación fue proponer la gamificación (aplicación ta-tum) para generar interés por la literatura infantil y juvenil en los estudiantes. En cuanto, a la metodología se aplicó el enfoque cualitativo que permitió evidenciar la opinión de 25 docentes; se utilizó la encuesta como técnica y el cuestionario como instrumento, identificando así que los docentes sí implementarían estrategias gamificadas como la aplicación ta-tum para generar interés por la lectura; sin embargo, no lo hacen por falta de tiempo. En base a esto, se aplicaron métodos estadísticos como el Chi-cuadrado para determinar si existe una diferencia significativa entre los resultados esperados. Además, se trabajó con ANOVA para conocer si los resultados obtenidos ayudarán a determinar que la gamificación es una estrategia efectiva para fomentar el interés literario. Concluyendo así, que los 25 docentes consideraron que la aplicación ta-tum ayudó a despertar el interés literario en los estudiantes.

Keywords: gamificación, aplicación ta-tum, literatura infantil y juvenil

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Introduction

Reading is a skill that opens doors to knowledge and personal growth, bringing with it great benefits and opportunities for today's society. However, there is a lack of interest in reading worldwide due to several mitigating factors. In this context, the Regional Center for the Promotion of Books in Latin America and the Caribbean (CERLALC) indicates that the countries with the highest reading rates are Spain with 61%, Argentina with 55%, and Chile with 51%. Of these countries, Spain and Argentina read for pleasure, while Chile reads as a job requirement.

In Ecuador, the Ministry of Culture and Heritage (2022) conducted the first national survey focused on measuring reading habits and practices, with a sample size of 15,492 households and a confidence level of 95%. The form consisted of 76 questions, yielding the following results: in natural regions, the Coast had the highest reading rate with 52.0%, Sierra 36.3%, and Amazon with 11.8%; adults aged 35 to 64, who read 14.9%, were also considered. (p. 4)

On the other hand, in an educational institution located north of Quito, it was evident that students from third to seventh year of EGB have no interest in reading, since teachers do not apply innovative strategies such as gamification to motivate their students to have reading habits, as Aldana (2021) pointed out:

> Inadequate pedagogical practices by teachers also play a role, as they continue to use traditional methodologies, there is a lack of innovation in activities, there are no appropriate strategies to strengthen reading skills in students, some teachers lack interest in teaching reading, and in some cases, by prioritizing other tasks, they neglect the teaching of reading comprehension. (p. 18)

Reading is important because it helps develop cognitive and communication skills that allow students to be more critical, analytical, and reflective. Poor reading habits have negative consequences for students' personal and academic development. It is known that children learn best through interaction, games, and the manipulation of objects. Therefore, the ta-tum app, as a gamified platform, helps foster reading autonomy by encouraging students to become more interested in reading.

In this way, the research group aimed to promote gamification (the Ta-tum application) to generate interest in children's and young adult literature among students. Ta-tum is an innovative educational tool that allows children to develop reading habits on their own, in addition to developing cognitive skills that will allow them to have a well-rounded education that will enable them to function in society as active and participatory participants.

1.1. Teaching strategies

For Reynosa et al. (2019), teaching strategies are "a discipline of pedagogy, which is responsible for the study and intervention in the teaching-learning process with the purpose of optimizing methods, techniques and tools" (p.261), that is, strategies are procedures in which teachers and students organize the actions of the training process consciously. Similarly, Ordóñez (2022)

considered that “gamification is a teaching strategy, which allows the teacher to provide a teaching-learning process through games which allows us to investigate, know, reason, and participate in the process.”

When linking the authors’ two ideas, the importance of teaching strategies as tools is highlighted, which are fundamental to optimizing the teaching-learning process. Incorporating playful and motivating elements typical of games, such as gamification, allows students to actively participate in their own learning. The choice of gamification as a strategy is justified by its potential to transform the classroom into a dynamic and engaging environment where students feel motivated to learn and achieve their goals.

Thus, an example of a gamified strategy is the ta-tum app, which uses a reward system similar to video games to motivate young people and children to read.

1.2. Teaching practice and the promotion of children’s and young adult literature.

Teaching practice is essential in promoting literature, as teachers mediate between knowledge and students, creating an environment that motivates them to read. Therefore, it is important to mention the following aspects that teachers should possess to generate interest in children’s and young adult literature among their students.

A teacher must have reading habits, since if the teacher does not present reading habits, he or she would not be able to encourage his or her students to read or guide them in the reading process. (Applegate 2004, as cited in González, 2022) “they affirm that reading has little presence in the lives of teachers, (...) limiting its exercise to work demands.” However, teachers can share times designated for reading with their students, through gamification in which students and teachers can participate based on collaborative work. Teachers must know and implement the use of technological tools, which offer resources that can be used to improve the teaching-learning process. According to Carvajal (2020) “Technological resources can form a discipline that can enhance educational processes such as reading through the implementation (...) of technological tools that include social networks, programs, applications, the internet, office automation, among others.” (p. 45). This is how ICTs can make classes more engaging and motivating for students by offering virtual environments focused on literature, such as the ta-tum app. This virtual space allows the educational community to have a positive approach to reading habits by creating new, more interactive experiences. Furthermore, teachers would have greater control over these spaces.

Finally, a teacher must present research skills, according to García (2015) “in the face of constant scientific and technological changes, (...) the need for research is imposed for the generation of new knowledge that allows us to face the challenges and challenges imposed by current reality” (p. 144). So the teacher’s research skills help them stay up to date with teaching strategies that help interest students in reading, such as gamification, an effective tool for developing research skills in teachers, since it allows them to create attractive learning experiences.

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1.3. Students using gamification such as the ta-tum app.

Gamification is an effective tool that can help students develop an interest in literature. Incorporating games into the reading experience can increase motivation, engagement, and fun. In fact, some of the benefits of using the ta-tum app include developing students' reading freedom.

Orellana and Vial (2018), in a study of reading plans developed in Chilean schools, "indicated that a great deal of reading interest was produced when freedom of choice of books and autonomy in the times, moments and places chosen by the child to read were introduced." Therefore, it can be said that reading freedom allows students to select texts of their personal interest and genre since this way they are more likely to enjoy the reading process and develop a taste for it.

Paraphrasing Bustos (2019), it is important to give children a wide repertoire of books to choose from, since if they cannot find the book they like, it is difficult for them to get involved in reading. It is worth noting that the ta-tum application offers a library, which allows the student to choose the text of their interest and read in a more fun way, venturing into it like a great detective. In addition, with the ta-tum application, students develop conscious reading; by entering a world of adventure where they are detectives, they must find hidden clues in the texts. In turn, it becomes an active reading since it is a competitive game in which students will earn medals, points and stars, they will feel motivated to read texts more quickly.

On the other hand, according to Oviedo and Páez (2021), they mentioned that "cognitive skills are thinking operations that help process the information received through the senses." (p.36) Reading allows students to develop cognitive skills such as text comprehension, memory, critical thinking, and learning to reason. Ta-tum is an educational platform that promotes critical and innovative thinking, which, by providing challenges, forces students to think, analyze, evaluate, and be able to provide solutions to various problems.

Methodology

This research was documentary and bibliographical, collecting information from primary and secondary sources, which were used as a reference for this study. The research was conducted for educational purposes, to understand the opinions of 25 elementary school teachers regarding the implementation of gamification as a method to generate interest in children's and young adult literature. A survey was used as a technique and a questionnaire as an instrument. The questionnaire was developed using the digital tool Google Forms, which allowed for the creation of a spreadsheet that automatically records each teacher's responses. These responses were then uploaded to SPSS, a system used to perform data analysis and create tables and graphs. Cronbach's alpha was used to measure reliability, as well as the chi-square test, which allowed for the examination of differences that may exist between categorical variables within the same population. Finally, the ANOVA was developed to evaluate the influence of one or more factors on a variable, so by applying the ANOVA within the research it was expected that the results obtained would help determine whether gamification is an effective strategy to promote reading interest in students or not.

Results

The results we obtained regarding the opinions of the 25 teachers on the ta-tum application show the following:

Table 1

Survey of 25 Teachers.

	Totally Disagree	Disagree	Neither agree, nor disagree	Agree	Totally agree
Do you agree that it's teachers' duty to stay up-to-date on innovative teaching strategies like gamification to encourage students to read?	0%	4%	0%	4%	92%
Do you agree that teachers should allocate reading time through teaching strategies such as gamification, in which teachers and students participate to develop reading habits through play?	4%	0%	0%	44%	52%
Do you agree with implementing technological teaching strategies like the Ta-Tum app, which focuses on rewarding students who solve hidden cases in texts to foster a love of reading?	0%	0%	8%	28%	64%
Do you agree with using the extensive library of books provided by the ta-tum app so that students can choose texts according to their personal taste?	0%	4%	0%	48%	48%
Do you agree that gamified methodologies should be implemented in reading instruction so that children develop a genuine interest in reading?	0%	0%	12%	44%	44%
Do you agree that schools need to implement recreational virtual spaces for teaching and promoting interest in reading?	0%	4%	4%	36%	56%

Note. Análisis de la encuesta a docentes (2024)

As shown in Table 1, it can be deduced that 92% of the teachers surveyed strongly agree that it is their duty to stay up-to-date on innovative teaching strategies such as gamification to encourage students to read. On the other hand, in the second question, 52% of teachers mentioned that they strongly agree that teachers should allocate reading time through the application of teaching strategies such as gamification, and 44% only agree with the aforementioned. In the third and most important question of our research, 64% of teachers say they would implement technological teaching strategies such as the Ta-tum application to generate a love of reading, and 28% only agree. In the following question, 48% of teachers strongly agreed with using the extensive library of books offered by the ta-tum app so that students could choose texts according to their personal taste, and 48% only agreed with the above. In the fifth question, 44% of teachers strongly agreed

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that gamified methodologies should be implemented in reading instruction so that children develop a genuine interest in reading, and 44% only agreed. Finally, in the last question, 56% of teachers surveyed stated that schools should implement recreational virtual spaces for teaching and promoting an interest in reading, and only 36% only agreed.

3.1. Cronbach's alpha

Table 2

Cronbach's alpha.

Reliability statistics		
Cronbach's alpha	Cronbach's alpha based on standardized items	Number of elements
.880	.854	14

Note. Own creation from SPSS

Cronbach's Alpha allows us to evaluate the magnitude to which the items of an instrument are correlated so that a research is considered reliable. We obtained a .880, which means that the research is reliable.

3.2. Chi-square

H_0:There is no relationship between years of teaching experience and use of technology.

H_1:There is a relationship between the use of technologies and years of teaching experience.

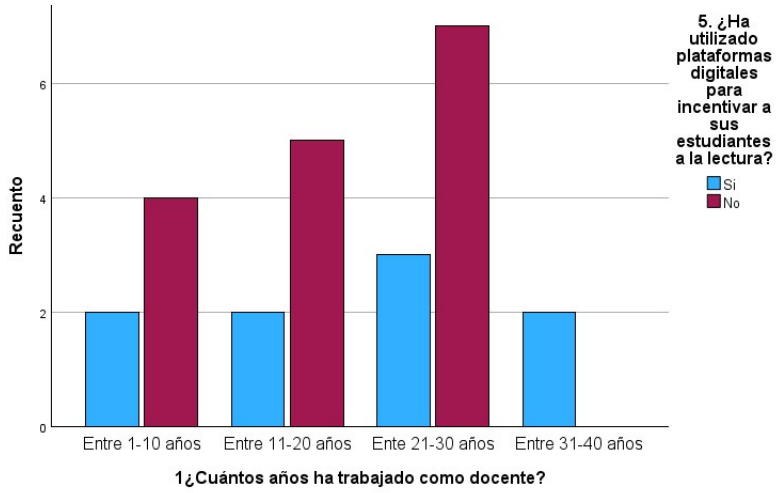
Table 3

Chi-square test

	Value	df	Asymptotic significance (bilateral)
Pearson's Chi-square	3.898a	3	.273
Likelihood ratio	4,440	3	.218
Linear by linear association	.873	1	.350
Number of valid cases	25		

Figure 1

Result of the Table of Relationship between Years of Teaching Work and Level of Instruction.



According to *Table 3* and *Figure 1*, it is deduced that there is no relationship between years of teaching experience and the use of technology, since the percentage obtained of .273 is greater than 0.05; this means that it does not meet the established hypothesis. However, the relationship between years of teaching experience and the use of technology is complex and varies depending on how teachers have adapted to technology and how they intend to implement it in classes. It was identified that the majority of teachers working between 21 and 30 years of age do not use technology in class, but within this group, the highest percentage is found among teachers who do use technology to promote a love of and interest in reading.

H_0: There is no relationship between educational attainment and the use of digital platforms to encourage reading.

H_1: There is a relationship between the use of digital platforms to encourage reading and the level of education.

Table 4

Chi-Square Test.

	Value	df	Asymptotic significance (bilateral)
Pearson's Chi-square	3.518a	3	.318
Likelihood ratio	4.159	3	.245
Linear by linear association	3.375	1	.066
Number of valid cases	25		

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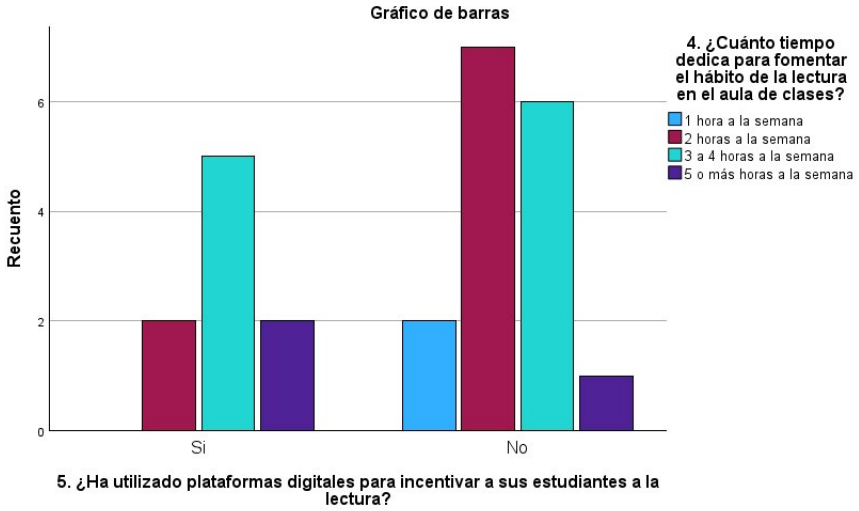
Figure 2

Result of the Table of Relationship between the Level of Teacher Instruction and the Use of Digital Platforms to Encourage Reading.



Based on *Table 4* and *Figure 2*, it is deduced that there is no relationship between the level of teacher education and the use of digital platforms to encourage reading, since the percentage obtained of .391 is greater than 0.05, this means that it does not meet the established hypothesis. However, the relationship between the level of teacher education and the use of digital platforms to encourage reading is complicated since it is affected by the short time or lack of internet within educational institutions. It was seen that the people who most use digital platforms to encourage reading among students are people who have a third-level degree.

H_0: There is no relationship between teacher research skills and reading habits.

H_1: There is a relationship between teacher research skills and reading habits.

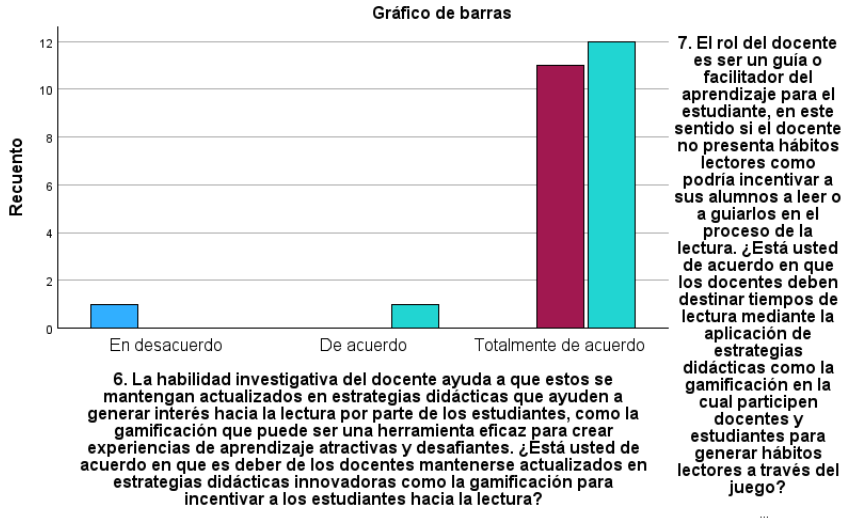
Table 5

Chi-Square Test.

	Value	df	Asymptotic significance (bilateral)
Pearson's Chi-square	25.920a	4	<.001
Likelihood ratio	9.660	4	.047
Linear by linear association	13.128	1	<.001
Number of valid cases	25		

Figure 3

Result of the Relationship Table between Teacher Research Skill and Reading Habits.



Based on *Table 5* and *Figure 3*, it can be deduced that there is a relationship between a teacher's research ability and reading habits, since the percentage obtained of <.001 is less than 0.05, which means that it meets the established hypothesis. However, the relationship between a teacher's research ability and their reading habits is affected since if a teacher does not have good reading habits, their research ability will not be well developed. It was seen that those surveyed agree that a teacher's research ability goes hand in hand with their reading habits.

H_0: There is no relationship between the enjoyment of reading and reading comprehension.

H_1: There is a relationship between reading comprehension and the love of reading.

Table 6

Chi-Square Test.

	Value	df	Asymptotic significance (bilateral)
Pearson's Chi-square	29.398a	6	<.001
Likelihood ratio	13.792	6	.032
Linear by linear association	12.281	1	<.001
Number of valid cases	25		

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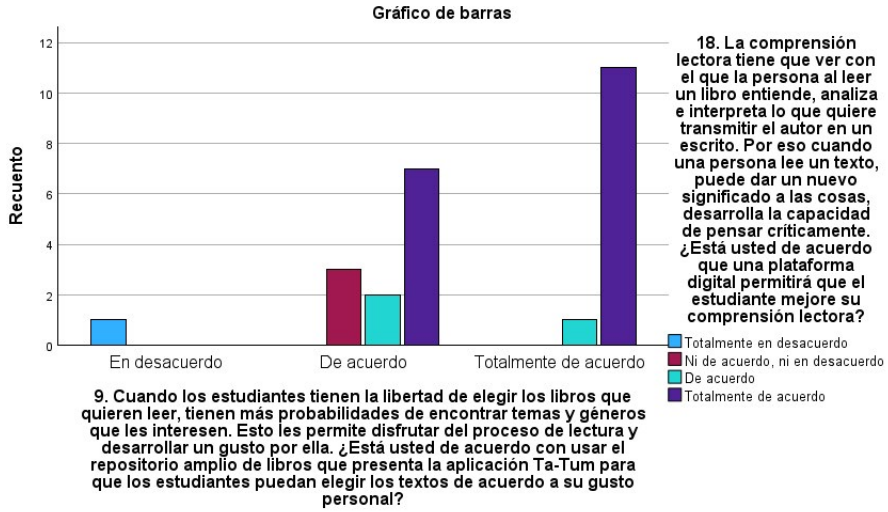
Figure 4

Result of the Relationship Table between Reading Enjoyment and Reading Comprehension.



Based on Table 6 and Figure 4, it is deduced that there is a relationship between reading comprehension and the love of reading, since the percentage obtained of <.001 is less than 0.05, this means that it meets the established hypothesis. In other words, the relationship between reading comprehension and the love of reading does correspond since if you have a love of reading, you will better understand what you read by having reading comprehension and an inferential reading level. It was shown that the people surveyed agree that reading comprehension and the love of reading complement each other to carry out a genuine interest in reading.

3.3. ANOVA

H_0: Teachers who have more time on their desks do NOT take the time to encourage reading habits through the use of digital educational platforms.

H_1: Teachers with more time on their desks find time to encourage reading habits through the use of digital educational platforms.

Table 7

Compare Means and Portions Anova.

		Sum of squares	df	Mean square	F-value	p-value
How many years have you worked as a teacher?	Between groups	.780	1	.780	.869	.361
	Within groups	20.660	23	.898		
	Total	21.440	24			
How much time do you dedicate to promoting the habit of reading in the classroom?	Between groups	2.250	1	2.250	3.764	.065
	Within groups	13.750	23	.598		
	Total	16,000	24			

According to *Table 7*, two groups or questions present in the questionnaire applied to 25 teachers have been analyzed with a common factor, the first is related to the years of teaching work and the other is the time that teachers give themselves per week to encourage reading, with a factor that would be the use of digital educational platforms, obtaining a positive result in this case it is seen that the values of the two groups are 361 which is greater than 005 referring to the years of teaching work.

Conclusions

The ta-tum educational platform encourages students to develop cognitive skills by providing challenges that require them to analyze, process, acquire, and construct their own knowledge. Furthermore, because it is a gamified, engaging, and fun platform, it fosters greater reading autonomy. Students are the greatest beneficiaries, as they foster their reading habits in a more innovative and fun way, thus generating students with good behavior and establishing values of responsibility with their work, homework, and class activities.

In relation to teachers, when using this educational tool, it turns their students into an active and participatory entity, since the interactive activities allow them to concentrate on what they are doing, capturing their attention, making students responsible for their own development as autonomous readers, in addition to promoting better reading comprehension in their students, since it establishes ways to obtain the interest and motivation of students.

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The Learning Train, a strategy for reading and writing in Elementary General Education students

El tren del Aprendizaje, una estrategia para la lectura y escritura en estudiantes de Educación General Básica Elemental

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Nadia Estefania Curipallo Peralta[1]
Universidad Central del Ecuador, Ecuador
necuripallo@uce.edu.ec
https://orcid.org/0000-0002-1612-4521

Jacqueline Alejandra Díaz Parra[2]
Universidad Central del Ecuador, Ecuador
jadiazp1@uce.edu.ec
https://orcid.org/0000-0002-2767-3868

Abstract

The “learning train” (tren de aprendizaje) is an innovative strategy aimed at strengthening the reading and writing process, as it develops students’ linguistic skills such as syllable formation and text composition. In this sense, the purpose of the research was to explain how the application of this strategy contributes to the improvement of the reading and writing process in Basic General Education students.

For this purpose, a deductive method and field research with a mixed-method approach were used, obtaining both qualitative and quantitative data. According to the results, between 2018 and 2022 the percentage of people at the national level who did not know how to read and write decreased from 6.5% to 6%. Furthermore, the health emergency caused by Covid-19 generated significant limitations in the teaching-learning process, due to restricted access to teacher training, work overload, and scarce support from parents.

In this context, the application of the learning train yielded positive results; students showed progress in fluent reading, phonological recognition, and text comprehension, while parents became actively involved, showing motivation and interest in the educational process. In conclusion, this strategy favored the development of reading and writing skills and strengthened the students’ performance in the social, academic, and family spheres.

Keywords: learning train, reading, writing, linguistics, phonology, syllable

Resumen

El tren de aprendizaje es una estrategia innovadora dirigida a fortalecer el proceso de lectura y escritura, ya que desarrolla en los estudiantes habilidades lingüísticas como la formación de sílabas y la redacción de textos. En este sentido, el propósito de la investigación fue explicar cómo la aplicación de esta estrategia contribuye al mejoramiento del proceso de lectura y escritura en estudiantes de Educación General Básica.

Para ello, se utilizó el método deductivo y la investigación de campo con enfoque mixto, obteniendo datos cualitativos y cuantitativos. Según los resultados, entre los años 2018 y 2022 el porcentaje de personas a nivel nacional que no sabían leer y escribir pasó de 6,5% a 6%. Además, la emergencia sanitaria causada por el Covid-19 generó limitaciones significativas en el proceso de enseñanza-aprendizaje, debido al acceso restringido a la formación docente, la sobrecarga laboral y el escaso acompañamiento de los padres de familia.

En este contexto, la aplicación del tren de aprendizaje arrojó resultados positivos; los estudiantes mostraron avances en lectura fluida, reconocimiento fonológico y comprensión de textos, mientras que los padres se involucraron activamente, mostrando motivación e interés en el proceso educativo. En conclusión, esta estrategia favoreció el desarrollo de las habilidades de lectura, escritura y fortaleció el desempeño de los alumnos en los ámbitos social, académico y familiar.

Palabras clave: tren del aprendizaje, lectura, escritura, lingüística, fonología, sílaba

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Introduction

Reading and writing are skills that involve a complex and progressive process, as they require letter recognition, word decoding, reading comprehension, and written expression. Different educational institutions experience varying difficulties from the early years of schooling, as not all children learn to read and write in the same way or at the same pace, which can affect their academic performance and personal development.

Thus, between 2018 and 2022, the percentage of people nationwide who could neither read nor write increased from 6.5% to 6%. This means that there were 764,610 illiterate people. According to the INEC (2023), this problem was rooted in rural areas, where illiteracy reached 11.1%, while in urban areas it reached 3.6%. In this sense, the figure increased as a result of the COVID-19 crisis, as many children stopped going to school to go to work. Thus, it can be said that illiteracy in Ecuador is due to a combination of factors, including poverty, geographic location, discrimination, and lack of opportunities.

On the other hand, one of the causes of this problem is the limited access to teacher training due to excessive workload, which makes it difficult for teachers to dedicate time to their training, affecting the quality of education. Thus, according to the Ministry of Education (2021) study, one of the causes affecting teacher development is the lack of connectivity and the availability of devices such as computers and cell phones, especially in rural areas, since more than 11,200 teachers cannot access the training provided by the ministerial body. That is, 7% of public teachers have not been able to resolve the doubts and problems that arise in the classroom. For this reason, the lack of teacher training is a complex problem that requires support from the State and educational institutions, since only through mutual effort can quality education be guaranteed for all children in Ecuador.

Taking these figures into account, the objective of the research was to explain how the “learning train” improves the reading and writing process of students in Basic General Education. According to the study by the National Institute of Statistics and Census (2023), 91.4% of students over 5 years of age know how to read and write, but present learning difficulties such as poor reading comprehension, difficulties recognizing sounds and letters, poor reading fluency, and limited vocabulary in their oral and written expression.

Finally, by implementing the strategy in a creative, dynamic, and planned manner, students achieved meaningful and lasting learning, as these learning spaces adapt to their learning styles and rhythms.

1.1. The learning train

In this sense, Ronald Bauer was one of the driving forces behind station-based learning in primary and secondary schools in Germany, promoting motivational and practical teaching. According to Bauer, cited in Gigena (2019se), it is a strategy in which educators plan the topic they are going to teach in various physical spaces inside or outside the classroom, using countless resources

such as worksheets, texts, games, and others, so that students can work independently and autonomously.

Therefore, teachers must clearly delimit the space or corner so that students can identify it in a timely manner. They must also organize, stock, and provide the necessary materials for all students, thus meeting the needs of each individual.

1.1.1. Benefits

The learning train encourages children's reading and writing skills, as it is equipped with innovative and engaging materials, which spark students' interest. Teachers can also plan different activities such as storytelling, reading alouds, discussions about the books read, dramatizations of books, story writing, among others, to develop students' creativity and cognitive, emotional, and linguistic skills. (Murillo, 2023)

On the other hand, according to Cantalejo (2021), learning spaces provide benefits for the comprehensive development of children: they facilitate meaningful and playful learning; they favor the development of autonomy and responsibility; they motivate teamwork and social skills; they allow students to express themselves freely, fostering creativity and imagination; and finally, they increase their personal motivation, helping them value their progress and accept their mistakes.

On the other hand, these spaces offer advantages for teachers, as they foster the development of their creativity when designing teaching materials such as picture and word cards, illustrated stories, interactive comics, and puppets. They also allow them to adapt their teaching strategies to students' different learning styles. They also foster innovation in the classroom and promote a dynamic and participatory environment.

1.1.2. Learning Train Materials

To develop the learning model, educators must consider various materials that will attract students' attention and motivate them to use it. Amaiquema (2023) believes the following resources should be used, the same ones used in this strategy:

- Natural materials (due to their composition): stones, leaves, sand, among others.
- Artificial materials: puzzles, printed images, illustrated stories, letter bingo, costumes for dramatizations, among others.
- Structured materials: rubber, glitter, scissors, plasticine, colored paper, among others
- Unstructured materials (those created by the teacher): reading windows, syllable, word and sentence posters, educational games, stories, writing cards, among others.

These materials not only enrich the teaching process but also increase student motivation by transforming the educational process into a participatory experience. They also strengthen their literacy skills, allowing them to associate words with images, structure narratives, and improve their oral and written expression in a fun and meaningful way.

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In this way, teachers must work closely with the school's authorities and parents to obtain the materials that contribute to student learning. Likewise, for the maintenance of learning stations, rules and regulations must be established to maintain order, cleanliness, and the care of the materials children use in the designated spaces.

1.2. Literacy

1.2.1. Definition of reading

Reading is a form of communication between the person who wrote the text and the person who reads it, transmitting information and cultural foundations. It also benefits cognitive processes by producing reflections, encouraging creativity and critical thinking. The stages of reading are: pre-reading, reading, and post-reading (Sisa, 2023). In this sense, reading is a complex process that involves interaction between the reader and the text. The reader uses their prior knowledge, experiences, and imagination to interpret the text and construct its meaning. Reading is an essential skill for success in school, work, and life. By encouraging reading, we can help people reach their full potential.

1.2.2. Definition of writing

Writing is a system of graphic representation of a language, using signs drawn or engraved on a medium. It is the basis for the development of communication, as it captures ideas, feelings, desires, and events. Although there are other methods, writing is one of the most effective. Furthermore, writing itself can generate the pleasure of communicating and be appreciated for it (Sisa, 2023).

1.2.3. Phonological and syllabic reading and writing

Reading and writing are essential skills that children must acquire together. This is because children develop a phonological grapheme-phoneme relationship, where they begin to realize that words are made up of syllables, but also of phonemes. The beginning of reading and writing is vitally important, as it allows for the connection between what is heard and what is written (Pérez, 2018, p. 7-8). Therefore, relating auditory and written language develops children's phonological awareness, allowing them to understand that words are made up of sounds (phonemes) that can be represented by letters (graphemes).

After children acquire phonological awareness, they can begin to develop syllabic awareness, which consists of "joining vowels and consonants to form syllables, which is incorporated with greater difficulty, achieving the formation of meaningful words and phrases" (Morales and Escalona, 2023, p. 8). It is important for children to begin to know the vowel sounds (a, e, i, o, u). Once they have acquired this knowledge, they can start with the consonants and then practice spelling them with their sound, so that learning and forming words, sentences, and texts is easier. Additionally, it can be mentioned that phonological and syllabic reading and writing are two important stages in literacy since they allow the identification and manipulation of syllables. It is worth remembering

that in phonological awareness the focus is on the sounds of spoken language, while in syllabic awareness the emphasis is on the syllables of spoken language.

1.2.4. Fluent reading and writing comprehension

These are two fundamental skills that allow people to access information and express themselves effectively. Fluent reading is the ability to read accurately, quickly, and expressively, while reading comprehension is the ability to understand the meaning of the text being read.

As stated by Fumagalli et al. (2017), "Efficient reading allows one to read sentences and texts accurately and comprehensively. A prepared reader, upon seeing a word, activates its pronunciation and meaning" (p. 165). In this sense, word recognition skills allow one to relate the meaning to the signifier.

Fluent reading and comprehension are important skills for success in school, work, and life. People with strong reading skills are better able to learn new information, solve problems, communicate effectively, participate in civic activities, and develop critical thinking skills.

1.3. Relationship between the learning train and literacy.

One of the most important pillars of learning spaces is promoting reading and writing. Children are motivated by observing letters, drawings, cards, and other elements, motivating them in their learning through exploration, manipulation, and self-awareness. This model can be used at any educational level, but it is particularly effective for learning to read and write, as it allows students to practice their skills and strengthen their phonological and syllabic awareness.

It is of great importance to implement the learning train in the classroom, as it fosters children's motivation and allows them to express their feelings through storytelling, character creation, and comics. This will allow students to develop their communication skills in both writing and oral expression (Saltos and Moncayo, 2021). Stations can focus on different aspects of writing, such as spelling, grammar, writing, and creativity, helping them develop into successful readers and writers. Finally, station-based learning should be organized, friendly, and engaging, designed with fun activities that can help children develop a love of reading and writing, as well as improve their language skills.

Methodology

2.1. Type of Research

The purpose of this paper was to explain how the "learning train" improves the literacy process of students in elementary general education. Therefore, this research was field-based, as it was characterized by primary data collection. This involved direct interaction with the people involved, allowing us to observe and understand their perspectives in their context.

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2.2. Research Method and Approach

The deductive method was used, which, from Palmero's (2020) perspective, is characterized by starting from general premises to reach specific conclusions. In this sense, this method allowed conclusions to be drawn from the opinions presented, facilitating the analysis and judgment of the information collected on the topic presented. Furthermore, this research had a mixed approach, since the benefits, results obtained, and materials used to implement station-based learning in the classroom for the meaningful learning of reading and writing among students in Basic Elementary General Education were detailed.

2.3. Instrument

For this research, a questionnaire was administered, consisting of a series of closed questions (14) to 150 elementary general education teachers and 10 to 150 elementary school parents. The purpose of the questionnaire was to gather information from the participants. This instrument also allowed for the creation of tables and graphs based on the information extracted from the surveys conducted on the topic presented, resulting in accurate information on the study variables. Finally, a satisfaction survey was administered to the 20 parents to determine their level of acceptance of the innovative strategy implemented.

2.4. Reliability Analysis

For the reliability analysis of the surveys, Cronbach's Alpha was used, which measures the level of reliability of the questionnaire. For this purpose, categorical questions were selected, resulting in 0.745 for the teachers' survey and 0.796 for the parents' survey, which was favorable for the research.

Table 1

Cronbach's alpha.

Reliability statistics	
Cronbach's alpha	Number of elements
.745	8

Note. Analysis of the teacher survey (2024)

Table 2

Cronbach's alpha

Reliability statistics	
Cronbach's alpha	Number of elements
.796	5

Note. Analysis of the parent survey (2024)

2.5. Statistical modeling

In the study carried out, the Chi-square test was applied, which is a statistical test developed by Carl Pearson, which uses the analysis of two or more groups of categorical variables, to determine whether or not there is a correlation and in turn the null hypothesis is ruled out or the alternative hypothesis is accepted (De la Rosa et al., 2017). In general, this test compares the observed frequencies with the expected ones; for this purpose, the following formula is observed in Figure 1:

Figure 1

Chi-square formula

$$x^2 = \sum \frac{(f_0 - f_e)^2}{f_e}$$

Where:

f_0= Frequency of the observed value

fe= Frequency of expected value

Note. General formula for the Chi-square test. Source: (Valera, 2020).

In this sense, if the result of the Chi square coefficient is greater than 0.05, the null hypothesis is approved; therefore, there is no relationship between variables, while, if the result of the Chi square coefficient is less than 0.05, the alternative hypothesis is approved, therefore, there is a correlation between variables. On the other hand, factor analysis was used, which according to Martínez (2021) "It is a statistical technique that can be used to study a set of observed variables (items) with a smaller number of factors that show correlations between the observed variables." (p.6). That is, this method allows reducing the data and grouping the variables that are correlated, for this, the Kaiser Meyer Oklin (KMO) index must be taken into account, which measures the magnitude of the correlation coefficient between 0 and 1, which if they are greater than 0.5 it is acceptable to use the method, but if they are less than 0.5 the variable must be eliminated and another process must be used. For this method, the factor analysis formula is shown in Figure 2.

Figure 2

Factor analysis formula

$$KMO = \frac{\sum \sum_{i \neq j} r_{ji}^2}{\sum \sum_{i \neq j}^{r^2} ji + \sum \sum_{i \neq j}^{a^2} ji}$$

Where:

$r_{ji=}$correlation coefficient observed between the variables j e i

$a_{ji=}$ partial correlation coefficient between variables j e i

Note. General formula for Factor Analysis. Source: (Chávez, 2017).

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Results

For the discussion and interpretation of results, the most relevant questions from the survey, both from parents and teachers, were considered.

Table 3

Difficulties in the Reading and Writing Process.

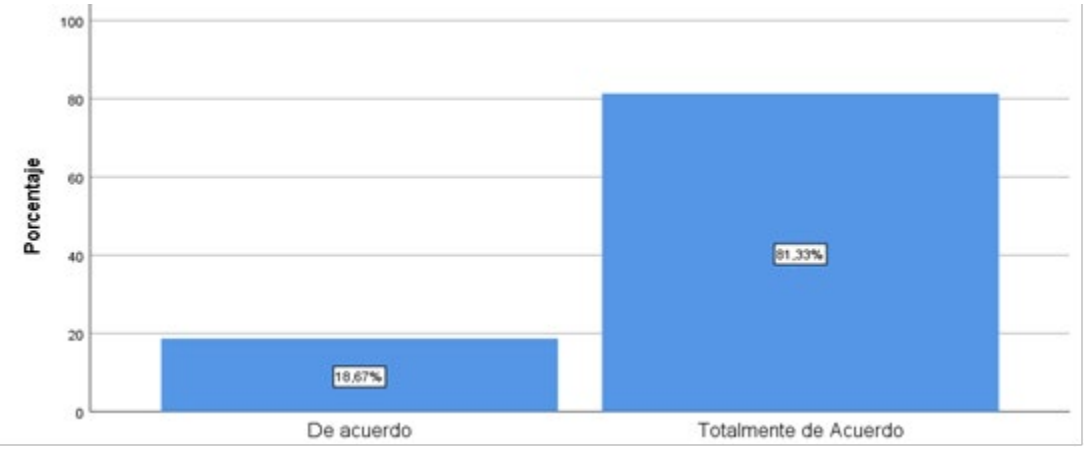
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Learning difficulties (dyslexia, dysorthography, dysgraphia, among others)	60	40.0	40.0	40.0
	Poor reading comprehension in reading texts	55	36.7	36.7	76.7
	Little vocabulary	11	7.3	7.3	84.0
	Poor word decoding	24	16.0	16.0	100.0
	Total	150	100.0	100.0	

Note. Data taken from the teacher survey (2024)

Among the learning difficulties that basic general education teachers see in the literacy process, 40% of teachers identified their students with learning difficulties such as dyslexia, dysorthography, dysgraphia, and others. 36.7% of teachers reported poor reading comprehension, 7.3% reported limited vocabulary, and 16% reported poor word decoding. This result demonstrated that most children with literacy difficulties can overcome these challenges through a teaching strategy that enables students to learn to read and write effectively.

Figure 3

Use of Concrete, Visual and Auditory Materials in the Reading and Writing Process



Note. Data taken from the teacher survey (2024)

According to the results, 81.33% of teachers strongly agreed that the use of concrete, visual, and auditory materials benefits the literacy process; 18.67% agreed, therefore, that it is important for teachers to use a variety of materials and activities to ensure effective and motivating learning for students.

Table 4

Does your educational institution have learning spaces to strengthen reading and writing?

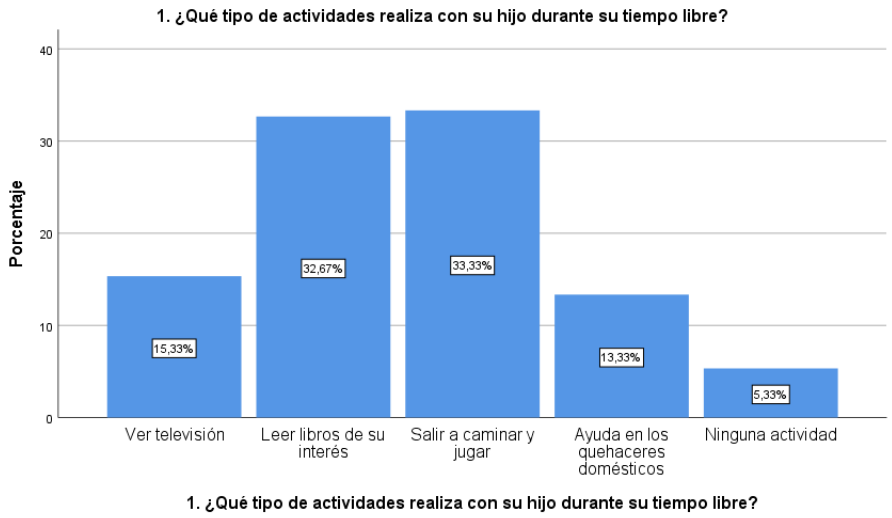
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	36	24.0	24.0	24.0
	No	114	76.0	76.0	100.0
	Total	150	100.0	100.0	

Note. Data taken from the teacher survey (2024)

According to the results, 24% of teachers mentioned that their educational institution does have a learning space that allows for the reinforcement of literacy skills, while 76% do not have such spaces, which hinders the reading and writing process. Therefore, it is recommended that teachers implement a learning space and pedagogical strategies in their classrooms or at school, as this allows for the creation of an environment that motivates students to read and write with pleasure and confidence.

Figure 4

Free Time Activities with Your Child.



Note. Data taken from the survey of parents (2024)

Figure 4 shows the activities that parents do with their children in their free time: 33.3% of parents spend their time going for walks and playing with their children, 32.7% spend time reading books of

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interest, 15.3% spend time watching television, 13.3% spend time helping with household chores, and 5.3% do not spend any time with their children. This result reflects the lack of support during children's free time, and therefore, there is no incentive to read and create a daily reading routine.

Table 5

Do you agree that establishing a suitable space or corner in the home is important for carrying out reading and writing processes?

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Neither agree nor disagree	1	.7	.7	.7
	Agree	27	18.0	18.0	18.7
	Totally Agree	122	81.3	81.3	100.0
	Total	150	100.0	100.0	

Note. Data extracted from the survey of parents (2024)

According to the analysis in Table 5, 81.3% of parents strongly agree with establishing a space or corner for reading and writing, 18% agree, and 7% neither agree nor disagree. Therefore, enabling and creating an appropriate space or corner can encourage, create, and develop reading and writing routines for children, in conjunction with their parents at home.

Furthermore, correlations between the questions were established by applying the Chi-square test using SPSS, which allowed us to draw conclusions within the research conducted, for which the most relevant ones were selected from the surveys.

Table 6

Relationship between Teachers' Age and Reading Time.

Chi-square tests			
	Value	df	Asymptotic significance (2-tailed)
Pearson's Chi-square	23.561[a]	12	.023
Likelihood ratio	23.661	12	.023
Linear by linear association	1.761	1	.184
Number of valid cases	150		

Note. Data extracted from the teacher survey (2024)

According to the chi-square analysis, the result obtained is 0.023, which shows that the value is lower than the 0.05 established in the statistical method; therefore, it is concluded that there is a correlation between the age of teachers and reading time. This allows us to deduce that teachers in the 33-43 age range dedicate 11-21 minutes to reading and writing, while teachers between 55-65 years old dedicate 0-10 minutes to reading and writing. Therefore, older teachers do not dedicate adequate time to reading and writing in the classroom.

Tabla 7

Relationship between Learning Spaces in Educational Institutions and the Books Read in Class per Year.

Chi-square tests			
	Value	df	Asymptotic significance (2-tailed)
Pearson's Chi-square	22.129[a]	3	.000
Likelihood ratio	22.440	3	.000
Linear by linear association	11.271	1	.001
Number of valid cases	150		

Note. Data extracted from the teacher survey (2024)

In Table 7 the result obtained is 0.000 which shows that there is a correlation between learning spaces in educational institutions and the number of books read in class per year, which allows us to deduce that 76% of teachers surveyed do not have spaces to strengthen reading and writing, therefore they only manage to read 3-4 books per year.

Table 8

Relationship between Parents' Age and the Time They Spend Helping Their Child with Reading and Writing Homework.

Chi-square tests			
	Value	df	Asymptotic significance (2-tailed)
Pearson's Chi-square	28.639[a]	9	.001
Likelihood ratio	28.145	9	.001
Linear by linear association	9.305	1	.002
Number of valid cases	150		

Note. Data extracted from the survey of parents (2024)

Table 8 shows that the result obtained from the Chi square is 0.001, which concludes that there is a correlation between the age of the parents and the time they spend helping their child with reading and writing homework. This allows us to deduce that 17.3% of the total number of parents aged 25-35 years, help their children with reading and writing homework for 33-43 minutes, while 2.0% of the total number of parents aged 58-68 years, help their children with reading and writing homework for 0-10 minutes, that is, younger parents spend more time helping their children with reading and writing homework.

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Table 9

Relationship between Parents' Educational Level and Establishing the Learning Train.

Chi-square tests			
	Valor	df	Asymptotic significance (2-tailed)
Pearson's Chi-square	17.573[a]	6	.007
Likelihood ratio	14.993	6	.020
Linear by linear association	10.188	1	.001
Number of valid cases	150		

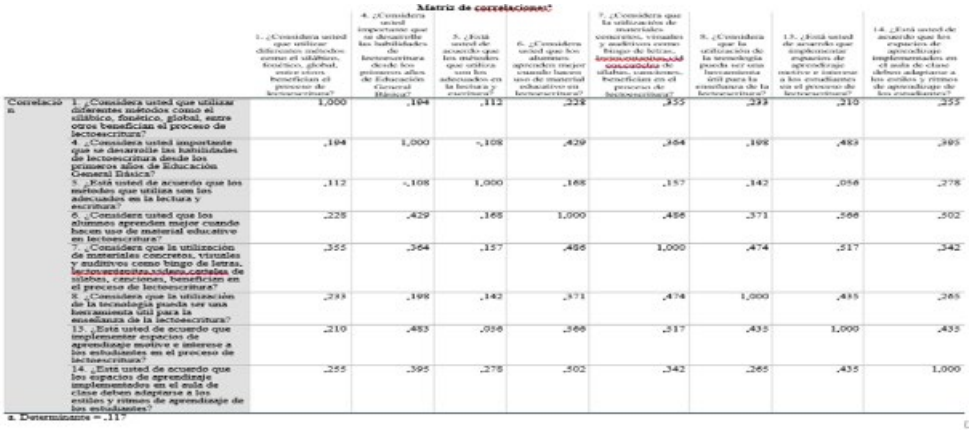
Note. Data extracted from the survey of parents (2024).

According to the chi-square analysis in Table 9, the result obtained is 0.007, which shows that the value is lower than established. Therefore, it is concluded that there is a correlation between the educational level of parents and establishing learning spaces. This suggests that 50.0% of all parents with a university-level education believe that establishing an adequate space or corner in the home is important for reading and writing.

Furthermore, a factor analysis was performed using SPSS on the teacher survey, which determined that questions 1, 4, 5, 6, 7, 8, 13, and 14 are related.

Figure 5

Factor Analysis Determination Matrix for the Teacher Survey.



Note. Datos extraídos de la encuesta a los docentes (2024)

According to Figure 5, it is considered that question 7 and question 14 have a correlation because, with the use of concrete, visual, and auditory materials such as letter bingo, reading windows, videos, songs, among others, at the learning stations, they improve the reading and writing process of children in Basic General Education.

Figure 6

Factor Analysis Determination Matrix for the Parent Survey.

Matriz de correlaciones[a]

		2. ¿Está usted de acuerdo que la lectura y escritura son importantes para el desarrollo de su hijo?	3. ¿Usted practica con el ejemplo leyendo libros, revistas, periódicos y trasmite a su hijo conductas lectoras?	7. ¿Está usted de acuerdo que realizar actividades de lectura y escritura en el hogar refuerzan el aprendizaje de su hijo?	8. ¿Está usted de acuerdo que establecer un espacio o un rincón adecuado en el hogar es importante para realizar procesos de lectura y escritura?	9. ¿Está usted de acuerdo que una manera de motivar la lectura y escritura de su hijo es utilizar materiales visuales, auditivos y concretos en el hogar?	10. ¿Está usted de acuerdo que llevar a su hijo a espacios lectores como bibliotecas, librerías, obras de teatro, funciones de títeres promueven la lectura y escritura?
Correlación	2. ¿Está usted de acuerdo que la lectura y escritura son importantes para el desarrollo de su hijo?	1,000	-,399	,389	,355	,218	,192
	3. ¿Usted practica con el ejemplo leyendo libros, revistas, periódicos y trasmite a su hijo conductas lectoras?	-,399	1,000	-,445	-,313	-,251	-,242
	7. ¿Está usted de acuerdo que realizar actividades de lectura y escritura en el hogar refuerzan el aprendizaje de su hijo?	,389	-,445	1,000	,630	,413	,506
	8. ¿Está usted de acuerdo que establecer un espacio o un rincón adecuado en el hogar es importante para realizar procesos de lectura y escritura?	,355	-,313	,630	1,000	,501	,557
	9. ¿Está usted de acuerdo que una manera de motivar la lectura y escritura de su hijo es utilizar materiales visuales, auditivos y concretos en el hogar?	,218	-,251	,413	,501	1,000	,562
	10. ¿Está usted de acuerdo que llevar a su hijo a espacios lectores como bibliotecas, librerías, obras de teatro, funciones de títeres promueven la lectura y escritura?	,192	-,242	,506	,557	,562	1,000

a. Determinante = ,150

Note. Data extracted from the survey of parents (2024)

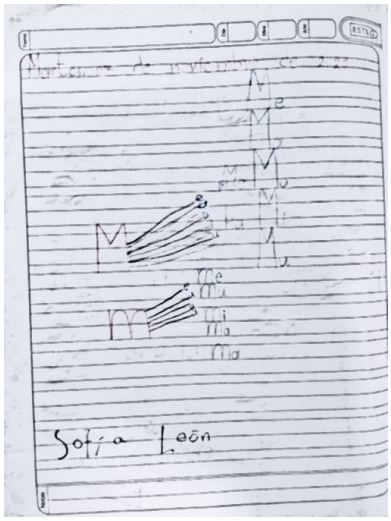
According to Figure 6, it is established that question 6 and question 7 are correlated because, with the support of parents, the implementation of the learning train and recreational activities at home, children's reading and writing learning is reinforced.

After data collection, we implemented classroom learning spaces with elementary school students. Twenty students from the second grade of primary school were selected. They engaged in recreational activities such as word dominoes, word formation with cards, letter molding, and others. This led to improvements in writing and orderliness, as well as the development of fine motor skills, as seen in Figure 7.

Figure 7

Child's Notebook: Writing Process.

Before



After

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Furthermore, this innovative strategy is adapted to students with Specific Educational Needs (SEN).

Figure 8

Traces of the Girl with Special Educational Needs.

Before

After

In addition, we worked with the children's 20 parents, encouraging them to implement learning spaces within their homes. Recommendations included modeling letters with clay, word dominoes, and word formation with cards, among others, as shown in Figure 9.

Figure 9

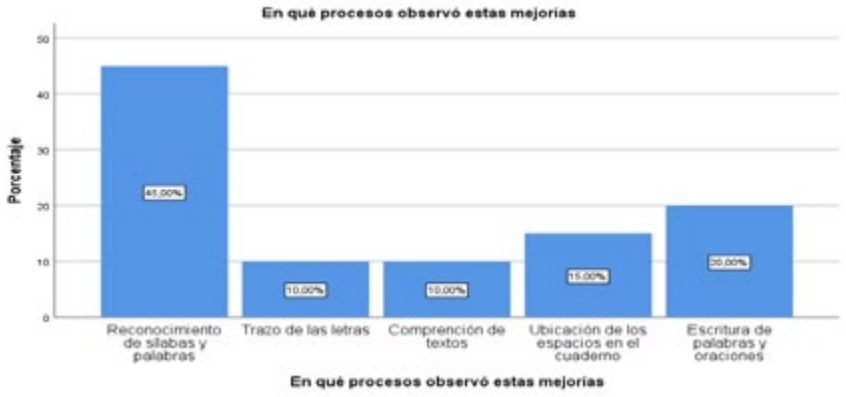
Fun Activity: Word Dominoes.

Note. Source: Parents (2024).

Finally, the satisfaction survey was applied to the parents who participated in the implementation of the learning stations, in which they mentioned that they did observe an improvement in the reading and writing process in the following aspects observed in Figure 10.

Figure 10

Improvements in the Reading and Writing Process.



Note. Data extracted from the parents' satisfaction survey (2024)

As can be seen in Figure 10, 45% of parents surveyed observed improvements in the recognition and reading of syllables and words, 20% considered that they improved the writing of words and simple sentences, and 10% of parents saw improvements in the stroke of letters, comprehension of texts and the location of spaces in the notebook when writing.

Similarly, parents believe that the learning stations allowed them to interact and communicate with their children in a timely manner. Furthermore, the materials, such as cards, games, stories, and others, were appropriate. The implementation of these materials increased motivation and attention to reading and writing. Table 10 shows the level of satisfaction parents felt with implementing this teaching strategy in their children's learning.

Table 10

Level of Satisfaction with the Learning Stations.

Overall, how satisfied are you with the implementation of the learning station in your home?					
		Frequency	Percentage	Valid Percentage	Cumulative percentage
Valid	Satisfied	14	70.0	70.0	70.0
	Very Satisfied	6	30.0	30.0	100.0
	Total	20	100.0	100.0	

Note. Data extracted from the parents' satisfaction survey (2024)

As seen in Table 10, 70% of parents surveyed are satisfied with the implementation of the home learning train, and 30% are very satisfied. This allows us to deduce that the learning spaces are effective in the reading and writing learning process for children in general basic education.

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Conclusions

Developing students' literacy skills is a challenge that must be taught not only in the teaching-learning process but also in everyday life. This research showed optimal results in language skills, as literacy skills were strengthened when activities were carried out continuously. It was concluded that the diagnostic phase allowed for the identification of weaknesses in learning difficulties such as dyslexia, dysorthography, dysgraphia, poor reading comprehension, limited vocabulary, poor word decoding, a lack of learning spaces in educational institutions, and limited parental support in literacy activities. In this sense, the aforementioned highlights the need to promote the use of learning spaces to address reading and writing weaknesses.

For this reason, it is recommended to implement the learning train within the classroom and at home to reinforce language skills. This helps children develop their communication skills, giving them the opportunity to express their ideas and thoughts freely and spontaneously. Finally, the data obtained reflect the reliability of the implementation of learning spaces, considering that these stations must be welcoming and attractive, and they must not only focus on writing but also on spelling, grammar, composition, and creativity. Furthermore, they are adapted to the cognitive level and specific educational needs of students. For this reason, a teaching strategy helps children develop a love of reading and writing, as well as improve their language skills; but, above all, it is fun, as it is designed with countless recreational activities.

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Educational inclusion in initial teacher training

Inclusión educativa en la formación inicial docente

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Johanna Patricia Bustamante Torres[1]
Universidad Central del Ecuador, Ecuador
jpbustamante@uce.edu.ec
https://orcid.org/0000-0002-5816-8856

Esteban Rafael Bozano Rivadeneira[2]
Universidad Central del Ecuador, Ecuador
erbozano@uce.edu.ec
https://orcid.org/0000-0002-2877-3211

Carlos Fabián Izurieta Cabrera[3]
Universidad Central del Ecuador, Ecuador
cizurieta@uce.edu.ec
https://orcid.org/0000-0002-7835-7072

Abstract

The universalization of contemporary education has led to the recognition of the inclusive approach as a means to guarantee access and quality in education. Undoubtedly, a key element of educational inclusion corresponds to the training of qualified professionals to address diversity. Along these lines, this study aimed to determine the approach to educational inclusion in initial teacher training for the Language and Literature Pedagogy, Mathematics Pedagogy, and Psychopedagogy programs at the Faculty of Philosophy, Letters, and Educational Sciences of the Central University of Ecuador during the 2022-2023 academic period. The methodology was quantitative and descriptive. Two questionnaires were administered to one hundred and nineteen (119) ninth-semester students. The results showed a greater predominance of the inclusive approach to education in initial training for the Psychopedagogy program; however, it was recognized that each program demonstrates strength in addressing diversity based on the nature of their professional practice. In conclusion, it was determined that the three participating programs show variation in each dimension of the variables studied, according to student perceptions.

Keywords: Inclusive education, vocational training, teaching

Resumen

La universalización de la educación contemporánea ha conllevado al reconocimiento del enfoque inclusivo como un medio para garantizar el acceso y la calidad educativa. Sin duda, un elemento clave de la inclusión educativa corresponde a la formación de profesionales cualificados para brindar atención a la diversidad. En esta línea, este estudio tuvo por objetivo determinar el abordaje de la inclusión educativa en la formación inicial docente de las carreras de pedagogía de la Lengua y Literatura, Pedagogía de la Matemática y Psicopedagogía de la Facultad de Filosofía, Letras y Ciencias de la Educación de la Universidad Central del Ecuador en el período académico 2022-2023. La metodología fue de corte cuantitativo, de nivel descriptivo. Se aplicaron dos cuestionarios a ciento diecinueve (119) estudiantes de noveno semestre. Los resultados evidenciaron una preponderancia superior del enfoque inclusivo de la educación en la formación inicial de la carrera de Psicopedagogía; no obstante, se logró reconocer que cada carrera denota fortaleza en la atención de la diversidad con base en la naturaleza del ejercicio profesional. Como conclusión, se determinó que las tres carreras participantes evidencian una variación en cada dimensión de las variables estudiadas de acuerdo con la percepción del estudiantado.

Palabras clave: Educación inclusiva, formación profesional, docencia

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Introduction

At the sociocultural level, inclusion is seen as a substantial factor in generating social change, given that it promotes equality among individuals and, therefore, generates progress in societies (Reales, 2005, as cited in Carmona et al., 2019). Along these lines, the inclusive approach to education has been positioned as a means to guarantee fair, equitable, and equal attention within the educational system. This perspective is based on an awareness of the diversity inherent in human beings and is directed toward respecting and celebrating the plurality and multiplicity of differences.

Contemporary educational inclusion has gained relevance today, becoming one of the main issues in public policy and educational practice worldwide. This shift in socio-educational focus to respond to diversity has made visible the realities linked to access, retention, and participation in teaching and learning processes, allowing us to understand that educational practice did not actually consider diversity as an essential axis for promoting social and cultural changes of respect, justice, and tolerance.

Thus, national and international regulations consider education a fundamental right and an inherent right of the human being (Ruiz, 2020). For example, Article 26 of the Universal Declaration of Human Rights (1948) states that the purpose of education shall be the full development of the personality and the strengthening of fundamental rights and freedoms; or the 2030 Agenda, which explicitly addresses educational inclusion in Sustainable Development Goal 4 (SDG 4), mentioning the need to guarantee inclusive, equitable, and quality education that promotes lifelong learning opportunities (United Nations, 2015). Based on this, the importance of this study was based on the responsibility of States to guarantee an inclusive school offering, emphasizing the socio-educational demand for qualified and trained teachers to address and respond to diversity.

Within this framework, the analysis of teachers' perceptions and attitudes toward inclusive education has demonstrated their acceptance of this approach; however, it is acknowledged that support is declining when it comes to engaging and promoting practices that foster genuine inclusive education in the classroom (Chiner, 2011, as cited in Castillo, 2021). In several previous studies, this reality has been attributed to the lack of teacher training in this area, mainly on topics related to "classroom diversity, school integration, and pedagogical strategies for students with special educational needs" (Castillo, 2021, para. 2).

In Ecuador, the Ministry of Education has made efforts to address issues that address the need for teacher training and awareness-raising processes regarding stereotypes and prejudices that hinder inclusive practice. However, despite the initiative from the public policy sphere, the reality in educational institutions continues to require the epistemological preparation of practicing teachers (Bedor, 2018).

Based on this background, this paper aimed to determine the approach to inclusive education in the training of future teachers. The interactive phase of the research was conducted at the Faculty of Philosophy, Letters, and Educational Sciences of the Central University of Ecuador. The analysis focused on the recognition of theoretical content and the development of competencies related to

inclusive practice among students enrolled in the final levels of preparation for programs that teach instrumental subjects, such as Language and Literature, Mathematics, and Psychopedagogy.

This approach is based on the appreciation of attention to diversity as an educational phenomenon that transcends academic content, encompassing the comprehensive education of students and promoting inclusion, respect for individual differences, and the creation of equitable learning environments that foster the personal and social development of all participants. In the case of Language and Literature, it was considered that improvements in teaching and learning processes are possible thanks to a multifaceted approach to didactics, an element that leads to the generation of resources for optimal teaching among students (Álvarez and Pascual, 2020). This fosters more engaging approaches to literary theory and practice, reinforced by elements that enable interaction with all students. On the other hand, Mathematics, being a subject linked to the exact sciences, challenges the strengthening of teachers' skills, since it requires not only a mastery of the theoretical concepts specific to the area, but also the ability to adapt them to different levels of logical-mathematical understanding and analysis, through the use of innovative methodologies that facilitate problem-solving, critical thinking, and the practical application of knowledge in real-life situations. Thus, mathematics allows for the assessment of each student's representative, associative, and categorical skills to support their learning process (Faragher et al., 2016, as cited in Otondo et al., 2022).

For this research, teacher development referred to an element in constant evolution, which involves the constant updating of pedagogical and didactic competencies, with the aim of responding to the changing demands of the educational environment and the needs of students, thus fostering reflective practice and continuous improvement in the quality of teaching. This supports the idea that teacher training responds to a professional development that fosters metacognitive skills, essential in educational practice (Bedor, 2018). It is worth mentioning that once professionals have completed their initial training, they constantly strive to update and improve their skills (Torres, 2021). Thus, teachers who have trained in the university setting under the principles of the inclusive approach are expected to direct their continuous professional development toward deepening this perspective.

From this perspective, it is essential to analyze teacher training in the country's university classrooms, which, in various fields, continues to develop skills and competencies linked to standardized pedagogical practices (Vega, 2021). The need to educate future teachers about inclusion and attention to diversity is becoming increasingly urgent (Hurtado et al., 2019). Therefore, the analysis in this article focused on determining whether education professionals from the aforementioned programs possess the necessary skills related to this dimension of 21st-century education.

The insights from this study were implemented by comparing the findings with national and international guidelines related to the topic. The subsequent conclusions promote the improvement of the quality of Ecuadorian higher education, with the expectation of serving as a basis for developing curricular proposals that consider the dissemination of inclusive culture, policies, and practices among future education professionals.

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Methodology

2.1. General objective

The objective of the study was to determine the approach to educational inclusion in initial teacher training for the Language and Literature Pedagogy, Mathematics Pedagogy, and Psychopedagogy programs at the Faculty of Philosophy, Letters, and Educational Sciences of the Central University of Ecuador during the 2022-2023 academic year.

2.2. Data collection and processing

The methodology used to analyze the results was based on a quantitative approach and had a descriptive design, which allowed for the establishment of significant relationships between the variables and populations studied. Data collection was carried out through the application of two instruments using the Google Forms tool. The questionnaire for the initial training variable consisted of 32 items, distributed as follows: a) A filter item, assigned in dichotomous terms, which was intended to establish an inclusion criterion, determining whether participants received at least one subject associated with educational inclusion during their academic training; b) 21 items designed to identify elements associated with the training program, such as: curriculum plan (1-6), curriculum elements (7-15), and evaluation (16-21); c) 11 items for the establishment of the teacher development process, organized as follows: theoretical development (22-25), practical development (26-28), and praxis (29-32). The questionnaire for the variable Educational Inclusion consisted of 50 questions, distributed in: a) 20 items associated with the application of inclusive culture: legal regulations and public educational policy (1-9), diversity (10-15), inclusive values (16-20); b) 14 items that allowed establishing the frequency of application of inclusive institutional policies (21-33); c) 16 items directed to inclusive practices, distributed in: access elements (35-42) and adaptation of basic curricular elements (43-50).

2.2.1. Operationalization of variables

Initial teacher training. Process that incorporates a training program with the aim of achieving professional teacher development.

Table 1

Independent Variable: Initial Teacher Training.

Independent Variable	Dimensions	Indicators	Sub Indicators	Techniques and instruments	Reagent
Initial Teacher Training	Training Program	Curriculum Plan	Curriculum Grid Learning Outcomes	Technique: Survey Instrument: questionnaire (32 questions)	(1-6)
		Curriculum Elements	Contents Methodology Teaching Resources		(7-15)
		Evaluation	Initial Formative Summary		(16-21)
	Teacher Development Process	Theoretical Development	Approach Knowledge		(22-25)
		Practical Development	Competencies		(26-28)
		Praxis	Pre-professional Practice		(29-32)

Note: The table summarizes the elements addressed by the instrument regarding the independent variable.

Educational inclusion. A process of addressing diversity that involves cultural elements, inclusive policies, and practices aimed at guaranteeing the rights of all students.

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Table 2

Dependent Variable: Educational Inclusion.

Independent Variable	Dimensions	Indicators	Sub Indicators	Techniques and instruments	Reagent
Educational Inclusion	Inclusive Culture	Legal Regulation and Public Education Policy	International National Government Policies	Technique: survey Instrument: questionnaire (50 questions)	(1-9)
		Diversity	Recognition of Diversity Valuation of Diversity		(10-15)
		Inclusive Values	Solidarity Respect Equity Tolerance Justice		(16-20)
	Institutional Inclusion Policies	Institutional Educational Plan [PEI]	Administrative Pedagogical Coexistence Security		(21-34)
	Inclusive Practices	Access Elements	Personal Infrastructure Technical Resources Technological Resources		(35-42)
		Adaptation of Basic Curriculum Elements	Grade 2 Adaptations Grade 3 Adaptations		(43-50)

Note: The table summarizes the elements addressed by the instrument regarding the dependent variable.

2.3. Population

The research was conducted with a total of 119 students enrolled in the ninth semester. Specifically, 19 students enrolled in the Language and Literature program, 37 in Mathematics, and 63 students enrolled in the Psychopedagogy program participated.

Table 3

Distribution of Students by Degree.

Variables		Frequency	Percentage
Degree	Language and Literature	19	16.0
	Mathematics	37	31.1
	Psychopedagogy	63	52.9
		119	100%

Likewise, of the total number of students, 51 individuals define themselves as male and 68 as female.

Tabla 4

Distribution of Students by Gender.

Variables		Frequency	Percentage
Gender	Male	51	42.9
	Female	68	57.1
Total		119	100.0

2.3.1. Inclusion Criteria

- Study the selected courses.
- Be a regular student.
- Having passed the curriculum of the degree up to the eighth semester.

2.3.2. Exclusion Criteria

- Be a student with carryover subjects (second or third registration).
- Students who do not consent to participate in the study.
- Not having completed the basic and professional unit of their training.

2.4. Psychometric qualities of the instruments

In order to have the psychometric qualities of the instruments, a scientific endorsement was sought by applying the statistical package for social sciences [SPSS-25].

To establish the internal consistency coefficient for the factors, Cronbach's alpha was applied. The initial pilot test yielded a reliability coefficient of (α= 0,62) for the variable "Initial Training"; while the variable "Educational Inclusion of Diversity" obtained an alpha of (α= 0,67). Both values correspond to a questionable level of reliability. Therefore, it was decided to adjust the scale of those questions that offered two response options, leaving all items on a Likert scale.

The aforementioned change resulted in a total reliability of (α= 0,96) for the Initial Training variable. The Educational Inclusion of Diversity questionnaire had a reliability of (α=0,92), both values equivalent to a very high or excellent level of reliability.

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Table 5

Cronbach's alpha coefficient.

Variable	Cronbach's Alpha	Number of elements
Educational Inclusion	.924	50
Initial teacher training	.965	31

Results

3.1. Analysis of Results

Figure 1

Initial Teacher Training in Participating Programs.

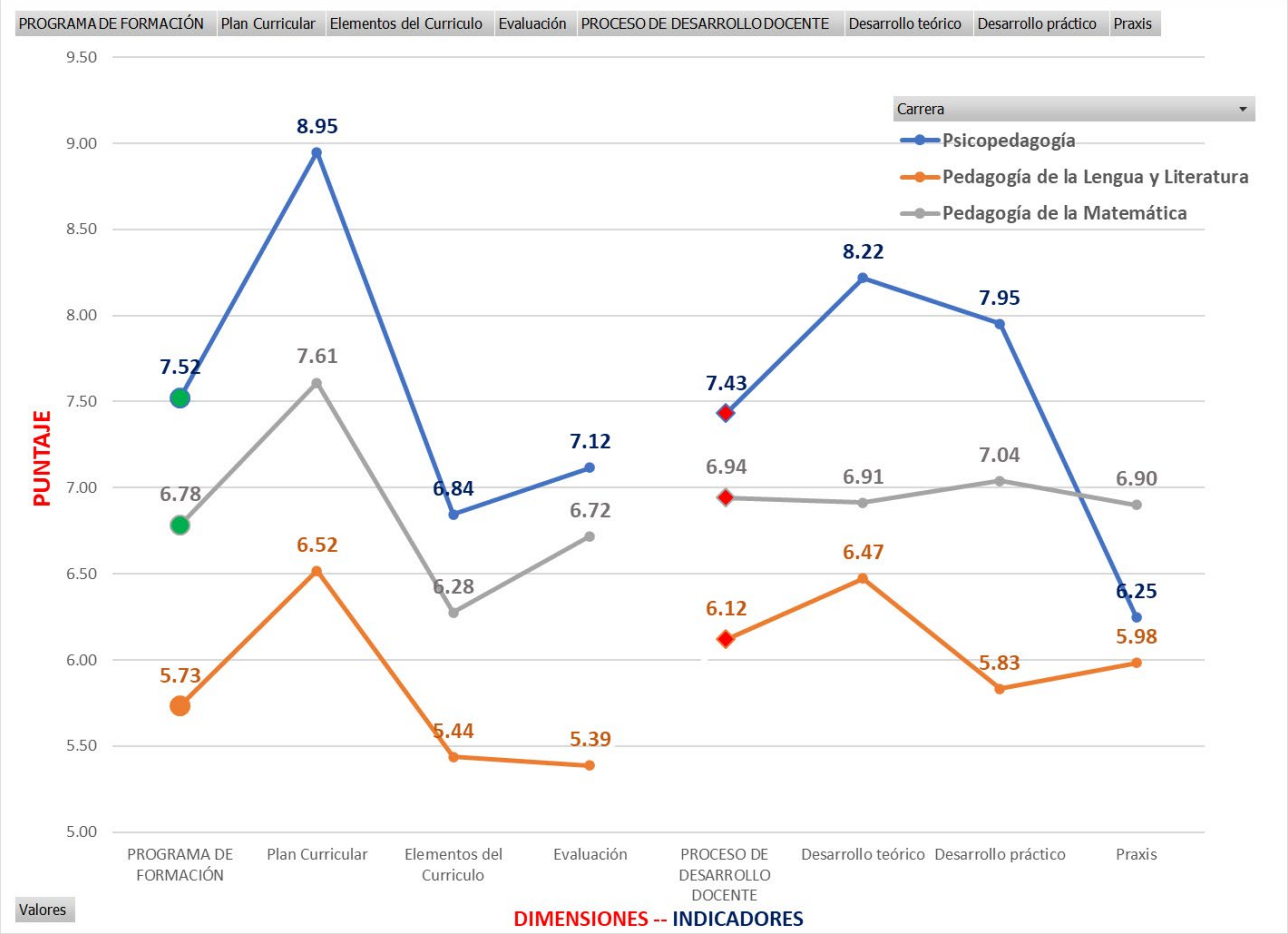

Figure 1 shows the Psychopedagogy program, followed by the Mathematics Pedagogy program, and in third place, the Language and Literature Pedagogy program. Thus, in terms of the curriculum, the construction of the curriculum and the learning outcomes respond to the needs of society and promote the recognition of diversity. Furthermore, the curriculum elements - including content, methodologies, and teaching resources - promote inclusive culture and practices in

the classroom. Regarding assessment, various strategies are used for initial, formative, and summative assessments, which allow us to verify that the learning outcomes have been achieved in each subject. On the other hand, a similar picture emerges in the teacher development process dimension: the Psychopedagogy program shows a higher level of theoretical and practical development for understanding inclusive education from both theory and practice. While the practice level decreases considerably, appearing below the Mathematics Pedagogy program, suggesting that they have not had an adequate pre-professional practice process to apply and consolidate the reviewed theory in the classroom. Note that the Language and Literature Pedagogy program appears last in both dimensions, leading to the analysis that there is no true emphasis on inclusive education in the initial teacher training of this area.

Figure 2

Educational Inclusion in Participating Careers.

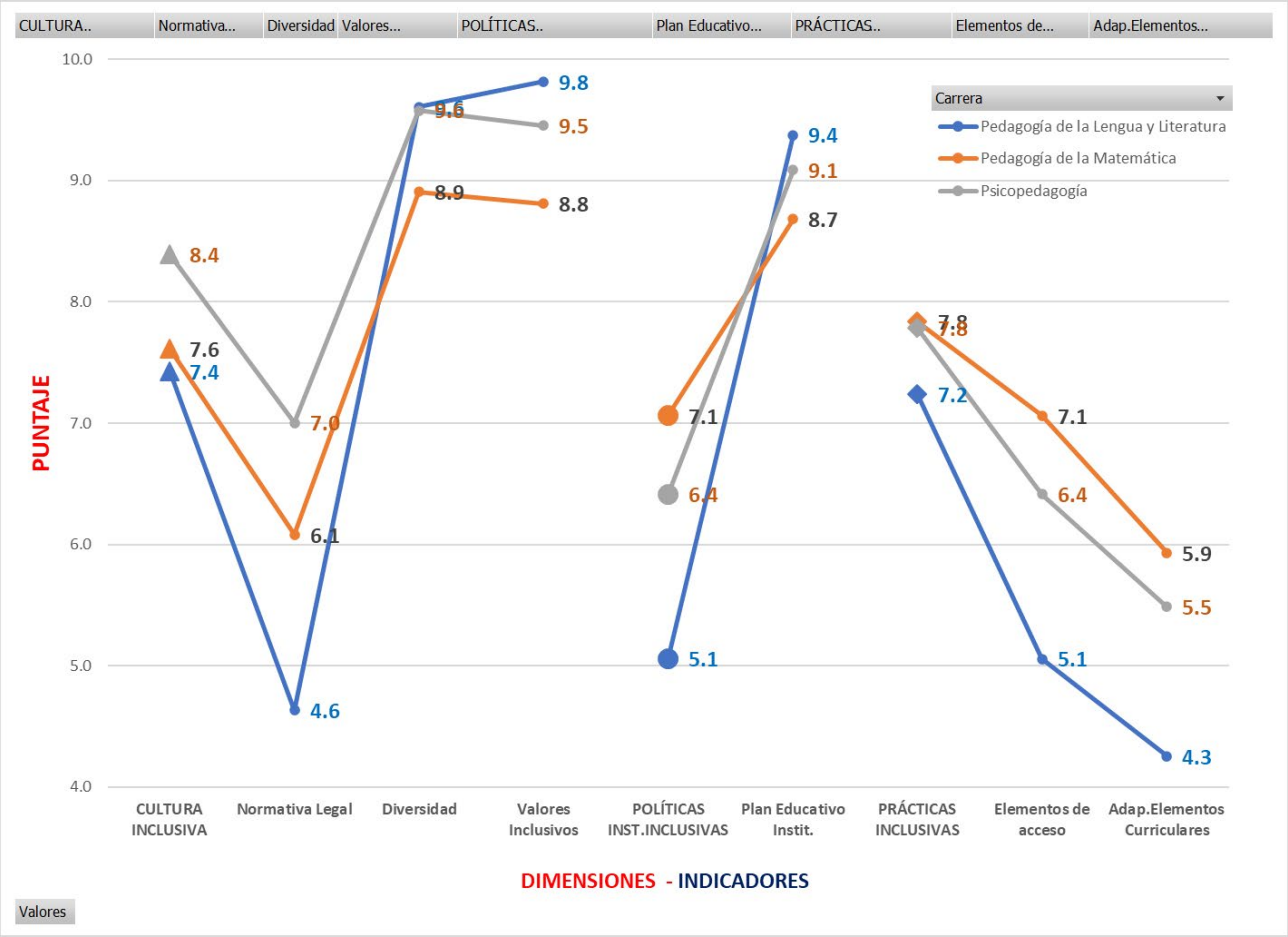

Figure 2 shows that the three programs present a variation in each dimension of the Educational Inclusion variable according to the student body's criteria. Thus, in inclusive culture, the Psychopedagogy program predominates, thus educational regulations and public policy are analyzed to the extent required by the training; in terms of diversity, it is considered fundamental from the valuation of heterogeneity; inclusive values, the understanding and implementation in

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social interaction of respect, solidarity, equity, tolerance, and justice as the framework on which the inclusive approach is based, in this indicator the Pedagogy of Language and Literature program shows an increase, which may be due to the characteristics of sensitivity in its training. Inclusive Institutional Policies, the Institutional Educational Plan sets the line of teaching work since its construction and implementation for the benefit of the educational community. In this indicator, the Pedagogy of Language and Literature program shows a significant increase, which argues that the students of this program have been involved in its institutional application. Regarding inclusive practices, the Mathematics Pedagogy program shows an increase in the perception that access elements should be considered in institutions as elements of accessibility for diversity. Finally, adaptations of basic curricular elements, which are the immediate response that teachers must provide to diversity, show a significant decrease. This is because they are not implemented or used as a pedagogical approach within the curriculum or in pre-professional practice, but rather as a tedious administrative process.

3.2. Discussion of Results

Academic training to address diversity is and should be a priority within State educational policies in the face of the challenge of education for all (Ndembele and Hernández, 2020). Therefore, it is necessary for those involved in higher education to reflect on their role in vocational training, but more than that, in the training of people as tools for the production and transformation of increasingly complex and diverse societies, understanding that education demands actions aimed at valuing, respecting, and addressing the diversity of learners (Cala et al., 2021), without neglecting the teaching and administrative staff who work together daily to offer quality education. In this context, it is essential to understand that teachers must exercise a practical stance regarding inclusion in the classroom, transcending theory as the basis of academic training (Ramos, 2023); Therefore, the importance of a critical evaluation with respect to teacher training is highlighted, in order to create participatory spaces for analysis, adaptation and application of pedagogical and research strategies.

In this context, an inclusive approach is a continuous and dynamic process that involves a commitment to equity, social justice, and respect for diversity. By addressing diversity through increased support and participation, inclusive practices not only improve students' educational outcomes but also create a more cohesive and respectful academic community. Implementing an inclusive approach requires commitment, collaboration, ongoing training, and an adaptable and welcoming learning environment, but the long-term benefits for students, teachers, and society at large are invaluable. Therefore, an inclusive approach should be conceived as an element that enriches educational environments, but above all, in practice, the teaching and learning processes, thus promoting quality and compassionate education for all without exception. Inclusion is a process that allows diversity to be addressed through increased support and participation that teachers can provide in their students' learning processes, thereby reducing exclusion and segregation in the educational sphere (Rodríguez, 2019).

From this perspective, professionals must be aware that their educational work is critical, creative, and convergent, as it encourages active reflection in students and the construction of knowledge

in accordance with their contexts (Avelino and Cala, 2020). In other words, teachers must ground the teaching process in the reality of the contexts and characteristics of their students, within the framework of attention to and inclusion of diversity as a generator of positive synergies for the comprehensive well-being of each member of the educational community. Thus, the Mathematics Pedagogy and Language and Literature Pedagogy programs have a complex social responsibility regarding the attention to diversity, as they train professionals who must not only develop pedagogical and methodological competencies, but also sensitivity and recognition of heterogeneity to strengthen their teaching work (Rebolledo, 2018).

On the contrary, the Psychopedagogy program presents a higher level in Initial Teacher Training according to the criteria of the students, which is logical, since the program was created with the objective of strengthening the teaching and learning processes in addressing the needs of educational support at different levels of education, with a holistic, systemic, and intercultural vision for the continuous transformation of the national education system within the framework of educational inclusion, by addressing strategies for the promotion, prevention, detection, intervention, and monitoring of psychopedagogical difficulties. Based on this, develop and strengthen the skills and competencies of future professionals to address diversity within the educational system; in this framework, inclusive education is a relevant aspect of psychopedagogy, which obliges these professionals to work for the rights of people in vulnerable situations and those without it (Alcalá del Olmo and Leiva, 2021).

Conclusions

According to student opinions, the Psychopedagogy program excels in Initial Teacher Training, followed by Mathematics Pedagogy, and, in third place, Language and Literature Pedagogy. Psychopedagogy students perceive that their program is implementing a curricular plan that favors the recognition of diversity and encourages inclusive practices in the classroom, supported by assessment strategies that effectively validate learning outcomes. Regarding the Teacher Development Process, Psychopedagogy also leads in the theoretical and practical areas but suffers a significant decline in praxis, suggesting insufficient implementation of pre-professional practice. The Mathematics Pedagogy program presents an intermediate level, revealing strengths in some areas but with similar difficulties in consolidating professional praxis. Finally, the Language and Literature Pedagogy program ranks last in the study variable, indicating a deficit in the initial training of its students with an inclusive approach. highlighting the need for a review and analysis of the graduate profile and, consequently, of the curriculum to strengthen the role of the teacher in this area of knowledge.

The diversification of the dimensions of the Educational Inclusion variable among the three programs reflects substantial differences in student perceptions. The Psychopedagogy program leads in the Inclusive Policies dimension, standing out in the analysis of regulations and public policies in the education sector, as well as in the Inclusive Culture dimension due to its training that predisposes students to value heterogeneity. However, the Language and Literature Pedagogy program stands out in the promotion of inclusive values, likely due to its academic focus on social sensitivity. Regarding Inclusive Institutional Policies, this program also shows a notable increase, suggesting a more active training focus on the construction of the Institutional Educational Plan.

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On the other hand, the Mathematics Pedagogy program stands out in the Inclusive Practices dimension, primarily in the need to implement elements of access to education. Despite the identified strengths, the Curricular Adaptations indicator shows a significant decrease in all three programs, suggesting difficulties in inclusive practice for future educators in responding effectively to diversity in specific situations. This predisposition reflects deficiencies in pre-professional training and practices, which limits their ability to implement modifications to curricular elements in a timely and efficient manner, highlighting the need to strengthen the academic process.

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Bringing Anglophone Literatures to the EFL Classroom: A Proposal for Collaborative Reading through Frankenstein

Un acercamiento a la literatura anglófona en el aula ILE: Una propuesta de lectura colaborativa mediante Frankenstein

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Jairo Adrián Hernández
Universidad de La Laguna, España
jadrianh@ull.edu.es
https://orcid.org/0009-0000-2964-0958

Abstract

The problem with teaching Anglophone literatures in the English classroom at higher levels is that sometimes linguistic comprehension is prioritized over literary appreciation. However, the following didactic proposal emphasizes awakening students' interest in English culture and narratives. A collaborative methodology centered on Mary Shelley's Frankenstein is proposed. The proposal is detailed in various sections, highlighting role diversification, adaptation selection, and meticulously crafted scheduling. Through a series of activities, the emphasis lies on dynamic approaches ranging from gamification to artistic creation, all aimed at fostering contextual reading and other cross-cutting competencies such as emotional health.

Keywords: english; reading; Foreign Language; Anglophone literature; collaborative work

Resumen

La problemática de la enseñanza de literaturas anglófonas en la asignatura de inglés en niveles superiores es que se privilegia la comprensión lingüística sobre la apreciación literaria. Sin embargo, la siguiente propuesta didáctica destaca el despertar el interés del estudiante por la cultura y las narrativas en inglés. Se propuso una metodología colaborativa centrada en la obra *Frankenstein* de Mary Shelley. La propuesta se detalló en diferentes apartados, destacando la diversificación de roles, la selección de adaptaciones y una calendarización minuciosamente elaborada. Mediante una serie de actividades, se enfatizó en actividades dinámicas que van desde la gamificación hasta la creación artística. Esto con el fin de fomentar la lectura contextual y otras competencias transversales como la salud emocional.

Palabras clave: inglés; lectura; lengua extranjera; literatura Anglófona; trabajo colaborativo

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Introduction

In the English classroom, both at the secondary and higher education levels, there seems to be a somewhat problematic issue regarding the presentation of Anglophone literatures. On many occasions, teachers choose editorial adaptations based on chapter reading and the completion of exercises aimed at practicing reading comprehension, with little emphasis on sparking students' interest in the culture or narratives written in English—unlike what often occurs with Spanish-language stories. This is clearly due to linguistic factors, as such adaptations focus more on ensuring that the student understands what they read rather than encouraging a certain literary sensitivity toward the text. This aspect often takes a backseat, whereas in the Spanish-language subject, it is generally assumed that the student will enjoy the text in almost all its dimensions, given their fluency in the language.

The following didactic proposal aimed to work with the British literary classic *Frankenstein*, written by Mary Shelley in 1818. The choice of this novel is not accidental. A literary piece that seems distant in both time and theme from the realities of 21st-century youth was intentionally selected to demonstrate that, through proposals like the one presented here, it is possible to introduce students to Anglophone literature in a didactic and enjoyable way that brings them closer to realities different from those of the Hispanic world. This is essential, considering that when we talk about Anglophone literatures, we refer not only to the United Kingdom and the United States, but to the entire (post)colonial legacy, thus exposing students to various cultures and multicultural discourses.

This project consisted of a detailed and thorough description of a didactic proposal designed to be applied at the secondary, high school, or university levels, as the key lies in the implementation of the methodology itself. The activities offered—ranging from gamification to the creation of artistic works—aim to foster a love of reading by bringing students closer to the text not only through engaging activities, but also through a contextual approach. There was also a focus on developing other competencies such as written expression and oral production, among others. Furthermore, the project aimed to address cross-cutting themes such as affective-sexual responsibility, mental and emotional health. All this was done while fostering a positive classroom environment and interpersonal relationships. In other words, the goal was to approach the novel's themes with students in a holistic way, while bringing them into a much more relatable space.

Methodology

This proposal was aligned with project-based learning methodology, along with collaborative learning. To this end, the theoretical framework of the project is based on cooperative work strategies, as reading circles have proven to be a highly effective strategy for achieving the goal of this article. Authors such as Agulló et al. (2011), Mendoza (2000), and Daniels (2002) are essential references when approaching cooperative reading. Ultimately, this is a methodological strategy for instructional design that implements a set of tasks based on solving questions or problems (challenges), through a process of investigation or creation by students who work in a relatively

autonomous manner with a high level of involvement and cooperation, culminating in a final product presented to others (dissemination).

2.1. Group Characteristics

This type of collaborative project was based on an equitable distribution of tasks in order to assess skills and intelligences beyond traditional academic competencies. Thanks to its egalitarian, heterogeneous, and inclusive nature, a diverse team was formed, referred to as the "training group," due to the variety of skills and responsibilities. Ideally, the group includes students with different strengths, such as communication, creativity, leadership, ICT skills, or language fluency. These groups may be permanent or temporary, depending on the task. This strategy has shown positive effects on student engagement and inclusion, especially when articulated with clear task design and a mindful management of group diversity (Nguyen & Oanh, 2025). In this case, a formal team structure will be used to foster interpersonal relationships, although it may change depending on how these relationships evolve.

Following the recommendations of experts in collaborative work (Gómez et al., 2012; Martínez & Paterna, 2010; Tabernero & Briones, 2005), the group was composed of five students to prevent social loafing. Although cooperative groups are often recommended to have no more than four members, the nature of the project allows for the inclusion of one additional participant. This structure has been recently validated in research highlighting how specific role assignments promote equity, individual engagement, and group performance in cooperative learning environments (Villalustre & del Moral, 2021). Based on literature on collaborative learning and the guidelines of the Canary Islands Department of Education, the following student roles were established:

- **Editor**: Acts as the leader, responsible for guiding and pacing the group, ensuring that objectives and timelines are met. Moderates and supervises the group in class. Should possess leadership skills.
- **Language Expert**: Identifies key words and paragraphs in the text and researches lexical, grammatical, and pragmatic meanings. Ideally should have strong reading skills and reading strategies.
- **Threader**: Compiles the group's contributions, raises questions, and proposes final reflections. Should be proficient in the foreign language and have intellectual maturity.
- **Researcher**: Investigates the text across different dimensions: historical context, author, genre, characters, plot, themes, etc. Guides peers and should be skilled in research tools and ICT.
- **Illustrator**: Designs and formats the task in either print or digital format, writes out all proposed activities, and creates an artistic piece related to the text.

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2.2. Materials

For the secondary school level, the adaptation of *Frankenstein* (1818) by Mary Shelley, retold by Patrick Nobes (1989) and published by Oxford Bookworms Library, was chosen. The book, which is 56 pages long, is divided into 4 modules and 15 chapters, with additional pages at the end offering a glossary, pre-reading, during-reading, and post-reading activities.
If the project is to be implemented at the university level, the Hoepli publishing house offers a B1-level adaptation of the novel, which aligns with the expected language proficiency at that academic stage. In degree programs such as Translation, English Studies, Foreign Languages, etc., it would be appropriate to work directly with the original novel.

2.3. Sessions

The following is a breakdown of each of the sessions. Not all of them correspond to a specific activity; due to the complexity of the project, some sessions are reserved for tutoring or explanation.

2.3.1. First session: Escape Room

This activity serves as an icebreaker and helps to activate prior knowledge. It consists of an escape room created with the Genially application. *Frankenstein* goes beyond the written work; like other archetypes such as *Dracula* or *The Little Mermaid*, the creature has become a cultural icon. Without a doubt, it appears in various visual representations such as film, theater, or painting. This activity aims to recover the group's imaginary of the monster through a series of questions that progress from general to specific. In methodological terms, the dynamic incorporates collaborative reading as students begin debating the possible meanings of the activity. This culminates in a negotiated outcome that must be presented by a representative.

The escape room is one of the many possibilities offered by gamified learning—gamification in the sense of applying game mechanics to various learning processes. These escape rooms are collaborative dynamics in which a group of people is "locked" in a room and must solve puzzles and clues in order to "escape." The group works together on different tasks that involve creativity, problem-solving, logic, and memory. Recent studies have confirmed the effectiveness of this approach in developing skills such as leadership, critical thinking, teamwork, and creative problem-solving—even in demanding educational contexts (Rushdan et al., 2025). As López (2019) points out, this innovative methodology has been tested in various disciplines, especially in more technical fields such as physics, mathematics, or biology. The author, however, applies this technique in the English as a Foreign Language classroom. The student groups in this project not only agreed that gamified learning is innovative and more motivating than traditional approaches, but also found it boosted teamwork and communicative skills such as listening and speaking, in addition to reading comprehension (Schönbohm et al., 2024).

This escape room activity was developed in an online format. The game was designed to gradually insert subtle references to the novel into the students' minds, offering increasingly obvious clues as they progress. The vocabulary is adapted to the group's language level. The time allocated for

this activity depends on the debates generated by each question. Depending on the group's needs, a specific amount of minutes per question or for the entire activity may be scheduled, but the most valuable outcome comes from the discussions among students, as it stimulates critical and collaborative thinking.

Once the escape room is completed, the class will engage in a debate about the final answer—Frankenstein's creature. Some guiding questions for discussion include: "Who is Frankenstein?" (with the aim of clarifying that the name refers to the scientist, not the creature), "Have you ever seen the creature in any series or movie before?" or "Can you name any characteristics or clichés of the creature?" (starting to build a visual association: bolts, electricity, body parts, green skin, tattered clothing, etc.). In the final fifteen minutes of the session, students will watch different trailers of film adaptations. This is not a random exercise; the objective is to provide various representations of the creature so students can realize that its depiction differs across media. YouTube offers clips from adaptations by James Whale (1931, 1935), Marcus Nispel (2004), Stuart Beattie (2014), or Paul McGuigan (2015). These differ in plot, style, and technique, making them interesting for viewing and discussion.

2.3.2. Second session: Project presentation

A presentation will be used to introduce the project. First, building on the previous session's activity, the text will be introduced. It is important to delve into the division of sections and chapters, and even into the presence of visual materials. Bloom (1956) provides taxonomic tables of different activities and emphasizes the importance of illustrations as an aid to understanding the meaning of the text. It is also important to present a work schedule so that students understand the scope of the project and reflect on their own organizational abilities (Miller et al., 2009). The session ends with a detailed explanation of each task.

The final project will be submitted in physical format, as some of the tasks involve artistic and manual components, making this approach more appropriate. Several studies have indicated that project-based learning enriched by manual, creative, or collaborative elements is more effective when the final submission includes physical components, as this promotes knowledge ownership and student engagement with the process (Moate et al., 2023). The proposal here is for each group to submit a folder containing plastic sleeves corresponding to the number of tasks. Written activities may be completed digitally, provided they are printed and included in the final submission.

2.3.3. Third session: Group formation

Once students understand how the tasks are structured, one session will be dedicated to group formation. As previously stated, each group must consist of five students corresponding to the five roles specific to this proposal (editor, language expert, threader, researcher, and illustrator), each with distinct skills or interests (creativity, language, leadership, literary sensitivity, etc.). An online questionnaire may be used to identify these five roles and ensure a fairer distribution. These roles will be explained in classroom-friendly terms and with clear, concise instructions that, although not exclusive, help prevent confusion. In fact, although not explicitly stated throughout this paper, it is

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understood that all roles described here are symbiotic and interdependent in task development—in other words, they operate in parallel throughout the execution.

The **editor**, with clear leadership skills, must coordinate their group. Recent research in collaborative learning highlights that assigning clearly defined roles strengthens group structure and improves outcomes in cooperative learning contexts, especially in hybrid or second-language environments (Rico & García, 2022). Additionally, the editor must moderate team debates, schedule group meetings, write brief minutes of the agreements, and send them to teammates. They must also ensure that deadlines are met, that each member fulfills their responsibilities, that project goals are achieved, and that any issues or doubts that arise during development are resolved. These are just some essential tasks for the editor role, but each group may and should adapt the roles to its own dynamics.

The **language expert** role is sensibly assigned to a student with a solid grasp of the English language. This profile focuses initially on reading comprehension and explores each chapter's content as the tasks progress. The student is expected to compile a glossary of unfamiliar words, terms, or expressions and then explain their meanings. This role linguistically supports the entire project throughout its development. When writing tasks, the language expert should assist with language-related aspects. The student can rely on digital lexicographic tools. Current literature has demonstrated that assigning specific linguistic roles—such as glossary creation and contextual vocabulary analysis—enhances vocabulary acquisition and improves reading comprehension in collaborative language learning environments (Nguyen & Boers, 2023).

The **threader**, focused on interpretative mediation of the text, has been identified as key in collaborative learning environments, where critical processing of overall meanings and argumentative discussions enrich both comprehension and the co-construction of shared knowledge (Giannikas, 2021). Their role is to connect the text to potential responses and proposals. While the editor manages communication and debate, the threader—who ideally has a deeper understanding of the text—threads together discussions and arguments within the group to further enhance the collective goals. For example, they might link two opposing arguments to find common ground and develop a new proposal or reflection. If the previous role suits a student with language proficiency, this one requires intellectual maturity and sensitivity.

The **researcher** is responsible for exploring content peripheral to the text—everything that surrounds it—to uncover deeper insights with the help of the threader. This includes historical and social context, genre, themes, and more. As the text is read, the researcher identifies elements in each chapter (characters, plots, events, topics) and investigates them using encyclopedias (digital or print), journals, blogs, etc. Their role is to enrich the project with external readings that connect to the core text.

Finally, the **illustrator** must compile the group's work into either physical or digital format, writing out the group's final activities. Naturally, the language expert also plays an important role here. At the end of each task, the illustrator must also write a brief group journal, summarizing how the task was carried out—division of labor, challenges encountered, opinions on the tasks, and difficulties

faced. Additionally, since this is a clearly creative profile, one of their tasks is to create an artistic piece inspired by the text.

2.3.4. Fourth session: Geocaching

This session marks the beginning of the actual reading of the adapted text. To break the ice, a few minutes are dedicated to reading the first pages aloud. This is essential for working on cadence, intonation, fluency, and pronunciation. In fact, Fonseca-Mora (2013) explains that while silent reading engages students at the prosodic level, reading aloud allows the teacher to detect issues while also assessing multiple skills at once. Reading aloud—often done as a group activity involving listening to peers—democratizes the reading process. If the teacher is the only reference for pronunciation or rhythm, students may always feel like they're falling short in comparison. Reading aloud in class provides feedback that is much more aligned with the expected proficiency level (Li & Ma, 2022).

This first chapter introduces Victor Frankenstein's context as a scientist. Several facts about the Age of Discovery are presented, such as voyages to distant lands and technological advances. After reading, students engage in a geolocation activity around the school. This gamification strategy is inspired by *Geocaching*, a trending augmented reality activity in large cities. The game involves searching for hidden treasures (or caches) using clues and mobile-friendly maps similar to Google Maps.

Before the session begins, several caches related to the theme of "discovery" are hidden around the school premises. Each group receives a set of clues they must solve to find their cache. While this activity may seem anecdotal, its purpose is not only to strengthen interpersonal relationships within the group but also to develop collaboration skills and teamwork competencies (Redondo & Fonseca, 2021). It also allows the teacher to detect potential issues and address them before proceeding with more complex tasks. Consistent with the goals of this project, the activity focuses on motivating students. Scholars confirm that geolocation-based dynamics significantly boost motivation, engagement, and proactivity in student participation (Rojo Acosta et al., 2018; Gros Salvat & Forés Miravalles, 2013).

In a scavenger-hunt format, the first clue leads each group to a specific location, where they must complete a challenge or game to receive the next clue. Upon reaching the final location, they discover their treasure— a topic they must develop as their first task. These topics are linked to ideas of societal advancement, echoing Victor Frankenstein's vision. Example prompts include: "If you discovered a deserted island, what would you do with it?", "The world is ending, and we must live on the moon—what would that society look like?", or "You are the leader of a research team seeking a cure for mortality," among others.

The final minutes of the session will be used to reflect on how the activity unfolded, in order to identify and correct any issues that may have arisen during its development. Additionally, the task will be briefly explained: a group writing assignment about how students would act in the face of a discovery, with a special focus on the Machiavellian nature of science—in other words, what would they be willing to do to achieve such advances? The writing is, of course, a group task, but the roles

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of the threader and the designer are essential here. While the piece does not have to be explicitly linked to the novel, the final activity report must include a reflection on how Victor Frankenstein's actions inspired their own writing. Closely related to this, the researcher's role is also key, as they can look up relevant topics and online debates to support the group's contributions with a variety of arguments and metatextual insights (Leung & Francis, 2022).

2.3.5. Fifth session: Creating the creature

Like the previous session, this one begins with a reading aloud of the next chapter, which covers the creature's creation and escape. Once the group has finished the reading, they must work together to build their own creatures. This session emphasizes negotiation and mentorship within the teams. The monster represents otherness in all its dimensions (non-normative bodies, racialized identities, disability, neurodivergence, even queerness) (Jacobs, 2021). In this activity, however, students must create two monsters: the Instagram monster and the novel's monster. The first should be an idealized figure—for instance, with a normative body, fair skin, designer clothes, etc. In contrast, the second monster should have a non-normative appearance and represent the opposite of the polished image typical of Instagram. This exercise aims to explore self-concept and self-esteem. Roa (2013) defines self-concept as the understanding of oneself and concludes that it is linked to our perception of the events, objects, and people around us. Self-esteem, on the other hand, refers to the attitude we hold toward the way we think, feel, love, and behave toward ourselves.

Students must also create biographical profiles for both monsters. The first is imagined as a successful, enviable figure, while the second has a more humble background and a lifestyle closer to students' own realities—thus distancing the novel from a foreign or distant perception and boosting reading motivation. As this is a creative activity, the role of the designer is crucial. They should work alongside the threader to reflect on the profiles and consult the language expert for suitable adjectives and descriptive tools to enrich their narratives.

2.3.6. Sixth session: Assembling the creature

Now that the creatures and materials are ready, students will carry out the group activity, always coordinated by the editor, who is responsible for setting objectives and negotiating guidelines with the rest of the team.

2.3.7. Seventh session: Acceptance

Once again, the session will begin with a reading of the next chapter, which describes the creature's first encounter with humans and how he is rejected because of his appearance. Afterward, he hides and begins observing a family, gradually learning to behave like them—more human. In this activity, coordinated by the editor, group members must first work individually. Each student writes briefly on a piece of paper about a time they felt rejected. These accounts are placed into a bowl. The writing will follow simple structures that have been previously practiced in class. Given the sensitive nature of the topic, the script will be reviewed in advance by the teacher. Randomly and anonymously, the editor draws each story from the bowl and reads it to the group. If a student is uncomfortable sharing their personal experience, they may instead describe a situation observed in

a TV show or something from someone close to them.
The term **diversity** refers to the differences among all children (and all people), not just those with disabilities. **Inclusion** is therefore an essentially social process in which everyone in the school learns to live with differences—and to learn from them as well (Mel Ainscow, 2001).

After the readings, students must reflect—just as the creature did—on how people often change aspects of themselves to be accepted by society. In a two-column table, students will first identify a passage from the novel in which the creature is rejected. Then, drawing from the stories they heard, they will write a group reflection on how those situations made them feel and whether they identify with the creature. Additionally, they must select a passage where the creature attempts to fit into society, and in the second column, write another reflection on how they, too, have tried to adapt their personality or behavior to belong to a group. This is not only a way to reflect on the importance of accepting differences, but also a method to connect students more deeply with the text and narrative, as they may see themselves in the creature. Moreover, this exercise of revisiting key passages serves to uncover information that may have initially gone unnoticed.

2.3.8. Eighth session: Podcast

Reading continues until the chapter about the creation of a companion for the creature. This moment offers an opportunity to address a topic commonly discussed among young people: toxic relationships (Gómez & Yáñez, 2023). The creature, feeling lonely, desires a partner. In this activity, students will explore the topic of toxic relationships through the figure of the creature. To begin, the researcher must find and propose to the group a song that addresses this theme. Addressing such topics in the classroom aligns with the stage objectives outlined in current legislation (LOMLOE), which advocates for "strengthening students' affective capacities in all areas of their personality and in their relationships with others," as well as "recognizing and valuing the human dimension of sexuality." Locally, the Canary Islands Department of Education also adopts a firm and critical stance regarding affective-sexual education. The InnovAS network emphasizes the importance of "promoting a culture of prevention around gender violence, deconstructing courtship relationships based on patriarchal ideals, promoting models of egalitarian masculinities, and providing tools to detect and act against sexist violence."

Students will listen to the lyrics and analyze them briefly, drafting a discussion script with the help of the language expert and the designer. Afterward, they must record a podcast moderated by the threader and the editor. The editor will manage speaking turns, while the threader will connect arguments and spontaneous contributions to guide the group toward a shared reflection.

In recent years, many young singers (Olivia Rodrigo, Taylor Swift, Selena Gomez, Conan Gray, Billie Eilish...) have spoken out against problematic dynamics: power imbalances, age differences, jealousy, (ir)responsibility in relationships, and emotional dependence. This session offers an opportunity to incorporate students' musical tastes into an academic task. Moreover, since these songs are in English, students can engage with familiar content while improving their language skills and appreciation for literature by identifying meaning in a foreign language. This also encourages the connection between the text and students' personal experiences. Often, students

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perceive literature as introspective and inaccessible, but this activity helps them understand that even a (proto)Gothic 19th-century novel can be related to their own lives.

2.3.9. Ninth session: Mental health

The following chapters cover the events in which the scientist destroys the creature's intended partner, leading the enraged creature to murder Victor's friend and threaten to appear on his wedding day. As in previous sessions, the first minutes are dedicated to reading aloud. This part of the story reveals several aspects in both characters related to mental health: anger, paranoia, vengeance, despair, and helplessness.

For this activity, the designer and the editor are responsible for coordinating the creation of posters/infographics on mental health prevention, which will later be displayed in the school or faculty hallways. The designer must work with the group to come up with ideas that reflect various mental health conditions (depression, anxiety, eating disorders, bipolar disorder, obsessive-compulsive disorder).

The researcher's task is to find reliable information on these disorders. To carry out this activity, students will need basic tools for online research, and the topic should be discussed in the previous session so the teacher can provide printed articles. This activity not only promotes reading comprehension through informative, scientific, or educational texts related to mental health but also supports the overarching goal of fostering reading habits. It is a creative, current, and sensitive activity with an informative, inclusive, and community-oriented nature. It becomes inclusive and community-focused as students occupy the physical space of the school, giving visibility to realities that may affect many of their peers. The threader and the language expert are responsible for creating English-language awareness phrases. Meanwhile, as the rest of the team handles technical aspects, the designer focuses on the artistic side.

Addressing mental health in a classroom full of young people, with all the intellectual and emotional maturity this entails, is crucial. According to the InnovAS network of the Canary Islands Department of Education:

Promote healthy eating practices, enhance self-esteem, and develop a positive attitude toward body image by deconstructing beauty ideals spread by the media and social networks, in order to prevent eating disorders.

Integrating activities based on literary works that address mental health has proven effective in raising emotional awareness, preventing disorders, and creating inclusive educational environments through visual and collaborative tools such as posters or school exhibitions (García & Pérez, 2023).

2.3.10. Tenth session: Interview

In the next session, students will begin by reading aloud until they finish the adaptation. The final chapter also revolves around mental health and the scientist's regret for the people he has lost due to his experiment. After completing the reading, students will reflect on any doubts or questions

raised by the novel. They are then invited to create a fictional interview with the author, Mary Shelley.

Since this adaptation is a condensed version of the original text, students are likely to have encountered several uncertainties regarding the plot and characters. The editor and threader will lead a discussion with the group to formulate questions. The researcher, acting as Mary Shelley, will find answers using both the text and online sources. Meanwhile, the language expert helps write the questions in English, and the designer arranges them in magazine format, either manually or digitally.

2.3.11. Eleventh session: Presentation of results

In this final session, the groups present the outcomes of their projects. Students will now be able to see the perspectives, methodologies, and creativity of their classmates. They will likely reflect on textual themes and questions that hadn't occurred to them before—since every student brings a unique interpretation to a reading, it's easy to imagine that each team will approach the same activities in completely different ways.

It is essential to emphasize the use of visual aids (PowerPoint, Genially, Canva) in their presentations, not only to support their arguments but also to serve as a lexical springboard. As Barrot (2021) notes, the use of visual digital tools in academic presentations not only strengthens the organization and expression of ideas but also enhances communicative confidence and expands students' lexical repertoire in foreign language classrooms. During this and the following session, each group will present in turn, with a few final minutes reserved for questions from peers or the teacher.

Conclusions

Scientific literature (Gros & Forés, 2013; López, 2019; Rojo et al., 2018; Sai & Hsu, 2007) strongly supports the notion that cooperative reading projects significantly increase students' motivation to read. This essay confirms that claim by demonstrating how reading circles serve as an ideal space to foster reading habits through shared reflection and critical dialogue among group members. Moreover, the diversification of roles in such proposals activates different types of intelligences and sensibilities, thereby moving beyond a purely rote-based approach. In this way, these projects facilitate the integration of activities aimed not only at academic development—such as strengthening language competencies—but also at the interpersonal level, addressing aspects of emotional and affective-sexual education, and ultimately contributing to an improved classroom environment.

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The compliment: between flattery and harassment. Case study Eloy Alfaro Secular University of Manabí

El piropo: entre el halago y el acoso. Caso de estudio Universidad Laica Eloy Alfaro de Manabí

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Yenny Margarita Vera Loor[1]
Universidad Laica Eloy Alfaro de Manabí, Ecuador
yenny.vera@uleam.edu.ec
0009-0007-5133-7147

Mirian Yadira Quiroz Párraga[2]
Universidad Laica Eloy Alfaro de Manabí, Ecuador
miriany.quiroz@uleam.edu.ec
0009-0008-3372-7392

Jackeline Elizabeth Mendoza Pinoargote[3]
Universidad Laica Eloy Alfaro de Manabí, Ecuador
jackeline.mendoza@uleam.edu.ec
0000-0002-4157-2457

Abstract

The purpose of this research was to analyze the perception of gender violence expressed through catcalls within higher education institutions. To do this, it was decided to take the Eloy Alfaro Secular University of Manabí (ULEAM) as a case study. The aim was to determine the impact that the content of a catcall has on the person who receives it. The methodology implemented had a quantitative approach, in which the descriptive statistical method was used, since the survey technique was applied to collect information in the university faculty. The results show that 38% of the university population of ULEAM has suffered harassment through catcalls, both as students, teachers and administrative staff. Of that percentage, 45% of them stated that they felt uncomfortable when receiving a catcall. It is concluded that 38% of the ULEAM university community has been the victim of verbal sexual harassment through a compliment within the university premises, which made them feel uncomfortable. However, the compliment is sometimes wrongly perceived as an attempt at flirting, which makes it difficult to see.

Keywords: compliment, sexual harassment, gender, educational institutions, sociolinguistics

Resumen

La actual investigación tuvo el propósito de analizar la percepción de la violencia de género expuesta a través del piropo dentro de las instituciones de educación superior. Para ello, se decidió tomar como caso de estudio a la Universidad Laica Eloy Alfaro de Manabí (ULEAM), en donde se buscó determinar la afectación que trae el contenido de un piropo hacia la persona que lo recibe. La metodología que se implementó tuvo un enfoque cuantitativo, en la que se utilizó el método estadístico descriptivo y se aplicó la técnica de la encuesta para la recolección de la información en el claustro universitario. Los resultados mostraron que el 38% de la población universitaria de la ULEAM, han sufrido de acoso a través del piropo, tanto como estudiantes, docentes y personal administrativo. De ese porcentaje, un 45% de ellos manifestó que se sintieron incómodos al recibir un piropo. Se concluyó que un 38% de la comunidad universitaria de la ULEAM ha sido víctima de acoso sexual verbal mediante un piropo dentro de los predios de la universidad, lo cual les generó incomodidad, no obstante, el piropo es a veces percibido erróneamente como un intento de coqueteo lo que dificultad su visibilidad.

Palabras clave: piropo, acoso sexual, género, instituciones educativas, sociolingüística

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Introduction

The *piropo* (catcall), often considered a harmless gesture of admiration, has been globally recognized as a form of harassment that contributes to the normalization of gender-based violence. According to UN Women (2024), street harassment, including *piropos*, has been identified as a manifestation of discrimination and violence against women, perpetuating gender inequality and undermining fundamental human rights.

In several Latin American countries, demonstrations have taken place on this issue, reflecting the demand for the penalization of verbal street harassment, as well as the effort to make violent acts visible and raise awareness about this phenomenon. In 2015, in Argentina, legislators called for sanctions against verbal street harassment. That same year in Chile, the Observatory Against Street Harassment was established, and figures showed that 1 in 2 women had experienced street harassment, with the *piropo* being one of the most frequent forms. Meanwhile, in 2017, Mexico hosted the Global Forum on Safe Cities and Public Spaces for Women and Girls, organized by UN Women, where the Care Egypt case was presented with the aim of raising awareness among men and women about verbal harassment (Castrillón, 2022).

In Ecuador, high rates of gender-based violence against women are evident. According to the National Institute of Statistics and Census (INEC), in the country, 65 out of every 100 women have suffered some type of harassment during their lives, which means a total of 64.9% of the female population (National Institute of Statistics and Census [INEC], 2019). This suggests that sexual harassment against women in the country may have cultural roots embedded for years in society. According to Rodríguez and Gómez (2015), street *piropos* have been identified as a manifestation of the deeply ingrained machista culture in Ecuadorian society, contributing to the normalization of the objectification of women in public spaces.

With regard to the conceptual structure of disrespectful *piropos* within universities, several higher education institutions around the world have revealed the presence of harassment and gender-based violence within their environments. According to Macías et al. (2023), a survey conducted among students from various universities in the city of Neiva, Colombia, indicated the most frequent places where they have received or made *piropos* are: first, the street with an 82.1% probability; followed by universities with 58.9%; then shopping centers with 46.4%; and lastly, workplaces with 33.9%. This research demonstrated that *piropos* at universities are common, ranking second in terms of public spaces.

Regarding the context of Ecuadorian universities, a discouraging outlook is evident concerning this issue of verbal sexual harassment. According to Guarderas et al. (2023), they stated:
“The situation in the universities of the Sierra and the Coast continues to affect the student segment the most. The prevalence in these regions is slightly lower than in Quito: 1 in every 5 students from the Sierra has experienced verbal sexual harassment” (p.26).

It is worth mentioning that there are cases which are not always recognized as verbal sexual harassment, due to the subjectivity involved in interpreting the words used in a *piropo*, which often leads them to be mistakenly perceived as compliments. According to Álvarez (2018), in a study

carried out at a private university in Quito, it was found that half of the surveyed female population conceptually recognizes sexual harassment in its different forms, while the other half does not—indicating a clear normalization of the culture of gender-based violence.

It is important to note that in the province of Manabí, the rate of gender-based violence is not as high compared to other provinces in the country. According to INEC (2019), in Manabí, the total percentage of gender-based violence against women throughout their lives is 49.7%, placing it among the provinces with the lowest rates. In light of this, the following question arises: How does the university population at Universidad Laica Eloy Alfaro de Manabí perceive *piropos*?

The main objective of this study was to analyze the perception of gender-based violence expressed through verbal sexual harassment, more commonly known as *piropos*, within the campus of Universidad Laica Eloy Alfaro de Manabí. Furthermore, it also sought to determine the emotional impact caused by the content of a *piropo* on the person receiving it.

In this regard, *piropos*, as a form of verbal sexual harassment, have psychological effects on those who receive them. Ultimately, street harassment—which includes unsolicited *piropos*—can have serious implications for the mental and emotional health of victims, generating anxiety, fear, and insecurity (World Health Organization [WHO], 2000). Therefore, it is crucial to address the *piropo* as a form of harassment that violates women's dignity and personal space.

Methodology

This descriptive research employed a methodology with a quantitative approach, which allowed for the characterization of each element surrounding gender-based violence expressed through *piropos* in higher education institutions in Ecuador. As this was a case study, the main campus of Universidad Laica Eloy Alfaro de Manabí, located in the canton of Manta, was selected as the unit of analysis.

The method used for analyzing the statistical data was descriptive in nature, as it sought to observe measures of central tendency regarding the perception of *piropos* among the average university population. This aimed to obtain valid conclusions from the case study addressed in the research (Devore, 2008). In addition, a bibliographic review of various texts related to verbal sexual harassment and violence against women in higher education institutions was carried out.

To gather information, the survey technique was applied, targeting students, faculty, and administrative staff of ULEAM. According to the Human Resources Department, there are approximately 18,000 enrolled students, 1,000 faculty members, and 1,500 administrative staff, totaling 20,500 members of the university community during the 2023 academic period. It is important to clarify that this information pertains only to the university's main campus in Manta; therefore, populations from other university branches were excluded from this analysis. Given the large population—where any of the studied subjects could potentially experience verbal harassment within the institution—a simple random probability sample was extracted using the following formula:

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$$n = \frac{N * Z^2 * p * q}{e^2 * (N-1) + Z^2 * p * q} \quad (1)$$

After solving the above formula, the resulting sample size of the university population to be analyzed was 378 individuals, including students, faculty, and administrative staff, with a margin of error of 5% and a confidence level of 95%. The data collection instrument used was a questionnaire consisting of four multiple-choice questions and one open-ended question. It was created using the Google Forms web application and distributed via institutional email to the randomly selected study participants.

As for the processing of the information, this was carried out using Microsoft Excel software, where data from the multiple-choice questions were tabulated. The open-ended question was quantified using ATLAS.ti software in order to obtain a list of recurring words.

Results

Among the findings from the survey, it is important to mention that the demographic data of the studied population are essential for providing context to the main results. Each of these is detailed below:

- Regarding the age of the respondents, it was found that 84% of them are between 17 and 25 years old; another 7% fall within the 26 to 35 age range; 4% are between 46 and 55 years old; 3% are in the 36 to 45 age range; and only 2% are between 56 and 65 years old. This can be clearly seen in Table 1.

Table 1

Age of Respondents

Age Group	Frequency	Percentage
17 - 25 years	316	84%
26 - 35 years	28	7%
36 - 45 years	12	3%
46 - 55 years	15	4%
56 - 65 years	7	2%
Total	378	100%

- With regard to the gender of the respondents, it was observed that 66% of those who completed the questionnaire identified as female, while the remaining 34% identified as male. This is shown in detail in Table 2.

Table 2

Gender of Respondents

Gender	Frequency	Percentage
Female	249	66%
Male	129	34%
Total	378	100%

On the other hand, the main findings of the survey indicate that 62% of respondents stated they had not experienced any form of sexual harassment through a piropo within the premises of ULEAM. Meanwhile, the remaining 38% reported that they had indeed felt verbally sexually harassed through a piropo within the higher education institution. This is shown in detail in Table 3.

Table 3

ULEAM University Population Who Have Experienced Verbal Sexual Harassment

Options	Frequency	Percentage
Yes	145	38%
No	233	62%
Total	378	100%

Of the respondents who answered affirmatively (38%), they were asked to select from several options regarding their reactions upon being harassed. A total of 45% said they felt uncomfortable in such situations, 16% reported feeling flattered, 15% said they reacted with anger, 11% stated they felt powerless, and the remaining 11% included various other reactions, as detailed in Table 4.

Table 4

Reaction to a Piropo within the ULEAM Premises

Options	Frequency	Percentage
Anger	42	15%
Embarrassment	24	8%
Discomfort	132	45%
Powerlessness	33	11%
Flattery	47	16%
Satisfaction	13	5%
Total	291	100%

Regarding the perceived origin of the *piropo*, respondents were asked what they believed to be the main reason behind it. Of the university population, 33% indicated it was an attempt at flirting, 22% believed it stemmed from a lack of awareness of personal boundaries, 20% said it was due to admiration, 19% viewed it as disrespectful behavior, 3% stated it was an attempt at sexual aggression, and another 3% said it was a form of intimidation.

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As for when a *piropo* is considered offensive depending on the characteristics of the situation, 42% of respondents pointed to the content, 19% to the tone or manner in which it was delivered, 5% to the fact that it came from a stranger, 3% cited abuse of trust, and the remaining 31% selected all of the above. This is shown in Table 5.

Table 5

Factors That Make a Piropo Offensive

Options	Frequency	Percentage
Due to its form (How it is said)	72	19%
Due to its content (Words, double meaning, sexual tone)	158	42%
Coming from a stranger	21	5%
Abuse of trust	11	3%
All of the above	116	31%
Total	378	100%

Finally, university members were asked to identify the most offensive *piropo* they had received on campus. A total of 4.72% of respondents mentioned the word “None” as the most repeated among the responses, followed by “Mamacita” with 4.31%, then “Rica” (hot/sexy) at 2.98%, followed by “Piropo” itself with 1.91%, then “Cuerpo” (body) with 0.91%, and finally “Cocina” (kitchen) with 0.75%. These can be seen in detail in Table 6.

Table 6

List of Frequent Words Mentioned in a Piropo

Word	Frequency	Percentage
None	57	4.72%
Mamacita	52	4.31%
Rica	36	2.98%
Piropo	23	1.91%
Cuerpo	11	0.91%
Cocina	9	0.75%
Less relevant words	1019	84.50%
Total words	1207	100.00%

Meanwhile, the remaining 84.50% consist of less relevant words that are not displayed due to their low frequency (less than 0.50% occurrence) in the text of comments collected through the open-ended question. However, Figure 1 shows some of the words that were excluded from the previous analysis.

Figure 1

Word Cloud of Frequent Terms Found in a Piropo

Thus, Figure 1 shows a broad spectrum of words that become more closely linked as their frequency increases, and which are connected by a shared meaning. However, it is worth noting that some words appearing in the word cloud have little significance on their own, but serve a complementary role in the text to maintain coherence.

3.1. Discussion of the Results

The results of this research show that 62% of the university population reported not having experienced any form of verbal sexual harassment within the ULEAM campus; however, a significant 38% stated they had been harassed through a piropo at the institution. According to Carvajal (2014), piropo is not commonly recognized as one of the main visible manifestations of sexual harassment, precisely due to its normalization within cultural expression. Studies like this one demonstrate that it is indeed a form of harassment and that it should be considered a form of gender-based violence that causes discomfort, especially among women—more so when there is no consent, thereby undermining their integrity.

This reality is equally or even more present in universities in other countries. Buitrón, J. (2024), when discussing the various types of violence in Mexican universities, highlights verbal violence as the most common, with student perception indicating that men are more often the aggressors and women the primary victims. What this author states reflects that the issue of verbal sexual harassment is deeply rooted in Latin American universities, likely due to cultural factors.

In this regard, the findings support the previously mentioned evidence: among the 38% who experienced verbal sexual harassment at ULEAM, nearly half (45%) admitted that their reaction was one of discomfort. Morales and Pérez (2020) argue that piropos not only perpetuate gender

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inequality but can also have serious consequences on the mental and emotional health of Ecuadorian women, who have reported anxiety, stress, and fear as a result of harassment in public spaces, including unwanted piropos. All of this points to the piropo as a form of gender-based violence that often goes unnoticed in Ecuadorian universities due to its normalization within Ecuadorian culture.

On another note, the survey determined that 33% of the university population believes that piropos are an attempt at flirting by the person who delivers them. However, Gómez and Román (2019) have highlighted how piropos can be used as a tool of male control and domination over public space, thus perpetuating gender inequalities rooted in society. In this regard, Flórez et al. (2023), in their investigative work, collected the views of university students on myths surrounding sexual harassment in Medellín. They concluded that, according to these students, vulgar piropos are not perceived as a form of harassment—this perception being a result of how such behaviors have become normalized. Nevertheless, experts do identify them as offensive actions. This reveals that verbal sexual harassment is often mistaken for a compliment, which further complicates its recognition within the university setting.

Regarding whether a piropo is offensive based on the characteristics of the situation, nearly half (42%) of respondents stated that it qualifies as harassment when its content is of a sexual nature. Galtung (1998) classifies violence into three types: direct violence, structural violence, and cultural violence. The latter lies below the threshold of visible violence, which leads to its erroneous perception as something normal or natural. In this sense, piropo often lies on the line between what is visible and what is socially imperceptible. Saavedra (2022) argues:

“There are circumstances under which violence is instantly recognized; however, there are other contexts where the issue is preferably hidden or normalized. (…) A piropo or a whistle carries various meanings that can be perceived as violence, as they obstruct and discomfort the freedom of the person receiving them.” (p.101)

Saavedra categorizes the piropo as a form of street sexual harassment—harassment that, according to her, is present in countries around the world as an everyday and normalized problem. The survey results confirm the correlation between the literature review and actual events on the topic. This reaffirms the fine line between flirting and harassment. Since piropo is considered a form of harassment prone to invisibility, it is unsurprising that it is often perceived in a normalized way. As González et al. (2020) state, there are harassing behaviors that attempt to go unnoticed or be interpreted as flirtation by the aggressor but are ultimately “perceived as invasive.”

Beyond the interpretation of a *piropo* as harassment, the survey results also revealed that certain words are frequently used in *piropos*. According to the analysis of responses about the most offensive *piropo* received, the word “mamacita” appeared most often (f = 52), accounting for 4.31% of the total text in the comments collected in the open-ended question. However, it must be noted that the word “none” appeared most frequently overall—explained by the fact that only 38% of respondents answered affirmatively to the initial question about whether they had experienced harassment through a *piropo*.

Thus, it was confirmed that the most frequently used linguistic expression in male-to-female *piropos* within the ULEAM campus was the word "mamacita." According to the Royal Spanish Academy, "mamacita" is a diminutive form of "mamá" and is widely used across Central America, South America, and the Caribbean (Real Academia Española, 2014). However, the Association of Spanish Language Academies (2010) notes that "mamacita" is often used to refer to a physically attractive woman, even when there is no prior relationship. Clearly, the meaning of "mamacita" varies according to the context and situation in which it is used. It is not the same when said within a romantic relationship as when it comes from a stranger, as it can be offensive—particularly when accompanied by sexual vocalization or a lewd tone of voice (paralinguistic communication).

As a result, the word "mamacita" in the context of a *piropo* can be interpreted as a form of verbal sexual harassment that makes the recipient feel uncomfortable. According to Guarderas et al. (2023), *piropo* in Ecuadorian universities is an offensive linguistic expression, and within the university environment, it occurs both from male professors toward students and from male students toward female classmates—intimidating them and generating discomfort, panic, and fear.

Likewise, Saeteros et al. (2022), in their research on sexual harassment in higher education, also found that women are the group most exposed to this type of verbal violence, including *piropos*, as a social reproduction of the patriarchal system. This causes discomfort and fear. Fear of retaliation—especially from professors toward students—keeps many victims silent, which is a matter of national concern. These statistics resonate within higher education institutions, as few dare to report, especially when verbal violence is disguised as a compliment. This results in the normalization of such behavior as something culturally accepted, as part of the stereotype of masculinity.

Conclusions

The research results determined that 38% of the university population has experienced some form of verbal sexual harassment through a *piropo* within the premises of ULEAM, whether from a professor or administrative staff member toward a student, or vice versa. Although the number of individuals who reported being victims of harassment does not exceed half of the sample surveyed, it is important to emphasize that this remains a significant percentage. Furthermore, there is a probability that some individuals interpret a *piropo* as a compliment rather than as a form of gender-based violence, since 33% expressed the opinion that a *piropo* is an attempt at flirting. It can therefore be inferred that within the university campus, there are expressions of verbal sexual harassment that are generally not highly visible due to the cultural normalization of violence.

Regarding the impact that a *piropo* has on the person receiving it, the findings showed that among those who responded affirmatively to having been victims of verbal sexual harassment via a *piropo*, 45% reacted with discomfort. This can be attributed to the fact that the content of a *piropo* may be highly offensive, particularly when it carries a sexual connotation—an idea supported by 42% of respondents. The term "*mamacita*" was the most frequently mentioned (f = 52) among those who received such comments. As a result, women are the most affected by *piropos*, since the expressions used can cause discomfort, fear, and insecurity. This reinforces the patriarchal system embedded in Ecuadorian culture and, by extension, in institutions of higher education. However, it is

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important to mention that this research, being a case study, does not represent the entire university population of the country. Therefore, broader analyses on the topic are necessary.

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Attitudes and research skills towards artificial intelligence: Challenges for university teachers

Actitudes y capacidades investigativas frente a la inteligencia artificial: Desafíos de los docentes universitarios

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Ocupa-Cabrera Hitler Giovanni[1]
Universidad César Vallejo, Lima, Perú
hocupaca@ucv.edu.pe
https://orcid.org/0000-0002-0387-1130

Meneses-La-Riva Monica Elisa[2]
Universidad César Vallejo, Lima, Perú
mmenesesl@ucv.edu.pe
https://orcid.org/0000-0001-6885-9207

Abstract

This research investigated the prevalence and transformative capacity of Artificial Intelligence (AI) within the educational sphere, addressing both the challenges and opportunities it presents. The rapid evolution of AI necessitates continuous professional development for educators to acquire essential research and technological competencies. The study aimed to analyze the scientific evidence regarding university faculty members' attitudes and research competencies in response to the challenges posed by AI. A comprehensive literature review was conducted, primarily focusing on the Scopus database. The findings indicated that educators' attitudes toward AI varied significantly based on their level of training in digital platforms. While many acknowledged AI's potential, they also expressed resistance, largely attributed to insufficient training and concerns that AI might diminish personal interaction in the educational process.

Keywords: artificial intelligence, learning, technology, university teachers, research skills, education

Resumen

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Palabras clave: InXXXXng

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Introduction

Educational quality is a fundamental goal closely tied to the prosperity of nations, as it seeks to ensure economic growth and improve quality of life (Organisation for Economic Co-operation and Development [OECD], 2019). The emergence of new technologies, especially Artificial Intelligence (AI), is transforming various aspects of social, professional, political, and educational life. This shift is reshaping the global educational landscape and generating challenges and opportunities that require the educational community to adapt to an increasingly digital society. According to the United Nations Educational, Scientific and Cultural Organization [UNESCO] (2019), 40% of students in low-income countries lack access to AI, underscoring the need to personalize pedagogy through appropriate competencies to ensure quality educational practice.

AI is positioned as a key tool for enhancing knowledge, contributing to social development, and aligning the efforts of the educational community with the Sustainable Development Goals. Globally, UNESCO (2019) emphasizes that integrating AI into educational contexts depends on teacher training and the availability of adequate technological infrastructure. This technology enriches research competencies, allowing educators to carry out creative and relevant investigations (García Peñalvo, 2023). It is essential to address this challenge through university-level training that promotes the development of digital skills in students and technological competencies in teachers, enabling them to design effective learning strategies (Viñoles et al., 2022).

Based on the above, the following general research problem was posed: *What are the attitudes and research capabilities of university professors in the face of the challenge of AI?* The specific questions are: *What teaching competencies are evident in teaching and research activities? What is the attitude of university faculty toward AI and technological change? What opportunities does AI offer to improve teaching and research?*

The development of research competencies is essential for teaching work, as it involves not only professional experience but also the ability to explore, analyze, and design new learning strategies supported by AI, integrating digital skills for managing and processing information (Van Der Vlies, 2020). These competencies are crucial for educators to conduct quality scientific research, contributing to knowledge advancement and improving teaching practices. Despite progress over time, significant gaps persist between pedagogical proposals that promote scientific research and the actual research capabilities of educators in the classroom. Teaching and scientific research require innovative educators who are open to continuous learning (Soylu & Özkan, 2021).

In the Peruvian context, the implementation of educational policies is essential to guide the education system, integrating actions and decisions that foster educational quality and its impact on economic, cultural, and social development (Pita, 2020). These policies must adapt to global advancements and local needs to drive improvements in educational systems. However, the incorporation of AI faces structural and connectivity challenges in some universities, while others have begun integrating it into academic programs—despite the lack of digital skills among educators and limited access to technological resources, which restrict teaching and research activities (Torres et al., 2024).

The connection between policy and education is crucial to ensure the effectiveness and efficiency of implementing social models and policies. It is necessary to ensure the relevance of public governance, citizen participation, and transparency in management (Cotrado, 2020). Currently, many educators lack the skills to manage and adapt AI for teaching and research, and limited internet access restricts self-training, ultimately affecting educational quality (Ministry of Education of Peru [MINEDU], 2020). However, AI is not intended to replace teachers, but to transform education by optimizing classroom management and personalizing learning. Its success depends on an adaptive process that involves significant challenges and risks, which must be critically addressed by educational authorities.

In conclusion, the adoption of AI in the university context offers numerous opportunities to improve educational quality and advance scientific research, but also presents major challenges that must be addressed at structural, formative, and ethical levels. Universities have the responsibility to adapt through strategies that enable various educational stakeholders to leverage the benefits of AI and respond to the technological challenges of the 21st century. Therefore, the following general objective was formulated: *to analyze the attitudes and research capacities of university faculty in response to the challenge of AI.* Additionally, the specific objectives aimed to identify teaching competencies in teaching and research activities; evaluate university faculty attitudes toward AI and technological changes; and analyze the opportunities AI offers to improve teaching and research practices.

Methodology

An analytical-reflective literature review was conducted using a hermeneutic method to interpretively analyze the collected information. The research adopted an observational-descriptive approach, focusing on studies from the past five years and reviewing data from past events. Information was gathered from the Scopus database, and selected publications aligned with the evaluation of university professors' attitudes and research competencies in response to the challenge of AI. Specific keywords were used for the investigation, and articles not primarily written in Spanish or English were excluded.

Table 1

Search Equations – Criteria Database

Database	Search Terms	Boolean Operators
Scopus	TITLE-ABS-KEY ((qualities OR attitudes OR abilities OR competencies) AND (research OR inquire) AND (AI OR artificial AND intelligence) AND (teachers OR professors OR faculty))	AND – OR

Note: Results according to the Scopus database.

Table 1 shows the initial exploration carried out in the Scopus database, recognized for its global relevance and impact. Boolean operators and keywords were used to perform a more precise search of the publications.

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Table 2

Search Equations – Article Summary

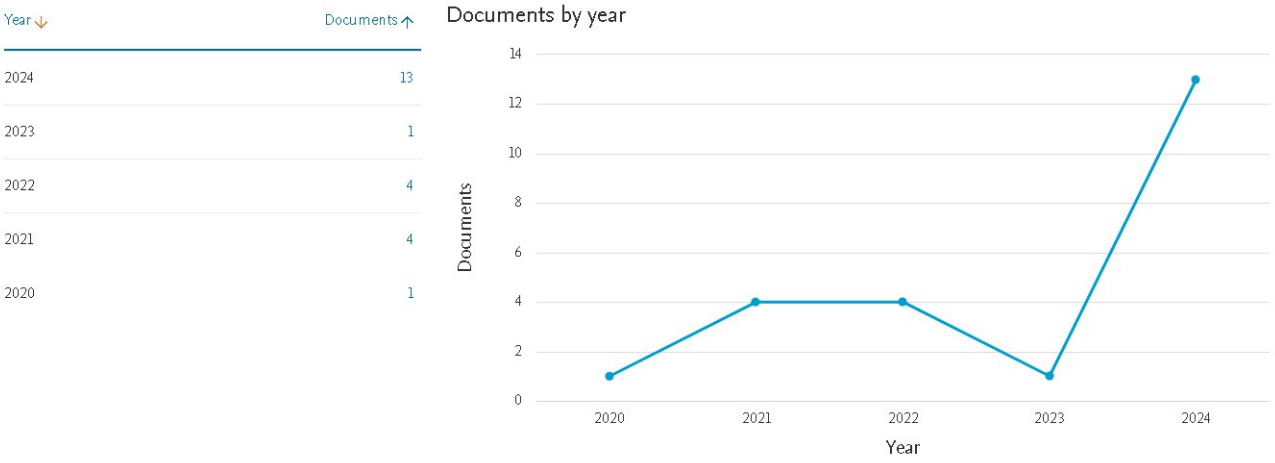
Database	Language	Results	Period	Open Access	Thematic	Analyzed
Scopus	Spanish					
		12	2020	–	–	–
		2	2021	–	–	–
		–	2022	–	–	–
		5	2023	2	–	–
		5	2024	5	2	2
	Total	12	2020–2024	7	2	2
	English					
		60	2020	27	1	1
		113	2021	42	5	4
		112	2022	58	5	4
		153	2023	54	2	1
		213	2024	98	17	13
	Total	651	2020–2024	279	30	23

Note: Compiled based on results from the Scopus database.

The adopted approach is based on a documentary analysis aligned with the objectives of the research. Articles were selected using keywords such as: artificial intelligence, learning, technology, teachers, and competencies, among other terms relevant to the study. The inclusion criteria established were: manuscripts published between 2020 and 2024, in English and Spanish, open access, and relevant to the topic.

The analysis made it possible to collect the most relevant scientific evidence to evaluate university professors' attitudes and research competencies in the face of the AI challenge. Articles were excluded if they were not written in Spanish or English, were not open access, were unrelated to the subject matter, or did not fall within the specified time frame (Table 2).

Figure 1
Publications according to Scopus Database



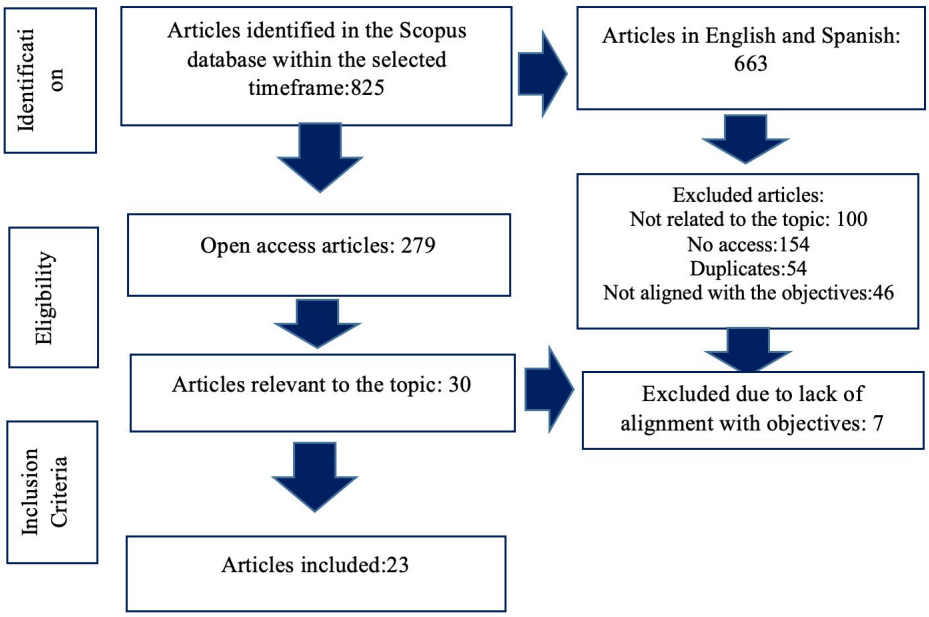
Year	Documents
2024	13
2023	1
2022	4
2021	4
2020	1

Note: Results according to Scopus

The findings from the years 2022 and 2023 revealed a notable decrease in the production of research focused on university professors' attitudes and research competencies in response to the challenge of AI, suggesting a resistance to change among educators despite technological advancements (Figure 1).

Figure 2

PRISMA Diagram



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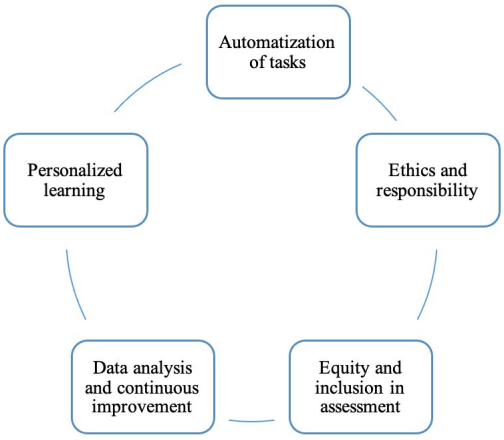
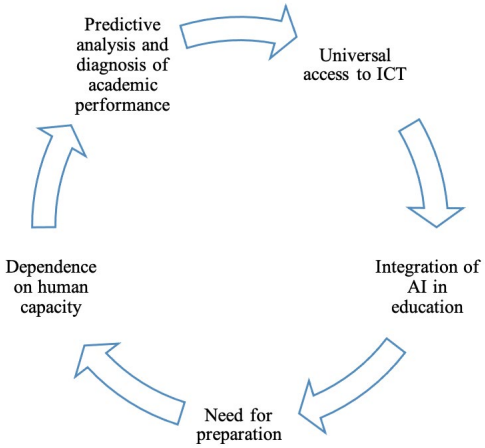
Based on the analysis conducted, the findings are as follows:

3.1. Contextualization and Evolution of Artificial Intelligence (AI)



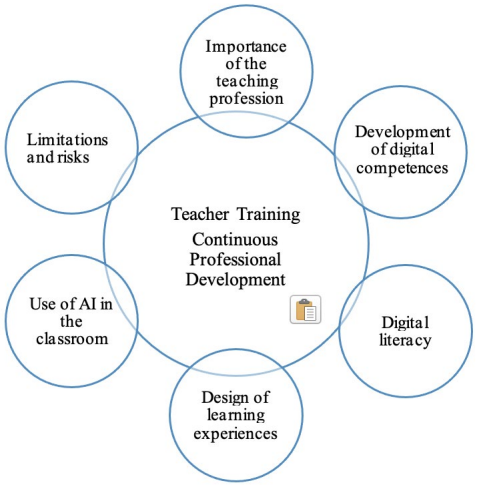
The implementation of AI involves the automation of tasks (Zielinski et al., 2023) and the need to maintain an ethical and responsible attitude (Vera, 2023), promoting student inclusion in academic assessments and global equity (Wang et al., 2024). Likewise, data analysis and continuous improvement are essential components for the personalization of meaningful learning (Zielinski et al., 2023).

3.2. Teachers' Attitudes and Perceptions Toward AI



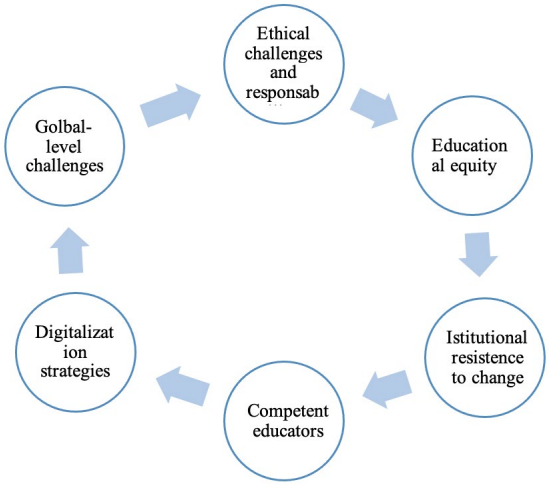
Digital infrastructure is essential to facilitate universal access to information and communication technologies (ICT) and the integration of AI in education, which requires openness and proper training (García Velázquez, 2023). The effectiveness of AI depends on human capacity, allowing teachers to carry out predictive analyses and diagnostics of academic performance, as well as to identify learning patterns and classroom issues (Aguirre et al., 2024).

3.3. Teacher Training and the Development of Research Competencies



Teacher training and continuous professional development are essential for building research capacities and digital skills, which are reflected in classroom practice (Kiryakova & Kozhuharova, 2024). Digital literacy facilitates the design of learning experiences through the use of AI, which -despite its risks and limitations- represents an opportunity to generate new knowledge (García Peñalvo, 2024).

3.4. Challenges, Inequalities, and the Digital Divide



The adaptation of education to AI presents various ethical challenges and demands responsibility from the educational community in its pursuit of educational equity, despite resistance to change in many institutions (International Telecommunication Union, 2021). Digitalization requires competent educators who can implement innovative strategies in the classroom (Viñoles et al., 2022), aligned with global technological challenges (Coronel de León, 2022).

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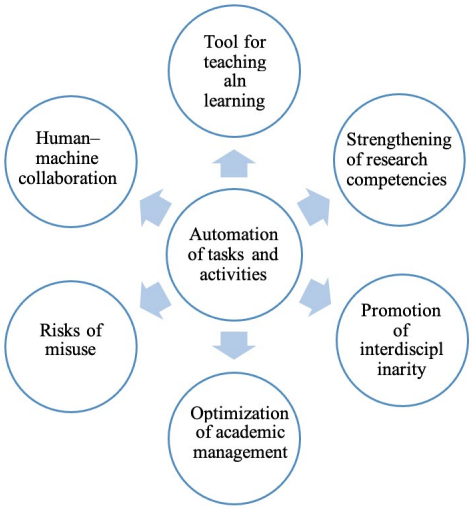
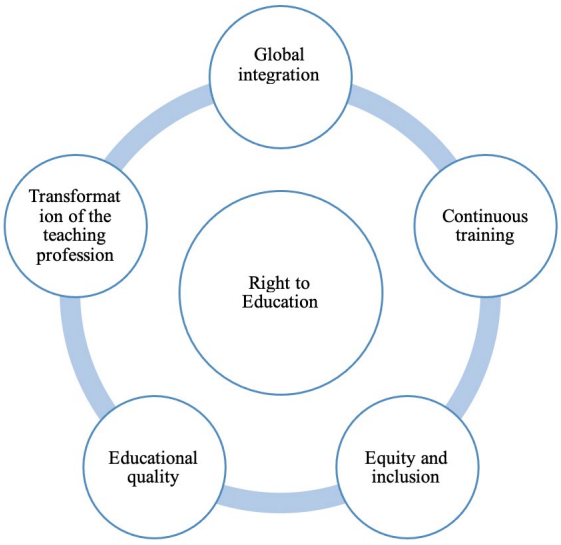
3.5. Opportunities of AI in Teacher Training and Research Development



AI is a valuable tool for teaching, enabling the automation of school-related tasks and activities (Joksimovic et al., 2023), which strengthens and fosters interdisciplinarity in research (González, 2023). However, its misuse can lead to risks, divisions, and the exacerbation of social inequalities (Lloret et al., 2022).

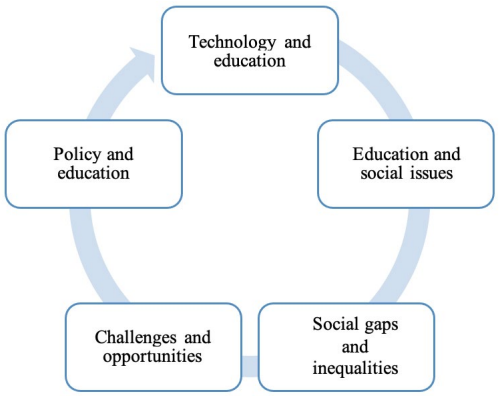
3.6. The Role of Educational Policies and Institutional Strategies



In Peru, education is a fundamental right (Roncal, 2024), and public policies focus on the continuous professional development of teachers and the global integration of AI in classrooms (García Peñalvo, 2024). The approach to addressing social issues is based on the principles of equity and inclusion, emphasizing the need to improve the curriculum (Martínez & Herrera, 2023). Educational quality implies innovation in infrastructure and resources to transform teaching practices and the educational system (Villegas et al., 2022). This approach promotes ongoing

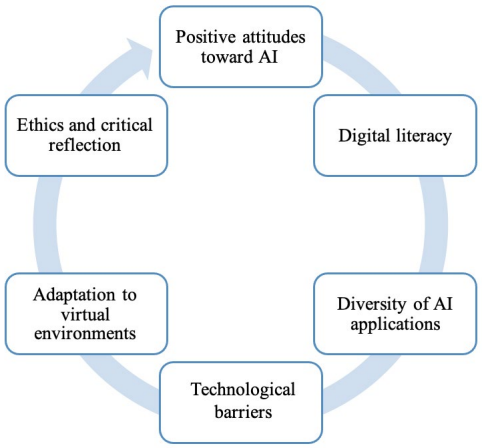
training, infrastructure improvement, educational management, and the updating of educational processes (Ccoto, 2023).

3.7. Impact and Challenges of AI in Educational Quality



Technology plays a key role in educational development by addressing social issues (García Velásquez, 2023). Educational policies focus on addressing social gaps to reduce inequalities that limit equitable access to education (Narcizo, 2021). AI in education presents both challenges and opportunities in terms of equity and digital access, integrating various educational components to strengthen learning resources (Baidoo & Owusu, 2023).

3.8. Future Perspectives and the Projection of the Teaching Profession



Teachers recognize the importance of AI in their professional work, academic content, and learning strategies (Baidoo & Owusu, 2023). Therefore, it is essential for them to develop digital skills to integrate AI into their pedagogical practices and achieve digital literacy (Ramazan & Gizem et al., 2023). Likewise, universities must understand the functionality of AI to overcome technological barriers (García Peñalvo, 2024), considering the need to adapt educational processes to virtual modalities. This highlights the importance of adjusting regulations and procedures within an academic context that prioritizes ethics and critical reflection (Tuesta et al., 2022).

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The development of research competencies is essential to respond to educational demands. This involves not only acquiring technical skills in AI but also fostering critical thinking and reflective teaching practice. AI facilitates access to large volumes of information, allowing teachers to conduct deeper, evidence-based research (Aguirre et al., 2024). Moreover, training in AI tools can stimulate intellectual curiosity and innovation in teaching, promoting a more active approach to educational research (González, 2023).

However, a common limitation in the reviewed articles is the lack of longitudinal studies that assess the long-term impact of AI on teaching practice and student learning. Some studies focus on specific contexts, which may limit the generalization of findings to other educational settings (Ccoto, 2023). Additionally, most works do not address how to effectively integrate AI tools into the curriculum, which is essential for maximizing their potential (Kiryakova & Kozhuharova, 2024). These limitations underline the need for broader studies that consider diverse contexts and pedagogical approaches.

Table 3

Reviewed Articles

Authors	Conclusions	Contributions
Vera (2023)	AI presents significant challenges but also opportunities to improve higher education	Promotes positive attitudes and enhances teachers' research competencies
Zielinski et al. (2023)	Chatbots facilitate efficient writing and revision of academic publications	Enhances research skills through AI tools in education
Shan et al. (2024)	AI is transforming education by improving teaching and learning	Highlights the importance of AI in developing teaching competencies
Aguirre-Aguilar et al. (2024)	AI strengthens research competencies in university education	Develops teachers' critical and analytical thinking skills
García-Velásquez (2023)	AI is crucial for the preservation and analysis of educational cultural heritage	Enriches teachers' research skills in digital communities
Kiryakova & Kozhuharova (2024)	Teachers need specific digital skills to integrate AI into teaching	Teachers must improve their attitudes toward AI in pedagogy
Viñoles-Cosentino et al. (2022)	Training in digital skills is essential in the university context	Training reinforces positive attitudes toward AI adoption
Coronel de León (2022)	Connectivism redefines education through emerging technologies	AI promotes collaborative research and connected learning
Joksimovic et al. (2023)	AI supports complex problem-solving in education	AI enhances research and methodological competencies in teachers
González-González (2023)	AI transforms teaching methodologies, requiring teacher adaptation	AI fosters improved research capabilities in educational practice
Lloret et al. (2022)	AI-based systems can assess and improve educational quality	AI provides tools that strengthen and energize teacher research
García et al. (2024)	Generative AI presents significant opportunities for educational improvement	Urgent need for teacher training in emerging technologies
Menacho et al. (2024)	AI supports autonomous learning for future university teachers	AI as an educational tool improves teacher research practices
Villegas et al. (2022)	Pedagogical support significantly improves teacher performance	Training fosters research and teacher adaptation to AI

Authors	Conclusions	Contributions
Ccoto (2023)	Teaching performance is directly related to educational quality	AI training enhances research skills and teaching performance
Socorro & Reche (2022)	Teachers' attitudes toward ICT influence effective educational training	Teacher training is key for managing educational technologies
Gallent et al. (2023)	Generative AI poses ethical challenges affecting academic integrity in higher education	Training promotes ethical reflection and integrity in teacher research
Narcizo (2021)	The digital divide is a major challenge in Peruvian education	Bridging the digital gap is essential for AI integration in education
Baidoo-Anu & Owusu (2023)	AI can improve teaching and learning in diverse educational settings	AI strengthens teachers' research and methodological skills
Ramazan & Gizem (2023)	The use of AI tools enhances skills, thinking, and motivation	AI positively impacts teachers' research competencies
Tuesta et al. (2022)	Educational responsibility must embrace technologies that improve virtual learning	AI enhances research capabilities to support virtual education
Velander et al. (2024)	Understanding AI is crucial for effective implementation in education	Continuous training enhances teachers' research capabilities
Cotrado (2020)	Educational policies affect teaching practice, promoting a culture of performance and efficiency	Teacher training in research competencies is essential in changing contexts

Conclusions

The reviewed articles offer varied findings on the implementation of AI in different educational contexts. For example, Gallent et al. (2023) addressed ethics and academic integrity, highlighting how AI can influence perceptions of learning in higher education. In contrast, Menacho et al. (2024) emphasized the use of AI as a tool for autonomous learning, presenting a more positive and proactive approach. To foster innovation in teaching and research, collaborative platforms between institutions could be established, enabling teachers to exchange resources and experiences in using AI. This would enrich teaching practices and encourage more active and collaborative research (González, 2023).

Moreover, AI is employed in various research activities. Teachers can use AI-based data analysis tools to work with student performance information, allowing them to identify trends, patterns, and areas for improvement (Ramazan & Gizem, 2023). Likewise, using AI platforms for literature review facilitates access to relevant studies, optimizing the development of academic publications (Zielinski et al., 2023). These applications not only improve the quality of teaching research but also promote a decision-making-oriented approach in education.

However, to overcome teachers' resistance to using AI, it is essential to implement specific training strategies that address both technical and pedagogical aspects. It is proposed to develop training programs that include practical workshops on using AI tools in the classroom and sessions discussing their benefits in the teaching and learning process. Additionally, fostering a culture of collaboration where teachers share experiences and best practices is essential (Aguirre et al., 2024). Training should be ongoing and adaptive, allowing educators to explore various AI

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applications in their educational contexts, thereby helping to reduce resistance and increase acceptance (Wang et al., 2024).

It is concluded that teachers' attitudes toward AI are heterogeneous, ranging from acceptance to resistance. While many recognize the potential of AI to enhance their pedagogical and research practices, they also express concerns about their ability to adapt to this new reality. Research competencies are conditioned by teachers' level of digital literacy, highlighting the need for specialized training to face the challenges that AI poses in academia.

It was also determined that the essential teaching competencies for instruction and research include skills in managing digital tools, data analysis, and integrating AI into the design of learning experiences. Furthermore, continuous professional development is essential to keep teachers updated in a dynamic technological environment. These competencies are fundamental to developing effective pedagogical strategies and conducting relevant, high-quality research.

Additionally, the evaluation of teachers' attitudes reveals a combination of enthusiasm and resistance. A significant number of educators show openness to adopting AI, recognizing its transformative potential in education. However, concerns persist regarding the lack of specific training and fears that AI might replace human interaction in the classroom. This context calls for training programs that address both technical skills and attitudes toward change.

AI offers multiple opportunities to improve teaching and research, with personalized learning standing out as a key benefit—allowing content to be tailored to individual needs—and the automation of administrative tasks freeing up time for teaching. Moreover, it facilitates the collection and analysis of large volumes of data, enhancing research quality and supporting educational decision-making. However, it is vital to implement these opportunities critically, considering associated risks and maintaining a student-centered approach.

Accordingly, it is proposed to implement specific programs on the use of AI in education, including practical workshops, seminars, and online courses. These programs should focus on developing digital and research skills, ensuring that teachers gain the confidence and capabilities to integrate AI into their teaching practices. Additionally, it is recommended to offer certifications to formally recognize these competencies.

Universities must establish regulatory frameworks that promote the integration of AI into curricula and academic practices, facilitating the adoption of emerging technologies and ensuring access to adequate technological resources. It is also essential to encourage cooperation across campuses, branches, and disciplines to develop multidisciplinary approaches in AI teaching and research, enhancing the exchange of knowledge and experiences. The need to encourage teachers' participation in AI-based projects is highlighted, allowing them to experiment with its benefits and challenges. Sharing success stories through conferences, seminars, and publications will serve as motivation to adopt new methodologies.

Universities should invest in improving technological infrastructure to ensure that teachers and students have the necessary tools for effective use of AI. Continuous assessment systems should

also be implemented to measure the impact of training and AI use on learning outcomes, along with psychological and emotional support mechanisms to address resistance to change and concerns related to technology adoption.

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Differentiation in Academic Management of Military Training Programs: A Comparative Study at the Armed Forces University ESPE

Diferenciación en la Gestión Académica de Carreras de Formación Militar: Estudio Comparativo en la Universidad de las Fuerzas Armadas ESPE

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María Fernanda Serrano Aldaz[1]
Universidad de las Fuerzas Armadas ESPE, Ecuador
mfserrano@espe.edu.ec
https://orcid.org/-0009-2240-0180

Manolo Germán Cruz Ordoñez[2]
Universidad de las Fuerzas Armadas ESPE, Ecuador
mgcruz@espe.edu.ec
https://orcid.org/0000-0002-1959-6639

Mishell Romina Angulo Alvarez[3]
Universidad de las Fuerzas Armadas ESPE, Ecuador
mrangulo@espe.edu.ec
https://orcid.org/0000-0002-6434-6137

Cristina Maribel Dávila Molina[4]
Universidad de las Fuerzas Armadas ESPE, Ecuador
cmdavila1@espe.edu.ec
https://orcid.org/0009-0007-6725-088X

Abstract

This research examined the differentiation in academic management of military training programs at the Universidad de las Fuerzas Armadas ESPE, using a comparative approach between specialized and non-specialized programs. The study analyzed the structure and characteristics of these programs. The results indicated that the military sciences program stands out for implementing a dual training modality, which entails a greater hourly workload and close academic collaboration with the Ministry of Defense. This modality, in which cadets alternate between academic studies and practical training, is unique when compared to non-specialized programs and is regarded as essential for ensuring the development of officers proficient in both military skills and academic competencies. Furthermore, it was observed that the academic management of the Military Sciences program is oriented not only toward the acquisition of theoretical knowledge but also toward the ethical and practical formation of future officers. The study concluded that this differentiation in academic management is fundamental to the preparation of competent officers. It also suggested that this differentiated approach could serve as a model for other higher education institutions interested in integrating academic education with practical skill development.

Keywords: academic management, military education, focused careers, University of the Armed Forces ESPE

Resumen

La presente investigación examinó la diferenciación en la gestión académica de las carreras de formación militar en la Universidad de las Fuerzas Armadas ESPE con un enfoque comparativo entre las carreras focalizadas y no focalizadas. La investigación analizó la estructura y características de estas carreras. Los resultados mostraron que dicha carrera se distingue por implementar una modalidad dual de formación, que implica una mayor carga horaria y una estrecha colaboración académica con el Ministerio de Defensa. Esta modalidad en la que los cadetes alternan entre estudios académicos y formación práctica es única en comparación con otras carreras no focalizadas, y es vista como esencial para asegurar la formación de oficiales capacitados en habilidades militares y competencias académicas. Además, se observó que la gestión académica en la carrera de Ciencias Militares no solo está orientada a la adquisición de conocimientos teóricos, sino también a la formación ética y práctica de los futuros oficiales. Se concluyó que esta diferenciación en la gestión académica es fundamental para la formación de oficiales competentes. El estudio también sugirió que este enfoque diferenciado en la gestión académica podría servir de modelo para otras instituciones de educación superior interesadas en combinar formación académica con habilidades prácticas.

Palabras clave: gestión académica, educación militar, carreras focalizadas, Universidad de las Fuerzas Armadas ESPE

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Introduction

In the context of military education, the integration of academic programs alongside traditional military training is important in order to respond to modern security challenges, which are increasingly complex and multifaceted. According to Metz (2021) and Zelbo (2024), modern military academies are adapting their curricula to include studies in political science, international relations, and information technology, reflecting the need for officers who are not only military strategists but also diplomats and globally informed leaders.

The ESPE Armed Forces University in Ecuador has been a pioneer in this integrative approach, designing programs that prepare students not only in military skills but also in academic competencies applicable in various civic and administrative contexts. As Fernández and Álvarez (2018) point out, the university has strengthened the country's defensive capabilities and promoted a broader vision of the role of the military in society, including areas such as natural disaster management and technological development. This training model responds to global trends in military education, similar to those implemented in Brazil and Cuba, where technical and professional training has effectively integrated theory and practice over the last twenty years (Silva & Oliveira, 2019; Lorenzo, 2012).

The main objective of this study was to analyze the differences in the academic management of the Military Sciences degree program, comparing it with non-focused degree programs at the ESPE Armed Forces University. This analysis focused on highlighting the particularities of the dual modality, which combines academic training with professional practice under the supervision of the Ministry of Defense. Given that this modality is unique in its structure, it is essential to examine how it influences both the workload and the practical and ethical preparation of cadets, in comparison with non-focused degree programs. Thus, it is hoped to identify the characteristics that make the Military Sciences degree program offer a more comprehensive preparation.

Furthermore, it is important to explore how institutional collaboration with the Ministry of Defense impacts the training of officers who must not only be competent in military skills, but also in academic and ethical areas. Comparing the educational outcomes between Military Science students and those in other non-focused majors will allow for an evaluation of the effectiveness of this modality in the acquisition of essential skills. Likewise, this research sought to determine whether the differentiated approach to academic management in the Military Sciences program can offer a replicable model for other higher education institutions interested in efficiently combining theoretical and practical training.

The rationale for this study was based on the need to train officers capable of responding to the current challenges of the global environment. In this sense, the dual modality implemented in the Military Sciences program represents a specific adaptation of pedagogical principles already established in other educational contexts, such as technical training in Ecuador (Vásquez, 2019; Muñoz, 2020; Gualán et al., 2023). In other countries, such as Singapore, Siew and Koh (2023) point out that experiential learning and practical application are fundamental to leadership development, a central principle in dual education. Although dual training is not an innovation in itself, its application in the military context of the ESPE Armed Forces University is novel, as it combines

solid theoretical training with intensive practical training in collaboration with the Ministry of Defense. This approach responds to the growing demand for professionals who can operate in military and civilian contexts with solid ethical and practical training.

Furthermore, this comparative analysis between focused and non-focused careers was crucial in determining whether differentiated management is a determining factor in the preparation of more skilled and ethically responsible officers. This approach also made it possible to generate recommendations that could be applied in other academic programs, both in Ecuador and internationally. In this way, the present study contributed not only to the field of military education but also to the development of pedagogical strategies that promote comprehensive training adapted to the demands of the contemporary world.

The above reflects a global trend in military higher education, where training is increasingly seen as an integral component of national and international development. By expanding the educational horizons of cadets, institutions such as ESPE ensure that future military leaders can operate effectively in a world that requires both military competence and leadership skills, as well as ethical and strategic decision-making.

1.1 Conceptual Framework

Prior to the conceptual treatment of academic management of degree programs, it is first necessary to review the theory of what is meant by "public policy," which De la Parte et al. (2016) conceive as a set of actions that a state designs and manages through the government and its public administration with the purpose of satisfying the needs of society. In this regard, the following regulatory framework was created for the management of higher education in Ecuador: The Organic Law on Higher Education (LOES), the General Regulations to the Organic Law on Higher Education (REGLOES), the Academic Regulations (RRA), the Regulations for the Harmonization of the Nomenclature of Professional Titles and Academic Degrees conferred by Higher Education Institutions in Ecuador (RANT), the Regulations of the National Leveling and Admission System (REGSNNA), the Regulations on the Career and Rank of Academic Staff in the Higher Education System (RECEPA), and the Regulations for Dual Training Careers and Programs (RECADUAL).

For the purposes of the research, focused and non-focused face-to-face degree programs were considered as units of study. In this regard, the Secretariat of Higher Education, through the REGSNNA (2021), defined focused degree programs as those that aim to "...professionalize workers and public servants...". It also mentions that dual training degree programs may be offered under the focused degree program modality. In the present case, the University of the Armed Forces ESPE offers this type of degree program exclusively for the training of military personnel of the Armed Forces.

From a regulatory standpoint, the General Regulations of the Organic Law on Higher Education (Presidency of the Republic of Ecuador, 2019) conceives of university educational management as the exercise of the functions performed by the dean and/or vice dean of a degree program. For the purposes of this study, Casassus (2000), in the context of the theory of educational management of a degree program, states that the processes involved are the functions of planning, financial

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management, human resources management, and user relations. As for the analysis of the factor of academic management classified as differentiated, it is first necessary to resort to the theoretical approach of its opposite: the paradigm of convergence; which, according to Dettmer (2004), is the characteristic or action of regulations that tend to converge at the same point and that these are manifested in the context of globalization and social processes, specifically in higher education, enhanced by the influence of new information technologies and various forms of production.

With this premise, following Dettmer (2004), it can be corroborated that the phenomenon of divergence appears as a trend opposite to convergence and manifests itself as a feature antagonistic to homogenization and standardization; which is why initiatives have been designed to differentiate higher education systems and processes in response to structural and organizational changes or market demands. He also asserts that there are valid arguments that contravene convergence, such as the reduction of the autonomy of educational systems or the promotion of disparity in social or labor structures, which positively encourages a thorough examination of the diversity and differentiation of higher education policies.

For the present research, it is necessary to consider and refer to the distinction made by Huisman (1996) between "differentiation and diversity" in the field of higher education, attributing the former to "something new" within an educational system, while relating the concept of diversity to the variety of entities within the system or different forms of it. Brunner (2006) states that two dimensions are considered in the study of institutional differentiation in higher education systems: level and sector. Based on this first classification, the author identifies university and non-university levels, while at the level of sectors, he mentions the public and private sectors. In addition, the author describes other variables that are international benchmarks for comparative studies, namely: size, admission, program duration, certificates, academic versus vocational content, cooperation, financing, expenditure per student, legislation, academic staff, quality assurance and the labor market, transfer, and tensions in systems with more than one educational level.

In the comparative exercise of the degree programs offered by the university, we will consider what Birnbaum (1983) distinguishes as institutional diversity and its six variables: control, size, enrollment, student ratio, and program types. This concept is complemented by Meek's (2000) contributions with the following approaches that form part of diversity in higher education: systemic, structural, programmatic, procedural, reputational, clientele composition, and values and cultural climate.

Another important factor to consider is what Clark maintains as a component of diversity in "academic discipline," since this manifests itself as the driving force behind research and development processes. He asserts that higher education is based on the division of labor and the differentiation of professional knowledge, which leads to increasing diversification and structural disintegration of disciplines in institutions.

The study considers the systemic perspective proposed by Guy (2000), who argues that this fact stems from the different visions that arise in the relationships between government, higher education, and society. He also asserts that diversity is a product of the masses' demand for higher

education, the segmentation of the system, and the diversity of programs, which is why it must be analyzed from a systemic approach.

Finally, the environmental perspective provided by Van Vught (1996) was addressed, as it includes aspects that are very necessary for the study, such as the ecology of the population as a source of variability and homogeneity of institutional forms, the dependence on resources as a means of interaction between organizations and their environments, and finally, isoformism as a mechanism of survival through adaptation to the environment in which they operate.

1.2. Trends in military education and academic management.

Military education has undergone a significant transformation in recent decades, driven both by technological changes and new global security demands. Academic management in these institutions has had to adapt, not only to incorporate technological advances but also to prepare officers for roles that require interdisciplinary skills and leadership abilities in complex scenarios. According to studies by Keegan (2020), the introduction of information technologies and advanced simulations in military training programs reflects this trend toward more interactive and technologically enriched teaching.

In terms of academic management, military institutions have adopted more collaborative and student-centered approaches, inspired by contemporary pedagogical practices in higher education, including problem-based learning methods, which Johnson and Meyer (2019) identify as crucial for developing critical thinking and decision-making skills in high-pressure contexts. These methods not only improve students' ability to apply theoretical knowledge in practical situations, but also foster a culture of continuous learning essential to a military career. In addition, academic management in military academies has begun to focus more on ethics and social responsibility, preparing officers to lead with integrity and social awareness. According to Thompson (2021), this change responds to a global demand for armed forces that act under strict ethical standards and are capable of integrating effectively into multinational operations and peacekeeping missions.

The ESPE Armed Forces University, for example, has been a leader in implementing programs that integrate these new pedagogical and management paradigms. The inclusion of courses on human rights and international humanitarian law, as highlighted by Silva and Castillo (2018), demonstrates a commitment to training officers who understand and respect international law and ethical principles. Although the importance of military education and its adaptation to contemporary changes is widely recognized, there remains a notable lack of detailed empirical research on the effectiveness of new pedagogical methodologies in the academic management of military institutions.

Previous studies have addressed various aspects of military education, but few have investigated specific academic management practices that influence the preparation and performance of future officers in a real-world context. Furthermore, despite the incorporation of advanced technologies and interactive pedagogical approaches in military training, there is a significant gap in the study of their effective integration into the traditionally rigid curricula of military academies. As Baxter (2022) points out, while technology has revolutionized tactical training, its impact on general

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academic training is still not well documented or understood. Another under-explored area is the impact of human rights and ethics training on the effectiveness of officers in international operations. Although Silva and Castillo (2018) highlight the growing inclusion of these topics in military curricula, there is a shortage of studies evaluating the results of these programs in terms of ethical behavior and decision-making in real conflict situations.

This study aimed to contribute to these areas by examining how the ESPE Armed Forces University has implemented and managed changes in its curriculum and teaching methods to address contemporary challenges in military training. It will also contribute to the understanding of the pedagogical approaches and management strategies adopted at the ESPE Armed Forces University, providing empirical evidence on their impact on the training of competent and ethically prepared officers.

Methodology

This study adopted a comparative approach, which, according to Latorre (2005), cited in Caballero (2016), aims to describe, understand, and explain reality. In addition, it adhered to the structure corresponding to the methodological design by defining the problem, the working hypothesis, and the units of analysis. After that, the research was developed by applying the descriptive, interpretive, juxtaposition, comparative, or explanatory phase and the prospective phase.

The sources of information used include primary data obtained from the BANNER institutional database, a system that centralizes official academic records and allows for the structured collection of data for educational management studies. According to González (2023), these types of databases constitute a primary source when they provide information directly from administrative records without prior analytical intermediation. The study adopted a mixed approach (Creswell, 2014), combining quantitative analysis to examine data extracted from the BANNER institutional database and qualitative analysis through document analysis and the construction of a conceptual map. The methodology followed the analytical-synthetic method, in which the key elements of academic management are broken down for subsequent synthesis and overall understanding (Sampieri et al., 2006). In addition, the comparative method was applied, which allows for the comparison of different academic management practices within the 25 degree programs at the ESPE Armed Forces University, since, according to Sartori (1994), comparison is essential for identifying patterns, establishing causal relationships, and understanding the evolution of educational models in military institutions.

Table 1

Areas of Knowledge and On-Campus Degree Programs at the ESPE Armed Forces University.

Área de Conocimiento (Departamento)	Carrera
Energía y Mecánica	Petroquímica
	Mecatrónica
	Ingeniería Automotriz
	Mecánica
Ciencias de la Computación	Ingeniería en Software
	Tecnologías de la Información
Eléctrica, Electrónica y Telecomunicaciones	Telecomunicaciones
	Electrónica y Automatización
	Electromecánica
Ciencias de la Vida y de la Agricultura	Agropecuaria
	Biotecnología
Ciencias Administrativas, Económicas y del Comercio	Administración de Empresas
	Comercio Exterior
	Contabilidad y Auditoría
	Mercadotecnia
	Turismo
Ciencias de la Tierra y la Construcción	Ingeniería Civil
	Ingeniería en Tecnología Geoespaciales
Área de Conocimiento (Departamento)	Carrera
Ciencias Médicas	Medicina
Ciencias Humanas y Sociales	Pedagogía de la Actividad Física y Deporte
	Educación Inicial
Seguridad y Defensa	Ciencias Militares
	Ciencias Navales
	Ciencias Militares Aeronáuticas
	Ciencias Náuticas

The sampling method used was non-probabilistic, as it was based on the criteria of seniority and tradition of the degree program by area of knowledge. Therefore, only one degree program per area of knowledge was considered, as follows:

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Table 2

Sample of face-to-face courses at the ESPE Armed Forces University, subject of study.

Área de Conocimiento (Departamento)	Carrera
Energía y Mecánica	Mecánica
Ciencias de la Computación Eléctrica, Electrónica y Telecomunicaciones	Ingeniería en Software
Ciencias de la Vida y de la Agricultura	Telecomunicaciones
	Agropecuaria
Ciencias Administrativas, Económicas y del Comercio	Administración de Empresas
Ciencias de la Tierra y la Construcción	Ingeniería Civil
Ciencias Humanas y Sociales Seguridad y Defensa	Pedagogía de la Actividad Física y Deporte

Regarding the operationalization of variables, for the analysis of the independent variable, University Educational Management of the degree program, we used what Brunner (2006) describes as levels and sectors. In terms of data organization, in the comparative exercise of the degree programs offered by the university, we considered Birnbaum's (1983) seven forms of diversity in higher education, according to the following differentiation variables and their corresponding indicators, which are displayed in the following table:

Table 3

Variables and Indicators.

VARIABLE DIFERENCIACIÓN	INDICADOR
Tamaño	Tamaño de la matrícula
Admisión	Condiciones y requisitos
Duración de los programas	Duración en horas
Certificados	Grados y títulos
Contenidos académicos vs. Vocacionales	Contenidos tipo 5ª (teóricos) y 5B (prácticos profesionalizantes)
Cooperación	Cooperación con otros organismos
Financiamiento	Tipo de financiamiento
Gastos por alumno	Relación teórico-práctico
Legislación	Normativa aplicable a las carreras
Personal académico	Tipo de docente
Aseguramiento de la calidad	Modelo de acreditación
Mercado laboral	Remuneraciones previstas
Transferencia	Movilidad estudiantil

Nota: Brunner, 2006.

Results

After applying the data collection instruments, the results were presented, classified by indicators with the respective characteristics and supporting information. The data presented is derived from the process of comparing the on-campus degree programs offered by the University of the Armed Forces ESPE to society.

3.1 Type, location, and control of the program

Because they belong to a public institution, all the programs under study are characterized as university-level programs under the control of the public sector with a single system of governance. However, it should be noted that the Military Sciences program has a dual system of governance and control due to its dual nature. In other words, the program is administered by a coordinator from the university and by the director of the military training school, who is part of the dual modality as a training body. This is one of the characteristics that makes it a specialized program due to its mission as an entity that professionalizes the military sector as part of the civil service.

In terms of geographical location, degree programs that are not part of the military are located on the grounds of the ESPE Armed Forces University in Sangolquí, while the Military Sciences degree program is located on the grounds of the Eloy Alfaro Military Academy in Parcayacu, Quito.

Table 4

Description of Variable Type-Location-Control.

Carreras	Tipo-localización-control
Sist. Inform.	Tipo- nivel: universitario – no focalizadas control: público/ Localización: matríz en Sangolquí
Mecánica	
Telecomunicaciones	
Administración de empresas	
Civil	
Pedagogía de la actividad	
Física	
Agropecuaria	
Ciencias militares	Tipo- nivel: universitario- focalizada control: público Localización: matríz en Sangolquí

3.2 Size (enrollment)

During 2021, the programs had an enrollment ranging between 557 and 639 registered students. On average, there were 597 students enrolled, with a narrow dispersion of students with respect to the average of 31 people. In terms of student enrollment, the Military Sciences program has the lowest number of female students (7%) and the highest number of male students (93%), while the Administrative Sciences program has a balanced proportion of female and male students (55.6%

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female and 44.4% male). In this regard, the Agricultural program stands out because it has more female students than male students (60.2% and 39.8%), which is unusual.

Table 5

Distribution of Student Enrollment by Gender and Program.

Carreras	Total	Femenino	Porcentaje	Masculino	Porcentaje
Sist. Inform.	557	140	25,1	417	74,9
Mecanica	561	43	7,7	518	92,3
Telecomunicaciones	568	136	23,9	432	76,1
Adm. Empresas	601	334	55,6	267	44,4
Ciencias militares	613	43	7,0	570	93,0
Ped. Act. Fisica	617	165	26,7	452	73,3
Agropecuaria	623	375	60,2	248	39,8
Civil	639	208	32,6	431	67,4
Promedio	597				
Desviación est.	31,3				

3.3 Admission

In the case of “non-targeted” degree programs, applicants must follow the guidelines required by the LOES (National Assembly, 2010), i.e., submit: identity card and voting certificate; high school diploma or degree certificate duly endorsed by the Ministry of Education (District Directorate); personal data sheet with a color passport-size photograph; proof of the score obtained in the admission exam; medical certification; if applicable, CONADIS disability card. It was determined that residents abroad and persons deprived of liberty (PPL) do not require an admission exam score. However, for dual-mode degree programs, in addition to complying with the guidelines established in the LOES (National Assembly, 2010), the following additional requirements determined by the Armed Forces Personnel Law are requested for dual-mode programs: no criminal record, medical, dental, and mental health evaluation, academic tests, physical tests, and personal interviews.

Table 6

Admission Conditions and Requirements.

Carreras	Condiciones y requisitos de admisión
Sist. Inform.	Se ciñen a los lineamientos exigidos por la loes
Mecanica	
Telecomunicaciones	
Administración de	
Empresas	
Civil	
Pedagogía de la	
Actividad fisica	
_Agropecuaria	
CIENCIAS MILITARES	Se ciñen a los lineamientos exigidos por la LOES y a las directrices emitidas por la Ley de Personal de las Fuerzas Armadas. Estas emiten criterios adicionales relacionados con los aspectos físicos, Médicos, psicológicos y académicos.

3.4. Program duration

The duration of the programs was evident in the degree programs submitted to the Higher Education Council platform for approval. This element is measured based on the total number of hours planned for the student's professional training. The information shows that, on average, degree programs involve 6,086 hours of training, with a standard deviation of 470 hours from the mean, which is not significant considering the technical and humanistic nature of the degree programs.

The Military Sciences program has a higher curriculum workload than all other programs. It should also be noted that the program includes full-time extracurricular activities under a system known as "internal," which applies to students, with outings only on weekends. However, the total training workload presented in the creation project only quantifies academic hours and not extracurricular activities. Degrees that are not considered non-focused, according to academic regulations, have working hours of six hours per day and up to 35 hours per week.

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Table 7

Total Workload per Degree.

Carreras	Total horas
Sist. Inform.	5.760
Mecánica	6.480
Telecomunicaciones	6.480
Adm. Empresas	5.760
Ciencias militares	6.928
Ped. Act. Física	5.760
Agropecuaria	5.760
Civil	5.760
Promedio	6.086
Desviación est.	470,3

Nota: Resolución del CES de aprobación de las carreras.

3.5 Certificates

According to the information gathered in the respective creation projects, it can be seen that 100% of the degree programs award third-level university degrees and academic qualifications, in accordance with the provisions of the Regulation on the Harmonization of the Nomenclature of Professional Qualifications and Academic Degrees (2021). In the case of military science programs, the state, through the Ministry of Defense, also awards students the military rank of second lieutenant in the army, in accordance with the Armed Forces Personnel Act (2007).

Table 8

Degrees and Academic Titles by Program.

Carreras	Titulos y grados académicos
Sist. Inform.	Título de ingeniero: ingeniero de software
Mecánica	Título de ingeniero: ingeniero mecánico
Telecomunicaciones	Título de ingeniero: ingeniero en telecomunicaciones
Administración de empresas	Título de licenciado: licenciado en administración de empresas
Ciencias militares	Título de licenciado: licenciado en ciencias militares. Además, se le otorga el grado o jerarquía militar de “subteniente”
Pedagogía de la actividad fisica	Título de licenciado: licenciado en pedagogía de la actividad física y deporte
Agropecuaria	Título de ingeniero: ingeniero agropecuario
Civil	Título de ingeniero: ingeniero civil

Notas: Resolución del CES de aprobación de las carreras.

3.6 Academic vs. Vocational Content (number of hours)

According to the analysis of the planned workloads in the creation projects approved by the CES, the document shows that three training units are considered: basic, professional, and curricular integration and certification. In this context, for analysis purposes, a comparison was made between the workload of the basic unit and the professional unit. It can be seen that the ratio between academic and professional content is 1.8, which means that for every hour of academic content, there is an additional 0.8 hours of professional content. This can be seen by degree program, and it can be seen that the Military Sciences degree program has the lowest ratio, which is a negative aspect for the purposes of professional training.

In contrast, the Administrative Sciences and Mechanics programs showed a higher ratio between academic and professional content, as in the former case, for every academic hour, there is an additional 1.8 hours of professional content, as in Mechanics.

Table 9

Ratio of Academic to Vocational Content.

Carreras	Relación contenidos académicos vs vocacionales		
	Horas	Porcentaje	Relación
	2160	0,38	
Sist. Inform.	3360	0,58	R= 1,6
	1776	0,27	
Mecánica	4128	0,64	R= 2,3
	2160	0,33	
Telecomunicaciones	4080	0,63	R= 1,9
Administración de empresas	1440	0,25	
	4080	0,71	R= 2,8
	2696	0,39	
Ciencias militares	3280	0,47	R= 1,2
Pedagogía de la actividad fisica	2160	0,38	
	3360	0,58	R= 1,6
	2160	0,38	
Agropecuaria	3360	0,58	R= 1,6
	2160	0,38	
Civil	3360	0,58	R= 1,6

Notas: Resolución del CES de aprobación de las carreras.

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3.7 Cooperation (institutions that support professional training).

With regard to cooperation strategies for supporting professional training, it can be seen that all of them presented in their creation projects agreements that served as support for students' pre-professional internships, which average 240 hours of professional practice. In the case of the Military Sciences degree program, due to the fact that it opts for a dual training modality, there is a specific agreement with the Army for the purpose of sharing responsibilities with the University of the Armed Forces ESPE in the process of military professional training.

Table 10

Forms of Cooperation.

Carreras	Formas de cooperación
Sist. Inform.	
Mecanica	La cooperación se materializa en base a convenios específicos para la ejecución de pasantías y prácticas pre-
Telecomunicaciones	
Administración de empresas	Profesionales en empresas públicas y privadas.
Civil	
Pedagogía de la actividad física	
Agropecuaria	
Ciencias militares	Se rige exclusivamente al convenio de cooperación entre el ministerio de defensa del Ecuador y la Universidad de las Fuerzas Armadas para la ejecución de las carreras militares bajo la modalidad dual

Notas: Resolución del CES de aprobación de las carreras.

3.8 Funding (public or private)

Funding for the entire degree program comes from public resources. However, in the case of the Military Sciences degree program, funding comes from public resources, both from the higher education system and the Ministry of National Defense.

Table 11

Type of funding for on-campus degree programs.

Carreras	Tipo financiamiento
Sist. Inform.	Público
Mecánica	
Telecomunicaciones	
Administración de empresas	
Civil	
Pedagogía de la actividad fisica	
Agropecuaria	
Ciencias militares	Público/compartido entre dos instituciones públicas

Notas: Resolución del CES de aprobación de las carreras.

3.9 Expenses per student

In terms of expenses per student, it was found that, on average, vocational training generates an expense (investment) of $1.77 per hour of student training, with a variation of $0.66.

It can be seen that the Military Sciences degree program has the lowest expenditure in the training process, while degree programs focused on technological aspects are the most expensive. It should be noted that the information on the Military Sciences degree program only corresponds to academic training expenses related to curricular activities and does not include the expenses involved in extracurricular activities due to the training regime.

Table 12

Expense per Student and Relationship between Hours and Training.

Carreras	Dólares	Horas/carrera	Relación hora/ formación
Sist. Inform.	7.332	5.760	1,27
Mecánica	15.102	6.480	2,33
Telecomunicaciones	15.102	6.480	2,33
Administración de empresas	6.804	5.760	1,18
Ciencias militares	7.460	6.928	1,08
Pedagogía de la actividad fisica	7.440	5.760	1,29
Agropecuaria	13.424	5.760	2,33
Civil	13.424	5.760	2,33
Promedio			1.77

Notas: Resolución ESPE-HCU-RES-2021-005 Cálculo de arancel y matrícula por carrera.

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3.10 Legislation

With regard to the legislation applied to the management of the on-campus degree programs offered by the University of the Armed Forces ESPE, it is noted that, in terms of academic training, all degree programs apply the legislation related to the Ecuadorian higher education system. In the case of military degree programs, this includes the legislation corresponding to dual training and the regulations related to military training.

Table 13

Legislation Applicable to Training Programs.

Carreras	Tipo
Sist. Inform.	LOES-REGLOES-REGSNNA-RRA-RANT-RECEPA
Mecánica	
Telecomunicaciones	
Administración de empresas	
Civil	
Pedagogía de la actividad física	
Agropecuaria	
Ciencias militares	Además de los mencionados, se incluye el reglamento de la modalidad dual y la legislación relacionada con la formación militar.

Notas: Base de datos de la Secretaría General de la Institución

3.11 Academic staff

It has been demonstrated that the academic staff involved in professional training in non-focused degree programs are teachers who are part of the university's teaching hierarchy, whose regulations are outlined in the Regulations on the Career and Hierarchy of Academic Staff in the Higher Education System, issued by the CES (Higher Education Council, 2021). In the Military Sciences degree program, based on the legislation issued by the CES corresponding to the dual modality (2021), it is verified that military personnel are included as specific tutors in the military field.

Table 14

Legislation Applicable to Training Degree Programs.

Carreras	Tipo
Sist. Inform.	Titulares y no titulares de acuerdo a RECEPA
Mecánica	
Telecomunicaciones	
Administración de empresas	
Civil	
Pedagogía de la actividad física	
Agropecuaria	
Ciencias militares	Ademas de los mencionados, el REDUAL

Notas: Elaboración propia con base en los datos de la Universidad de las Fuerzas Armadas ESPE.

3.11.Quality assurance, labor market, and transfer

In this area, it has been verified that all degree programs are undergoing self-evaluation. Thus, after studying their relevance, non-focused face-to-face degree programs have determined that the labor market is identified in the productive and service sectors of Ecuadorian society. The occupational field is defined based on the labor market situation and the political, social, and economic conditions at the time of graduation.

On the contrary, graduates of the Military Sciences degree program, based on the corresponding relevance study, are trained to fill an organic vacancy in the Army. The organic positions to be filled have their own configuration in terms of specific functions and responsibilities. Finally, none of the degree programs show mechanisms or channels for the transfer of credits with other institutions of the same level.

3.12. Discussion

In this research, when describing the variables mentioned in Table 3 that intervene in the academic management of the processes carried out in the professional training programs in face-to-face mode offered by the University of the Armed Forces ESPE, the following results were obtained in the research process: one hundred percent of the programs are university-type, public in nature; the Military Sciences program is subject to double control due to the application of the dual modality and because it is classified as a focused program; in addition, the entire training process is carried out on the premises of the training institution and not on university premises.

The average enrollment size for the programs is 597 students with a standard deviation of 31 students; in the case of the Military Sciences program, this is within the normal range. The programs adhere to the guidelines of the LOES for admission purposes; in the case of the Military Sciences program, the requirements specified in the Armed Forces Personnel Act are included.

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The average total course load for degree programs is 6,086 hours with a standard deviation of 470 hours. The Military Sciences degree program has the highest total course load, at 6,928 hours. The degree programs award third-level degrees. In the case of Military Science students, they also obtain the military rank of second lieutenant. The relationship between academic and vocational content in the degree programs shows an average of 1.8 with a standard deviation of 0.5, with the Military Science degree program showing the lowest relationship between these contents (1.2).

In terms of cooperation with organizations that support training, all programs have agreements for pre-professional internships, and the Military Sciences program has an agreement for dual training. All programs are publicly funded, and in the case of military programs, funding is public but shared by two institutions: the Ministry of Defense and the university. In terms of average student expenses, the cost is $1.77 per hour of training, with Military Sciences students having the lowest cost ($1.08).

All degree programs comply with national legislation, and in the case of Military Sciences, this includes the regulations governing dual training. The academic staff involved in the training process are part of the university's teaching hierarchy, including specific tutors in the Military Sciences program. In terms of the labor market, the only program that guarantees a job for all students who meet the requirements is Military Sciences. Therefore, the results show that the Military Sciences degree program, in addition to complying with the regulatory guidelines for higher education, is characterized by its difference from the academic management of face-to-face degree programs. This is in line with what Brunner (2006) states when he mentions that, for the purposes of institutional differentiation of higher education systems, analyzed dimensions are considered.

Conclusions

The results obtained in the Military Sciences program are characterized by differentiated academic management compared to face-to-face programs, for the following reasons. In addition to complying with the regulatory guidelines for higher education, the Military Sciences program is regulated by legislation corresponding to the dual modality; for this reason, it requires that professional training processes be consolidated and strengthened through cooperation with the Ministry of National Defense via specific agreements for the application of the dual modality. Additionally, the program was classified as focused in accordance with the regulations governing admission. The training process for students in the Military Sciences degree program is not carried out on university premises, but is centralized on the premises of the training institution.

The program is publicly funded and, in this specific case, shared by two institutions (the Ministry of Defense and the University); for which it is confirmed that the expenses generated by students of $1.08 per hour are lower than the average for other programs. In terms of academic processes, the Military Sciences program has a total workload of 6,928 hours, which is higher than the overall average for programs (6,086 hours).

In addition, in terms of the relationship between academic and vocational content, it was confirmed that the value of 1.2 is the lowest ratio in relation to the average of 1.8. The academic staff is part

of the university's teaching hierarchy, with the participation of specific tutors from the training institution.

Upon completion of the Military Sciences degree program, students are awarded a double degree: a third-level academic degree and the military rank of second lieutenant. Finally, the job market for Military Sciences graduates is the only degree program that guarantees a job for all students who meet the requirements.

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Reflective practice through peer coaching among English as foreign language preservice teachers' practicum

La práctica reflexiva a través de coaching entre pares del prácticum de los docentes en pre-servicio del inglés como lengua extranjera

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Miriam Eucevia Troya-Sánchez[1]
Universidad Nacional de Loja, Ecuador
miriam.troya@unl.edu.ec
https://orcid.org/0000-0001-7798-8684

Karina Alexandra Celi-Jaramillo[2]
Universidad Nacional de Loja, Ecuador
karina.celi@unl.edu.ec
https://orcid.org/0000-0002-8613-2893

María Patricia Rodríguez-Ludeña[3]
Universidad Nacional de Loja, Ecuador
maria.p.rodriguez@unl.edu.ec
https://orcid.org/0009-0000-7141-1753

Abstract

The aim of this study was to inquire how peer coaching promoted preservice teachers' reflective practice during their practicum. From a qualitative approach through a case study and interpretative approach, six voluntary preservice teachers in the seventh semester of the Teaching English as a Foreign Language Undergraduate Program from Universidad Nacional de Loja (UNL) were selected. A content analysis method assisted the researchers in organizing the transcriptions from pre-observation and post-observation meetings and records from classroom observation guides. Findings revealed that peer coaching promoted EFL preservice teachers' reflective practice, especially during peer classroom observations when preservice teachers assumed the role of observers, allowing them to have more time to reflect and identify the negative and positive teaching events performed by their peers.

Keywords: constructive feedback, peer-class observation, peer coaching, reflective practice

Resumen

El objetivo de este estudio fue investigar cómo las fases de coaching entre pares promovieron la práctica reflexiva entre los docentes en formación del séptimo semestre durante su práctica pedagógica. Desde un enfoque cualitativo, mediante un estudio de caso de tipo interpretativo se seleccionaron 6 estudiantes voluntarios del séptimo ciclo de la Carrera de Pedagogía del Idioma Inglés como Lengua Extranjera de la Universidad Nacional de Loja. El método de análisis de contenido ayudó a las investigadoras a organizar las transcripciones de las conversaciones previas y posteriores a las observaciones de clases, así como también las guías de observación. Los hallazgos revelaron que el coaching entre pares promovió la práctica reflexiva de los futuros docentes de ILE, especialmente durante las observaciones de clase, cuando asumieron el papel de observadores, lo que les permitió tener más tiempo para reflexionar y darse cuenta de los eventos de enseñanza negativos y positivos realizados por sus colegas.

Palabras clave: retroalimentación constructiva, observación de clase, coaching entre pares, práctica reflexiva

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Introduction

The practicum provides opportunities to get involved in professional learning in the classroom where preservice teachers (PSTs) can improve their teaching skills by creating supportive learning environments (Heikonen et al., 2020) Therefore, the practicum is a crucial component for the initial formation of English as a foreign language (EFL) preservice teacher who need to apply their knowledge base to real teaching experiences (Razeq, 2022). In this regard, Philip et al. (2019) claim that EFL preservice teachers' knowledge base consists of such key elements as knowledge of the students, pedagogical content knowledge (PCK), and general pedagogical knowledge. Although knowledge and experience have traditionally been the main pillars of EFL teacher education, they should be mediated by reflection to grow professionally (Castro, 2022).

Overall, teacher education provides PSTs opportunities to experiment with their theoretical knowledge in authentic classroom contexts. Each program's use to immerse their PSTs into these settings varies depending on its affordances and constraints. Similarly, the undergraduate program for EFL teacher education in Ecuador, specifically at Universidad Nacional de Loja comprises 360 hours divided into 4 semesters: the third, the sixth, and the seventh semester with 80 hours each, and the final semester with 120 hours. During the third and sixth semesters, PSTs are limited to observing and assisting the cooperating teachers. It is not until the seventh and final semesters that PSTs start to impart their lessons. It is worth mentioning that half of the total hours are devoted to planning and systematizing the experiences during the practicum, and the other half is the actual practicum in which PSTs observe, assist, or impart their lessons in primary and secondary schools.

From the experience of the researchers as teacher educators, PSTs receive guidance to conduct their practicum. They design chronograms with some activities that include elaborating and implementing lesson plans, instructional materials, and legal documentation to access the educational institution. As previously mentioned, the research participants of this study were the seventh-semester students who had to carry out their practicum during 80 hours from which they had to impart their lessons for 40 hours, and to plan and report their teaching experiences in the other 40 hours. Thus, the time PSTs must achieve or refine their teaching skills is too short. Teaching is a complex process, especially for prospective teachers who are supposed or expected to gain teaching competencies by putting theory into practical experiences in authentic classrooms (Flores, 2019). Moreover, PSTs usually get confused and disengaged when they find disagreement between theoretical knowledge and real practice, and in-service teachers' reluctance to change (Abou, 2022; Çapan and Bedir, 2019; Sulistiyo et al., 2021).

Concerning assistance and observation to cooperating teachers, empirical studies have revealed that preservice teachers claimed that it was useless because they (cooperating teachers) demanded PSTs to use their teaching strategies, such as repetition drills and translations from English to students' mother tongue (Çapan and Bedir, 2019). Likewise, the researchers of this study have observed Çapan and Bedir's issue in the Ecuadorian context, where some cooperating teachers, especially the ones with too many years of experience, refused to change their teaching performance and felt threatened by young PSTs who usually make an effort to manage the class by implementing innovative teaching techniques. What is more, they force PSTs to apply their

techniques because they do not want to change the pace of their teaching style. Nevertheless, it is worth mentioning that some other cooperating teachers, even the most experienced ones, have opened their classroom doors to let PSTs implement new teaching practices and have enhanced collaboration through peer coaching without being judgmental, but proactive.

Furthermore, Loman et al. (2020) reported that large classes of prospective teachers are an issue for teacher educators whose supervision time is too limited to observe every PSTs' practicum. In this respect, Çapan and Bedir (2019) claimed that traditional supervision hinders PSTs' collaboration among them to reflect on their teaching performance.

These constraints have also been found in the teacher program of English as a foreign language at Universidad Nacional de Loja in which the researchers as teacher educators attempted to solve these issues by implementing peer coaching among the seventh-semester PSTs with the aim to foster collaboration and reflection during their 80-hour practicum.

Previous studies confirm that peer coaching improves not only PSTs teaching skills but also enables them to reflect on their teaching experiences to overcome their weaknesses mediated by their dialogic interaction before and after their lessons (Abou, 2022; Çapan and Bedir, 2019; Sulistiyo et al., 2021). Since most of these past empirical studies have been done in Asian countries such as Turkey, Japan and Indonesia, this research fills a critical gap by addressing this topic in the Ecuadorian context whose standards demand EFL teachers reflect on their practices and work collaboratively to improve the educational system in teaching and learning English as a foreign language (Ministerio de Educación, 2012).

Therefore, this research aimed to inquire how the stages of peer coaching promote seventh-semester preservice teachers' reflective practice during their practicum. This objective generates the following research questions:

- What aspects of teaching are reflected during the peer coaching stages?
- Which peer coaching stage is the most and least powerful to involve preservice teachers in reflective practice?

1.1. Literature review

1.1.1. Peer coaching

Peer coaching has been widely applied as a model for professional development not only in the field of education but also in the fields of sports, business, arts and health (Colorado and Corcino, 2014). Undeniably, peer coaching has gained a lot of ground in the field of education, specifically in teachers' pedagogical skills. Some authors define peer coaching as an approach to teachers' professional development in which educators work collaboratively to improve their teaching competencies (Ben et al., 2018; Gottesman, 2000; Joyce and Showers, 2002). For Arslan and Sahin (2022), peer coaching enhances reflective practices through pair or group work whose members share similar job positions and make cooperative efforts to improve their performance through

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proactive interactions and constructive feedback. Loman et al. (2020) and Carlson et al., (2020) claimed that teacher programs should include peer coaching to enhance preservice teachers' teaching skills as well as their reflective practice.

Showers and Joyce (1996) are well known for their vast experience in addressing peer coaching to help in-service and prospective teachers acquire teaching skills. They confirmed that collaboration with peers encourages teachers to share planning decisions, develop or collect instructional materials, develop the curriculum, and reflect on their teaching performance. After 15 years of experience, these authors updated their theoretical foundations for peer coaching related to some aspects. One of the most outstanding and surprising features was the omission of the pre and post-meetings between peers aimed to give and receive feedback since they realized that peers assumed the role of supervisors and eliminated the nature of the non-evaluative process of peer coaching.

Even though a large body of literature displays the stages of peer coaching in different fields, this paper attempts to show the stages found in the EFL teacher programs with preservice teachers. From the perspectives of several authors, the stages of peer coaching differ somewhat from each other. For instance, Çapan and Bedir (2019) implemented peer coaching among EFL PSTs by using three phases: 1) initial phase which included peer coaching training, classroom observation to in-service teachers, and dialogues between peers; 2) peer classroom observation in which peers observed and compared their teaching practice to identify weaknesses and strengths; and 3) post-observation meetings to receive psychological support and feedback from experienced teachers and peers, and to write reflective journals. Like Çapan and Bedir (2019), Goker, (2021) and Okumura (2020) followed the same stages with some extra steps. For instance, in the initial phase, PSTs had to choose their peers by affinity, and classroom observations were made through video recordings to be discussed in the post-meeting sessions (Çapan and Bedir, 2019; Okumura, 2020).

1.1.2. Preservice teachers' challenges during peer coaching

Even though a wide range of benefits of peer coaching to PSTs, there are some challenges that they face during peer coaching in their practicum. For instance, Capan and Bedir (2019) reported that despite the fact that PSTs could increase their sense of collaboration before, during, and after the lessons, they were not able to manage the classroom properly, and classroom disruptive behaviour emerged too many times during their practicum. Similarly, Loman et al., (2020) argued that PSTs' disposition to collaborate was highly related to identifying their strengths and weaknesses during their teaching performance; however, they did not plan to improve the negative items for their future lessons. This implies that post-observation meetings did not work well or did not exist since PSTs did not make any plan to resolve the observed problems.

Sulistiyo et al. (2021) have demonstrated that the lack of communication between the university authorities and cooperating teachers from the educational institutions, where PSTs carried out their practicum, did not allow to fully reach the great benefits of peer coaching for both preservice and in-service teachers. The same authors claimed that peer coaching offers an opportunity for permanent reflection which can lead to professional growth according to the context needs.

As observed by Evişen (2021), during the classroom observation stage of peer coaching, the observers–teachers were able to capture the positive and negative pedagogical skills of their peers while imparting their lessons; nevertheless, this effect would not have been possible if selected peers had not had a good relationship or enough confidence to observe each other which might have impeded to collaborate between each other. According to Arslan and Sahin (2022), post-observation meetings, the third stage of peer coaching, were considered worthless by preservice teachers as they mentioned they lacked the expertise to give and receive constructive feedback. The same authors demonstrated that preservice teachers' inexperience in peer coaching resulted in changing their role from observers to assisting their peers which hindered the normal development of the lesson. Even so, peer coaching helped them increase their reflection process which simultaneously allowed them to identify the limitations of peer coaching for future interventions.

1.1.3. Reflective practice

Since English instruction has worldwide gained great demand to improve human beings' competencies in several areas of their way of living, teacher education programs, stakeholders, and the educational industry attempt to enhance teaching skills to guarantee EFL learners' language acquisition successfully. While theoretical courses, workshops, seminars, and conferences are good sources to clarify EFL teachers' doubts and concerns, the reflective practice boosts their teaching performance based on their experiences in authentic classroom settings (Farrell, 2020; Richards and Lockhart, 1994).

Schön (2017) proclaims that teachers' pedagogical skills to solve problematic situations with their students are too complex cases that standardized theories or methods fail to solve. In consequence, reflective practice fills this gap. Reflective practice is a systematic inquiry about the relationship between the initial intentions of doing something, the actual things done, and their results (Korthagen, 2014). Teaching is a social practice that requires dialogical interactions among peers who can reveal hidden aspects that hinder teachers' professional development (Golombek and Johnson, 2017). Thus, reflective practice leads to collaboration among peers whose feedback aids in refining their teaching performance (Shabani, 2016).

1.1.4. Teaching performance

Regarding teaching performance, Richards and Lockhart (2009) explain that what is written in a lesson plan differs from what is actually done during its implementation due to the complexity of real-world teaching interactions. Thus, he presents four dimensions found in a lesson plan execution: openings, sequencing, pacing, and closure

1) The opening dimension entails the first 5 or 10 minutes to develop the initial steps of a lesson through warmups and/or lead-ins (Richards and Lockhart, 2009). In a recent article Siljan et al.(2024) pointed out that during the openings, teachers usually activate students' prior knowledge with the new content of the lessons through an objective discussion which attempts to capture students' attention and motivation throughout the lesson delivery. The same authors stated that the openings should comprise both the cognitive and affective dimensions to make the lesson more memorable and meaningful.

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2) The sequencing dimension encompasses the logical order for developing the lesson contents and activities which should be related to each other (Richards and Lockhart, 2009). In fact, each teacher organizes and manages the lesson events according to his/her context, and justifies every step in the process which eventually leads to reaching the lesson objectives (Lerner and McDougal, 2023).

3) The pacing dimension is related to the time allocated for each activity to progress the lesson (Richards and Lockhart, 2009). Even if the sequencing dimension seems to be properly justified, the pacing dimension makes the sequence of events more accurate. Teachers usually take into account students' learning styles and interests to manage classroom time correctly which avoids to overwhelm or bore students either with too short or too long periods of time per activity. Classroom time should always be productive for both teachers and students (Mcneill et al., 2008).

4) The closure dimension includes several ways a teacher uses to end a lesson (Richards and Lockhart, 2009). Webster (2011) highlights the relevance of this dimension since it recalls the contents of the lesson and summarizes it to make it more memorable. These dimensions were the focus of analysis of this research work as presented in the following section.

Methodology

2.1. Research approach

This investigation employed a qualitative approach since the researchers as teacher educators evaluated the effect of peer coaching on their EFL preservice teachers' reflective practice during their practicum in authentic classroom settings (Creswell, 2013). Additionally, this is a case study which, according to Tomaszewski et al. (2020), is suitable for evaluating and extending a theory. Furthermore, the same authors state that case studies examine defined systems and show participants' behaviors, perceptions, and experiences regarding a specific phenomenon. Under these characteristics, the type of this research is interpretative since its researchers tried to explain preservice teachers' experiences during their practicum embedded by a social context that framed their teaching performance.

2.2. Setting and participants

Six preservice teachers in the seventh semester of the Teaching English as a Foreign Language Undergraduate Program from Universidad Nacional de Loja (UNL) were the research participants of this study. UNL is located in Loja, Ecuador. They were selected through a purposive sampling technique because they met the criteria for the study as they had to carry out their practicum through the peer coaching model. Even though the sample size was small, they provided the required information to delve in-depth into their experiences during the peer coaching process and their practicum. Sarfo et al., 2021 explain that too many case study participants may underestimate the investigation's major focus. Moreover, the saturation effect made the researcher decide on the sample size since more informants did not provide new information, and the quality of the

information supplied by the sample was good enough to answer the research questions (Sebele, 2020).

2.3. Data sources

Transcripts from conversations between peers before and after the lessons and classroom observation guides, provided the information that EFL preservice teachers generated during their practicum through the peer coaching model.

2.4. Data analysis

A content analysis assisted the researchers in organizing the transcriptions from pre-observation and post-observation meetings and classroom observation guides. First, an initial analysis process based on patterns from the data allowed codes and categories. A subsequent analysis helped to organize data in four broad themes: openings, sequencing, pacing and closure. Each theme contained somewhat similar categories and codes depending on each peer coaching stage.

As content analysis is a systematic and objective approach employed for the examination of qualitative data as text or visual materials, this method also entailed the identification and quantification of codes and categories using frequencies and percentages of patterns, and codes per each category in order to derive meaningful insights (Kleinheksel et al., 2020).

2.5. Procedure

At the beginning of the semester, preservice teachers were trained about how to perform their practicum through the peer coaching protocol which emphasized that one peer had to observe, and the other one had to teach. Their roles had to change in each one`s classroom so that they could benefit from each other about their experiences as an observed teacher and as an observer. Additionally, preservice teachers had to follow these stages:

First stage: Peers identification by affinity

Since they were in their penultimate semester, they had already built some friendship and confidence among themselves. For this reason, we, as teacher educators, allowed them to choose their peers by affinity to guarantee confidence to be observed, and to give and receive feedback.

Second stage: Pre-observation meetings

These meetings took place before every lesson with the purpose of agreeing the items to be observed. These items were the focus of attention as they represented the issues or challenges, they believed or perceived that they had to face during the lessons.

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Third stage: Classroom observations

This stage was done during the implementation of the lessons. The observer had a classroom observation guide to register the agreed events in the previous stage. The observer had to only observe his/her peer while implementing the lesson. He/She did not have to assist neither his/her peers nor the students.

Fourth stage: Post-observation meetings

At the end of each lesson, preservice teachers had to reflect on the observed items. They were trained to give feedback without being judgmental, but being proactive by giving suggestions for future improvement. During these debriefings, the observed preservice teacher had to start the conversation by explaining his/her perceptions about his/her lessons. The observer had to take the role of a good listener and tried to make sense about what the observed preservice teacher expressed with what he/she registered in the classroom observation guides.

After a 12-hour period of training, preservice teachers started their practicum in elementary schools with children between 8 and 12 years old. The practicum lasted 12 weeks in which preservice teachers completed 40 hours of instruction.

It is evident that the peer coaching stages revolve around the implementation of the lesson. As explained by Richards and Lockhart (2009), what is written in a lesson plan differs from what is actually done during its implementation due to the complexity of real-world teaching interactions. Thus, he presents four dimensions found in a lesson plan execution: 1) The opening dimension that entails the first 5 or 10 minutes to develop the initial steps of a lesson through warmups and/or lead-ins. 2) The sequencing dimension that comprises the logical order for developing the lesson contents and activities which should be related to each other.3) The pacing dimension is related to the time allocated for each activity to progress the lesson. 4) The closure dimension that includes several ways a teacher uses to end a lesson. These dimensions were the focus of analysis of this research work as presented in the following section.

Results

3.1. Research question 1: What aspects of teaching are reflected during the peer coaching stages?

Table 1

Teaching Aspects agreed for the Observation during Pre-observation Meetings.

Themes	Categories	Codes	f	%
Openings	Warmups	Students' engagement towards the initial phase of the lesson	3	3%
		Subtotal	3	3%
Sequencing	Instruction	Proper organization and implementation of the lesson, the topic, and the objectives.	25	28%
		Eliciting students' responses	1	1%
		Observe student engagement with flashcards	2	2%
		Supporting understanding of new words	6	7%
		Content explanation	5	6%
		Grammar explanation	2	2%
		Integration of instructional materials throughout the lesson	2	2%
		Subtotal	43	48%
	Practice activities	Grouping arrangement & collaboration	9	10%
		Ensure students' active participation and interaction	12	13%
		Subtotal	21	24%
	Assessment	Observe the assessment methods	3	3%
		How mistakes are corrected	3	3%
		Subtotal	6	7%
Pacing	Instructional time	Check if the teacher implements all the stages of the lesson plan.	1	1%
		Length of the activities according to the scheduled time	9	10%
		Transitioning to new topics	6	7%
		Subtotal	16	18%
Closure		na	0	0%
		Total	89	100%

Table 1 presents the results obtained from the transcriptions of the pre-observation meetings between peers which took place just before the classroom observation. A variety of aspects were agreed to be observed from which three broad themes emerged from the analysis: openings, sequencing, and pacing. The theme of sequencing recurred throughout the data since it came up with several categories such as instruction, practice activities, and assessment. It seems that preservice teachers were more concerned with the way they presented and explained the lesson; rather than the strategies for opening or closing the lesson which were the least recurrent

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categories during the conversations in the pre-observation meetings. In fact, the closure of the lesson did not even emerge in this first stage. There must be a balance at each stage of the lesson.

When analyzing the indicators from the openings, preservice teachers appeared to underestimate the importance of this dimension since just a few times they agreed with their peers to observe how students got engaged during this phase. Probably they were not totally aware of the positive impact of starting a lesson through active warmups and clear lead-ins to inform about the lesson objectives and to motivate students' participation and motivation throughout the lesson implementation.

As previously mentioned, the results concerning to the sequencing dimension registered the majority of the categories agreed to be observed. It is notable that preservice teachers were concerned about the correct organization and implementation of the lesson paying special attention to the alignment of the topic and lesson objectives. These results might suggest that preservice teachers' transition from theory to practice is a complex process that requires self-confidence to face real-life classroom situations. As usual, the lack of expertise in any field generates several fears that practitioners may manage to overcome in a real classroom setting; however, this is a gradual process that requires practice, reflection, collaboration, and lesson rehearsals to refine their teaching skills.

Further examination of the data displayed in Table 1 demonstrated that preservice teachers' conversations before the lessons tackled the topic of classroom management related to the pacing dimension. They wanted their peers to observe if they followed the time allocated per each stage as established in their lesson plans. When it comes to the closure dimension, prospective teachers did not mention anything about ending the lesson. It seems that they underestimated the opportunity to summarize all the contents, or to verify if all students the contents under study.

3.2. Research question 2: Which peer coaching stage is the most and least powerful to involve preservice teachers in reflective practice?

Table 2

Peer Classroom Observation. Actual Events Observed during the Lesson.

Themes	Categories	Codes	f	%
Openings	Warmups	No warm ups*	10	3%
		Students' disruptive behavior during warmups*	10	3%
		Students showed interest during warmups	18	5%
	Lesson objective presentation	No presentation of lesson objectives*	20	6%
		Presentation of lesson objectives	32	9%
		Subtotal	90	26%
Sequencing	Instruction	Questioning to recall students' previous knowledge	8	2%
		Clear revision of the topic	4	1%
		Inductive approach for presenting the topic	8	2%
		Deductive approach for presenting the topic	2	1%
		Using flashcards to present vocabulary	12	3%
		Eliciting students' responses	15	4%
		Subtotal	49	14%
	Practice activities	Explanations with examples in English and Spanish	14	4%
		Solving practice activities from the textbook	28	8%
		Students write their sentences	14	4%
		Group work activities	7	2%
		Peer evaluation	8	2%
		Individual work	16	5%
		Giving feedback	9	3%
		Some activities were not clear, and teachers did not provide help*	6	2%
		Subtotal	102	30%
	Assessment	Homework in the textbook	11	3%
		Homework in the notebook	12	3%
		Monitoring students	18	5%
		Subtotal	41	12%

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Pacing	Instructional time	Good and clear transition of the topics	13	4%
		The teacher checks if everyone worked on the activities in the allocated time	25	7%
		Some students cannot finish activities in the allocated time*	5	1%
		Students were noisy and the teacher lost control of time*	6	2%
		Students interrupted the teacher's explanation*	7	2%
		Subtotal	56	16%
Closure		Ends the class with a summary of the lesson	6	2%
		Subtotal	6	2%
		Total	344	100%

Note * negative event.

Table 2 shows a variety of aspects that were captured during classroom observation. Like Table 1, the sequencing dimension got the largest number of registrations; inside it, the section for practice activities got the highest rate. According to the listings, most events performed by preservice teachers during practice activities seemed to work. For instance, solving comprehension exercises from the textbook was the most recurrent practice activity. In addition, some individual, pair, and group activities were developed to reach the lesson objectives. Even though most events during the sequencing dimension were effective for students' learning, the observer noticed that sometimes instructions were not clear enough for students to solve the exercises. This situation explains why preservice teachers' feedback was too low.

The opening dimension got the second-largest number of registrations. This suggests that preservice teachers did observe what they agreed in the pre-observation meeting. Essentially, this indicates that they were concerned about getting students' motivation and engagement at the outset of the lesson. From the findings, it is clear that most of the time, they were able to get students involved in the context of the lesson either to warm up or to communicate the lesson objectives; however, sometimes students' disruptive behavior hindered their objectives. Likewise, from time to time, preservice teachers did not present the lesson objectives in the initial part of the lesson.

In the context of instruction, whose occurrences are less than half of practice activities, preservice teachers tried to activate students' prior knowledge before presenting the lesson topic. Furthermore, it is important to note that prospective teachers sometimes attempted to elicit students' responses related to the lesson topic. This suggests that their talking time was too long which may have limited students' active participation. Additionally, the data reveals that the assessment dimension was restricted to homework in the textbook or notebook at the end of the lesson; that is summative assessment. Nevertheless, monitoring students appeared to indicate a way to control students' progress, which may be interpreted as formative assessment.

When analyzing the data from the pacing dimension, strong evidence of preservice teachers' skills to transition topics was not good enough to have students finish their practice activities within the given time. This inconsistency may have been due to preservice teachers' inexperience related to

classroom management which ultimately reduced their power to control the time, and the students' classroom behavior. When it comes to the closure dimension, the low percentage of occurrences demonstrated that preservice teachers did not use to wrap up the lesson at the end of it. This situation may lead to such disadvantages as omitting the opportunity to consolidate students' learning, overlooking feedback, leaving gaps; in short, reducing the effectiveness of the lesson.

Table 3

Post-observation Meetings.

Themes	Categories	Codes	f	%
Openings	Warmups	The warm-up was attractive enough to engage and motivate students	38	22%
		Warm-up caused students' disruptive behavior*	5	3%
	Lesson objective	Students were aware of the objectives of the lesson.	18	10%
		Subtotal	61	35%
Sequencing	Instruction	Unclear teachers' questions or instructions to elicit students' responses*	13	7%
		The instructional materials facilitated the lesson development	25	14%
		Subtotal	38	22%
	Practice activities	Worksheets helped students practice the lesson contents	9	5%
		Implementation of effective activities during the lesson	22	13%
		Students' disruptive behavior during practice activities*	10	6%
		Subtotal	41	23%
	Assessement	Formative assessment to monitor students' progress	16	9%
		Summative assessment to evaluate students' knowledge	4	2%
		Subtotal	20	11%
Pacing	Instructional time	Lesson objectives were partially achieved*	4	2%
		Activities not completed in the allocated time*	12	7%
		Subtotal	16	9%
Closure	Closure	na	0	0%
		Subtotal	0	0%
		Total	176	100%

*Note *:* negative event

Table 3 illustrates the aspects under reflection during the post-observation meetings after every lesson or classroom observation. Overall, the conversations between preservice teachers, that is between peers, reduced to half of the points observed during the lesson. Surprisingly, the category practice activities did not reach the highest number of occurrences as it happened during the classroom observation. It is worth mentioning that the opening dimension was the focus of attention of the post-observation meeting and the pre-observation meeting, too. These results seem to imply, that preservice teachers were aware of the significance of starting a lesson with a

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strong sense of achievement; even so, some students' disruptive behavior appeared to block the overall effectiveness of a lesson as shown in the development of the lesson.

The results obtained from the sequencing dimension demonstrate that preservice teachers reflected on the positive and negative impacts of their teaching performance. For instance, even though they managed to get students involved in the lesson through a variety of instructional materials, they failed to elicit students' responses during the instructional time because their instructions or questions were not clear enough. As a consequence, it is almost certain that some students could not solve the proposed practice activities, and even some students misbehaved during this lesson stage. Despite these negative impacts, preservice teachers' reflections exhibited some gains regarding the use of worksheets as useful materials for students' practice activities.

When it comes to the pacing dimension, preservice teachers' conversations exposed their weaknesses in time management for the development of the lesson. This suggests that students may have not understood all the material which simultaneously may have led to decreased productivity. As a matter of fact, poor classroom time management limits lesson success. That being the case, preservice teachers could not progress to carry out the closure dimension of the lesson as shown in Table 3.

3.3. Discussion

3.3.1. How do peer coaching stages promote seventh-semester preservice teachers' reflective practice during their practicum?

Findings have demonstrated that PSTs were immersed in an ongoing process of reflection before, during, and after the lessons, as evidenced in the registrations in Tables 1, 2, and 3. Peer coaching involved practitioners in permanent collaborative work during their practicum. Their conversations and classroom observations allowed them to put into practice their knowledge base by elaborating their lesson plans and their subsequent implementation. These findings are consistent with those of Arslan Dönmez and Sahin (2022), who confirmed that peer coaching promotes reflective practices by involving pairs or groups of individuals in similar roles who collaborate to enhance their performance. This is achieved through active engagement and the exchange of constructive feedback. Alongside this, Schön (2017) states that teaching methods expressed in theories are not vast enough to solve the complexities of real-world classrooms. With this in mind, reflective practice bridges the theory and practice in authentic classroom settings, and peer coaching reinforces this process through dialogic interaction between peers.

3.3.2. What aspects of teaching are reflected during the peer coaching stages?

When it comes to the pre-observation meetings, the instruction aspects indicated that PSTs' major concern was related to the alignment of the topic and lesson objectives, and the correct organization and implementation of the lesson. These findings agree with Lerner and McDougal (2023) who claim that the correct management of the sequence dimension of the lesson leads to the achievement of the lesson objectives. Regarding the initial agreements made in the pre-observation meetings, they did not completely match with the aspects observed during classroom observations as discussed in the next section. This is consistent with Showers and Joyce (1996) who after years of experience on teachers' peer coaching, found that pre and post- meetings were ineffective because teaching performance in real-life classrooms is versatile and dynamic.

3.3.3. Discussing peer coaching stage: Classroom observation

As presented in the results, PSTs observations allowed them to identify the upsides and downsides of their PSTs' teaching performance. For example, they observed how their peers used worksheets successfully to help students to develop their practice activities; however, they found that their peers could not manage the time according to the lesson plan, which provoked students' disruptive behavior. This is in agreement with Capan and Bedir (2019) who demonstrated that PSTs' lack of experience hindered them in managing the pacing dimension of the lesson which weakened their classroom management skills. Despite these pitfalls, classroom observations reinforced PSTs' pedagogical skills and reflective practice by observing their peers' teaching performance. These findings are consistent with those of Arslan Dönmez and Sahin (2022) who highlighted that peer coaching fosters reflective practices by engaging individuals in pairs or groups with similar professional roles, encouraging collaboration to enhance their performance through active participation and supportive feedback. A possible explanation for these results may be the short time allocated for training PSTs in peer coaching. In fact, it is not an easy duty to develop both peer coaching skills and pedagogical skills at the same time.

3.3.4. Discussing peer coaching stage: post-observation meetings

Results showed that the events under reflection were reduced to half of those observed during classroom observation. Their focus of attention was on the sequencing dimension of the lesson in which reflections about students' disruptive behavior seemed to delay practice activities. In consequence, the pacing dimension seemed to be the most controversial one as preservice teachers' conversations demonstrated they were not able to control the time according to the scheduled lesson plan. The frequency of not pacing the lesson correctly was fairly high which revealed that PSTs' conversations were not constructive enough to plan properly for future lessons. These results agree with the findings of Loman et al., (2020), who considered that peer coaching generated reflection and collaboration among peers during the lessons; however, they did not plan to improve the negative items for their future lessons. Likewise, Showers and Joyce (1996), after many years of experience in peer coaching, warned practitioners that post-observation meetings should be omitted because peers assume the role of supervisors which overlooks the non-evaluative process of peer coaching.

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3.3.5. Which peer coaching stage is the most and least powerful to involve preservice teachers in reflective practice?

It is evident that the most powerful stage of peer coaching is peer classroom observation in which the observer registers positive and negative teaching performance done by his/her peer. It is interesting to note that the PST with the role of observer can reflect by observing their peer teaching in an authentic classroom setting that provides a unique opportunity to critically analyze and evaluate teaching practices, strategies, and classroom interactions without the pressure of actively teaching. These findings confirm what Showers and Joyce (1996) state about the roles that teachers take during the process of coaching. They state that the coach is the observed teacher since he or she is implementing the lesson in a real-world classroom and is developing several instructional methodologies for the observer to follow or to improve.

Peer classroom observation helps teachers critically reflect on lesson delivery by identifying successes, challenges, and areas for improvement through reflective questions like what worked well or bad; or what could have been done differently; or why these events happened are reflective inquiries that both in-service and preservice teachers raise to make sense of their teaching performance. These findings corroborate the ideas of Korthagen (2014) who claims that reflective practice is a systematic inquiry about the relationship between the initial intentions of doing something, the actual things done, and their results.

On the other hand, the least powerful stage to get preservice teachers involved in reflective practice was the pre-observation meetings, in which they had to agree on the items to be observed during the lesson. During these meetings, PSTs preservice teachers underestimated the relevance of the opening dimension of the lesson, and what is more, they did not mention the closing dimension. A possible explanation might be their fear of being evaluated or their inexperience in teaching. It is encouraging to compare these findings with those found by Showers and Joyce (1996) who decided to omit pre-observation and post-observation meetings during teachers' peer coaching since they hinder the non-evaluative nature of this model.

Conclusions

Pre-observation meetings revealed that preservice teachers prioritized the sequencing dimension but overlooked openings and closures, highlighting a need for balanced practice and peer-supported reflection

Peer classroom observations revealed important insights into the reflection process. Preservice teachers emphasized lesson sequencing and student engagement but struggled with instructions, pacing, classroom management, and closures, highlighting the need for improved formative assessment and balanced lesson delivery.

Post-observation meetings focused on lesson strengths and weaknesses, but preservice teachers failed to plan improvements, rendering discussions ineffective. Due to limited time from academic demands, this peer coaching stage should be omitted in future research, with more time allocated to peer coaching training and practicum.

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Interculturality and Cultural Identity in Contemporary Peru: Resilience and Transformation in Times of Globalization

Interculturalidad e identidad cultural en el Perú Contemporáneo: Resiliencia y transformación en tiempos de globalización

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Albano Pacco Ccasa
Universidad Cesar Vallejo. Lima, Perú
APACCOCCASA@ucvvirtual.edu.pe
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Abstract

Intercultural education in Peru has sought to recognize and celebrate cultural diversity by creating a space for dialogue and mutual learning across different contexts, with a focus on the holistic development of students. This study employed a qualitative approach using the PRISMA method, conducting the search, selection, and analysis of documents related to interculturality, globalization, and Intercultural Bilingual Education (IBE) within the Peruvian context. The findings revealed that both globalization and education have responded to the need to prepare students from diverse backgrounds to face the challenges of an interconnected world—without losing their cultural identity. This intercultural education has fostered understanding, respect, and inclusion of the multiple identities coexisting in Peru, establishing a foundation for overcoming adversity and navigating official frameworks that, in some cases, hinder intercultural progress.

Keywords: intercultural education, Peruvian identity, culture, globalization, education

Resumen

La educación intercultural en el Perú ha buscado reconocer y celebrar la diversidad cultural, mediante la creación de un espacio para el diálogo y el aprendizaje mutuo entre distintos contextos, con miras a un desarrollo integral de los estudiantes. Esta investigación fue de enfoque cualitativo, método PRISMA, se realizó la búsqueda, selección y análisis de documentos con contenido relacionado con la interculturalidad, la globalización y la Educación Intercultural Bilingüe (EIB) en el contexto peruano. Los resultados demostraron que, en efecto, la globalización y educación se interesaron en cubrir la necesidad de formación de los estudiantes de diferentes orígenes para enfrentar los retos de un mundo interconectado, sin perder su identidad cultural. Esta educación intercultural ha fomentado la comprensión, respeto e inclusión de las identidades que cohabitan en Perú, que a su vez ha producido las bases para sobrellevar las situaciones adversas y eventos oficiales que de alguna manera limitan el avance intercultural.

Palabras clave: educación intercultural, identidad peruana, cultura, globalización, educación

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Introduction

One of Peru's defining characteristics is its vast cultural diversity, comprising over 50 Indigenous peoples, each with its own rich heritage, unique languages, traditions, and customs. This diversity is a representative feature of the nation's heritage, making it invaluable. However, it currently faces new challenges brought by globalization—a phenomenon that has connected societies around the world but also tends to homogenize them. From an educational perspective, one of the challenges that arises is the urgent need to adopt policies and practices that promote interculturality. Globalization has been observed to generate both opportunities and challenges, as it brings different cultures into contact while simultaneously posing risks to local cultures, particularly those that have been historically marginalized or devalued (Anzoátegui, 2020).

Peru has sought to recognize and celebrate cultural diversity through intercultural education, fostering spaces for dialogue among various cultures with the goal of promoting the holistic development of students (Bada, 2020). This educational perspective encourages respect across all sociocultural contexts of the student population, which is essential for strengthening cultural identities and building a sense of citizenship that values diversity as a pillar of social cohesion (Fernández, 2020). For this reason, education must be relevant and meaningful for all Peruvians, regardless of their ethnic or cultural background—an imperative that has driven the implementation of policies aimed at overcoming historical exclusion and inequality.

In the past, Peru's educational system was oriented toward cultural homogenization, promoting a curriculum that prioritized Spanish and upheld a centralized view of culture, history, and values. This dominant cultural perspective left Indigenous languages and worldviews marginalized and forgotten for decades. However, in recent years, a shift has occurred, leading to greater recognition of cultural and linguistic diversity—driven by movements led by Indigenous peoples, academics, and international organizations committed to preserving and promoting ancestral cultures.

Bilingual Intercultural Education (BIE) has become one of the cornerstone policies of Peru's education system, formally established in the General Education Law of 2003. Its goal was to ensure that students from Indigenous communities receive instruction in their mother tongue while also being provided with the tools to learn Spanish and acquire other forms of knowledge relevant to the modern world. The aim is to foster respect for students' cultural identities while strengthening community ties and promoting intercultural dialogue that enriches Peruvian society as a whole.

The purpose of this article is to analyze how cultural identity within the Peruvian educational context is being transformed by globalization, and to identify the strategies being implemented to promote cultural resilience through intercultural approaches. Education is viewed as a key space for the development of values and knowledge, as its central role is to build a society that respects, values, and strengthens cultural diversity. This analysis allows us to highlight both the progress made and the challenges that remain—issues that are vital for the future of the country.

Therefore, the focus of this research is the Peruvian context, particularly in regions where BIE has been implemented over the past twenty years, especially during the period in which efforts to

advance intercultural education have intensified. Additionally, the study examines how government policies and the work of international organizations have influenced this process. It also explores the specific challenges faced by Indigenous communities in preserving their languages and cultures in an increasingly globalized world. Finally, it is important to note that this article did not receive external funding and is based on a literature review of academic sources, government reports, and prior research.

Methodology

This study adopted a **qualitative approach**, which enabled the analysis of the influence of globalization on cultural identity within the Peruvian educational context (Arias & Covino, 2021). The choice of this approach was based on its ability to explore and understand the meanings and perceptions held by the studied participants regarding **interculturality** and **cultural resilience**. Additionally, the **analytical method** was considered, based on the critical review of secondary sources (Hernández & Mendoza, 2018), which allowed for the identification and characterization of practices and challenges related to **Bilingual Intercultural Education (BIE)** in various regions of Peru, as well as the strategies implemented to promote cultural identity in educational institutions.

Likewise, the use of the **PRISMA method** was implemented—a highly effective guideline for capturing all recommended information during documentary research. This allowed for the integration of various theoretical and empirical perspectives, which facilitated a deeper understanding and analysis of how cultural identity within the Peruvian educational setting has been transformed and impacted by globalization. Furthermore, it helped identify which strategies are currently being implemented to promote cultural resilience through intercultural approaches.

To define the **units of analysis**, scientific documents were selected that provided relevant information on the topic under examination. The **inclusion criteria** for the selected sources were: publications no older than five years, and sourced from platforms such as Scielo, Dialnet, and Google Scholar. The types of documents included were **scientific articles**, **reports from international organizations**, **official documents from the Ministry of Education**, and **empirical studies**. These documents were located using keyword searches.

In summary, the methodology employed in this article combined a **qualitative approach**, **documentary analysis techniques**, and the **PRISMA method**, which allowed for an in-depth investigation into the relationship between **interculturality**, **education**, and **cultural identity** in contemporary Peru. At the same time, it provided a solid foundation for understanding how **globalization has influenced cultural identities**, and what **intercultural educational policies** have been implemented to preserve them.
The **PRISMA flow diagram** used in this article is presented below, following Page et al. (2021):

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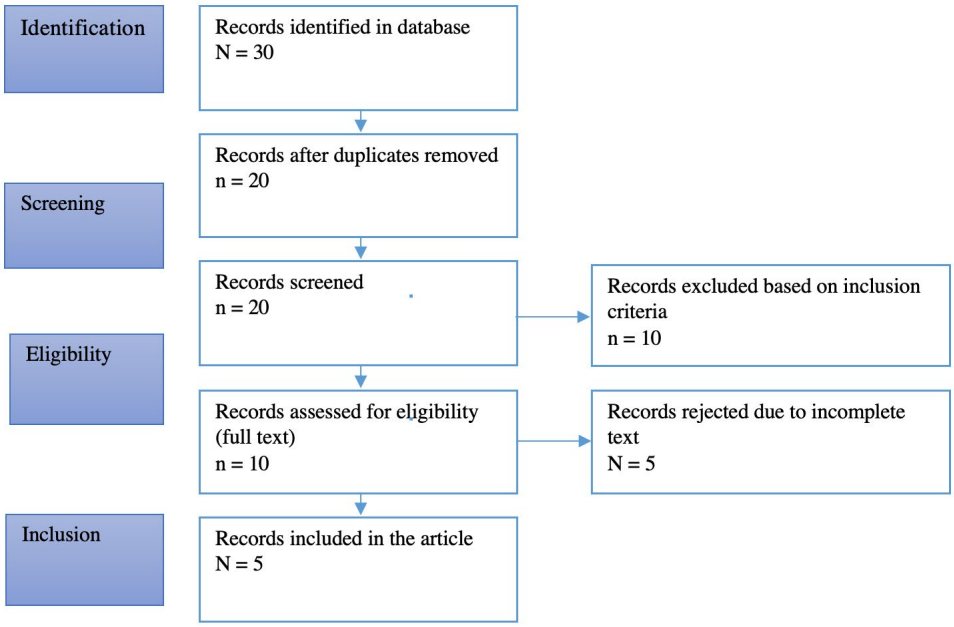
Figure 1

PRISMA Flow Diagram.



Results

This section presents the results of the review of the records obtained through the application of the PRISMA method. To facilitate clarity, the findings are organized in **Table 1**, which details the indicators assessed in each document:

Table 1

Evaluated Indicators

Author – Year	Document Title	Methodology	Contributions	Conclusions
(Olaya & Contreras, 2021)	Interculturality in Peruvian Society, 2015–2020	Documentary bibliographic	Since the colonial era, the Afro-Peruvian population has faced various abuses despite its invaluable contribution to Peru's cultural, social, and national development. As part of a country characterized by its multicultural, multiracial, and multiethnic richness, the Afro-Peruvian heritage stands out as a strength that has deeply influenced Peruvian identity, especially in the coastal region. This legacy is reflected in music, dance, literature, cuisine, and even in the slang and character of coastal inhabitants. Additionally, Afro-Peruvians have played a significant role in religious and sports expressions, underscoring their impact on the construction of national identity. It is essential to foster students' recognition of this diversity as an enriching element of Peruvian society.	Interculturality promotes respect for multiculturalism, equality, and dignity of cultural diversity. It is a priority to value the contributions of all cultures present in Peru, especially the Afro-Peruvian culture, which has significantly contributed to the nation and forms part of the intercultural identity.
(Bada, 2020)	Invisibility and Cultural Identity among Indigenous Students of the Amazon	Non-experimental quantitative, descriptive, and comparative research involving indigenous students.	The horizontalization of human interactions aims to promote a dual change in education: one that transforms both the internal development of individuals and established social dynamics. In this context, it is essential to value the ancestral knowledge of Indigenous peoples, integrating it as a foundational pillar for collective learning in society.	In the Awajún and Yanesha communities, a high degree of invisibility was observed regarding cultural dissemination, heritage preservation, and cultural identity, although some attention was given to their language, traditional practices, and sense of belonging. However, the situation differed in the Shipibo-Konibo, Kichwa, and Achuar peoples. Additionally, the educational system does not integrate the native languages of these communities nor recognize their value within the school environment.

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(Arévalo, 2023)	Effects of the Program "Chabuca Granda in the School" on Strengthening Cultural Identity in Secondary School Adolescents	Quantitative approach, quasi-experimental design	The educational program "Chabuca Granda in the School" had a positive impact on customs and traditions related to their strengthening and appreciation. It highlights that respect for the culture of other peoples as well as one's own fosters acceptance and adaptability within communities.	The use of the identity of a figure like Chabuca Granda facilitated the internalization of cultural identity among adolescents and the recovery of customs that were being lost.
(Lazo, 2024)	Cultural Identity and Social Fragmentation: A Critique of Identity Relativism	Documentary bibliographic	The principle of individual freedom is the result of a prolonged historical process, gradually constructed over time. Countless generations have tirelessly worked to achieve this goal, seeking emancipation from constraints imposed by collective structures and totalitarian regimes associated with religious, nationalist, political, territorial, ethnocentric, and especially ideological identities. In this context, adherence to a cultural identity can be considered a superficial and illusory act, as it fosters divisions and tensions within society, affecting its cohesion.	Cultural identity represents an illusion that has generated challenges in contemporary societies, just as it did in the past, and will likely do so with greater intensity in the future. This is because cultural collectivism, relativism associated with identities, and multiculturalism tend to create divisions among people, fostering separation, conflict, and, in extreme cases, harmful practices and acts of violence. Essentially, cultural identity is nothing more than a factor that fragments and disintegrates the social fabric.
(Astorima & Gutiérrez, 2024)	Andean Worldview in Intercultural Education	Documentary bibliographic	The current Peruvian education system operates under an approach that does not adequately reflect the country's vast cultural diversity. To address this disconnect, the initiative to implement a diversified curriculum at the local, regional, and national levels was proposed. However, in practice, this strategy has not achieved its objectives, mainly because many regions lack the essential resources to design and implement a curriculum adapted to their realities. Additionally, this situation is worsened by academic inefficiency and bureaucratic barriers that limit its effectiveness.	The Ministry of Education must prioritize the implementation of policies that promote interculturality with the purpose of recognizing and valuing Peru's cultural diversity. This approach seeks to foster respectful and harmonious coexistence among the country's various cultures, advancing toward education that is inclusive, equitable, and of high quality. In Andean communities, the ancestral worldview remains a living manifestation capable of resisting the influence of external cultures, resulting in a rich cultural syncretism. This context highlights the importance of developing an intercultural educational model based on the Andean worldview, aimed at inspiring both students and teachers to appreciate and deepen their understanding of the cultural legacy of our ancestors.

According to the review and examination of the records included in this article, it is understood that interculturality, by its very nature, fosters and encourages dialogue due to the multiplicity of elements upon which it is argued and reflected within the same context—in this case, the territory of Peru. Therefore, educational spaces where multiculturalism and identity construction converge are appropriate settings to open debates from the perspectives of students, teachers, and authorities. These discourses form part of the contributions of the protagonists in the educational process toward the construction of a genuine interculturality, which manifests itself in the diversity of pedagogical activities.

These considerations align with the ideas of Olaya and Contreras (2021), who recognize the diversity of cultures existing in Peru; thus, there is no single culture due to the coexistence of cultural heterogeneity. In this sense, it is pertinent to specify the recognition of Peru's ancestral asymmetry, which blends with transculturation resulting from the arrival of the peoples who today inhabit this territory. The expectation from this fusion is a process based on tolerance, respect, and harmonious coexistence through a relationship of equality and equity. However, this is precisely the point of disagreement, as the process of interculturality does not always develop as it ideally should.

Similarly, from the perspective of Astorima and Gutiérrez (2024), the practice of the intercultural approach in Peruvian schools has been disappointing, considering that most regions lack the necessary resources to develop a diversified curriculum aligned with interculturality. Added to this are academic shortcomings regarding teacher training and the way the curricular proposal is operationalized to address cultural diversity. Finally, bureaucratic demands often limit and delay these processes.

For Ramírez (2021), Peru is recognized as a culturally rich country with around 50 indigenous groups, now including Afro-Peruvians and migrants from various countries. However, relations between cultures have not always been favorable, as some groups have experienced discrimination, marginalization, or exclusion from a dominant-dominated perspective corresponding to majority-minority dynamics. This author emphasizes new national educational policies that face the challenge of creating curricular models to train intercultural teachers who implement particular didactics that allow for the appreciation and recovery of cultural diversity, thereby educating to form intercultural citizens with a dual dimension—namely, those who respond to the country's needs in correspondence with the context of globalization.

On the other hand, Lazo (2024) addressed in his article cultural identity and social fragmentation experienced by the Peruvian population, which is directly linked to the construction of individual freedom—a hard-fought conquest gradually achieved throughout human history. From his viewpoint, there is another side to this identity process, involving hegemonic collective implications of religious, nationalist, political, territorial, ethnocentric, and especially ideological nature. Therefore, Peruvian cultural identity is inconsistent and insignificant, ultimately contributing to social fragmentation.

However, a different perspective is presented by Merino et al. (2024), who argue that one way to understand Peruvian cultural identity and the recognition of belonging to this context involves

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creating outreach and educational programs that include digitalization and research components, with the participation of people sharing the same social space; considering transformations over time and using reflection to understand their origins and history. This leads to a feeling of pride in being Peruvian and fosters self-esteem. This contribution serves as a call to attention regarding technological change, since culture is not only expressed through painting, engraving, and all forms of production that reflect human labor, customs, and thoughts, but collectively shapes and illustrates cultural identity (Arnal, 2020).

In this regard, Arévalo (2023) also proposes in his article the implementation of the educational program "Chabuca Granda in the School," emphasizing its role as a means to rescue Peruvian identity, customs, and traditions in relation to their strengthening and appreciation, which ultimately define the identity of the peoples. The article highlighted respect for the culture of other peoples as well as one's own as a path to community adaptation and acceptance. Along similar lines, Araoz et al. (2021) reported that intercultural aspects applied by teachers in Peru promote the development of students' national identity. This means that the interculturality practiced by teachers significantly contributes to the development of students' national identity.

Also, it is important to highlight the contribution of the article by Bada (2020), who introduces the concept of horizontalization in the field of human relations, especially within the educational context. The author explains how the invisibility experienced by indigenous students in the Amazon significantly affects the construction of their cultural identity. In this regard, he proposes transforming the school environment toward an inclusive culture that fosters changes both in the hearts of individuals and in the social fabric. One way to achieve this is by valuing indigenous knowledge and incorporating it into the curricular proposal within that context.

Similarly, Ruedas (2021) notes in his article that Peru's Bilingual Intercultural Education policies aim to serve indigenous peoples as a pedagogical tool applied in schools but may pose learning difficulties for indigenous children. Through the analysis and interpretation of historical material, it was demonstrated that education policies in the 20th and 21st centuries have been influenced by globalization and transnational organizations, with indigenous peoples not being exempt from these influences. Therefore, it is now a priority to establish quality bilingual education as a valid means of learning for indigenous peoples, moving beyond utopia. In this sense, Peru's Bilingual Intercultural Education serves as a guide to generate more inclusive education, especially for indigenous communities, through a comprehensive approach aimed at strengthening teacher training, adapting curricula, and producing educational materials that guarantee quality learning while respecting the country's cultural and linguistic diversity.

Finally, the contribution of Armes (2023), from a critical perspective, asserts that some studies on Peruvian interculturality fail to address the importance and complexity of truly intercultural education, as they do not consider dominant structures that may exist within classrooms, downplaying the characteristics of various peoples and societies, as well as the use of particular languages and mother tongues. For this reason, the intercultural process in schools must begin by creating equitable conditions that allow cultural freedom for all individuals.

Conclusions

In general terms, globalization and education are processes that go hand in hand and must respond to the need to prepare students to face the challenges of an interconnected world without losing their cultural identity. This requires a pedagogical approach that combines global knowledge with local wisdom, integrating new technologies and teaching methods that promote inclusion. It has been established that Peru is recognized as a pluricultural country with multiple indigenous groups, to which Afro-Peruvians and migrants from various regions are added; however, relations among these cultures have been spontaneous and without pre-established order, often marked by discrimination, marginalization, and exclusion framed by dominant-dominated or majority-minority oppositions.

It is understood that the National Plan for Bilingual Intercultural Education (2021) has greatly contributed to the construction of Peruvian identity and the interculturality process from a more inclusive perspective, especially regarding indigenous peoples. This process possesses a comprehensive approach that seeks to strengthen teacher training, adapt curricula, and produce educational materials that guarantee quality learning respecting the cultural and linguistic diversity of the country.

Ultimately, interculturality should be considered a necessary component within education at all levels, framed within the understanding, respect, and inclusion of the diverse identities that form part of Peruvian culture. In turn, this will lay the foundations to cope with challenges, combat corruption, or address sociopolitical events that could disrupt the well-being of people within their country.

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Educational Management Strategies to Engage Teachers in the Development of Ecuador's Competency-Based Curriculum Framework

Estrategias de gestión educativa para implicar al docente en el desarrollo del Marco Curricular Competencial de Ecuador

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Gladys Jackeline Pesántez Auquilla[1]
Universidad Bolivariana del Ecuador (UBE).Cuenca, Ecuador
gjpesanteza@ube.edu.ec
https://orcid.org/0009-0001-6531-5316

Darwin Antonio Velastegui Valle[2]
Universidad Bolivariana del Ecuador, (UBE).Ambato, Ecuador
davelasteguiv@ube.edu.ec
https://orcid.org/0009-0008-7945-2136

Francisco Samuel Mendoza Moreira[3]
Universidad Bolivariana del Ecuador (UBE)
Universidad Laica Eloy Alfaro de Manabí (ULEAM) Durán, Ecuador.
fsmendozam@ube.edu.ec
https://orcid.org/0000-0001-9959-5240

César Ricardo Castillo Montúfar[4]
Universidad Bolivariana del Ecuador (UBE) Durán, Ecuador
crcastillom@ube.edu.ec
https://orcid.org/0009-0001-7978-5036

Abstract

The implementation of Ecuador's Competency-Based Curriculum Framework (MCC) represents a complex process that demands structural transformations in curriculum planning, instructional practices, and the professional role of teachers. This qualitative study, grounded in a phenomenological approach, aimed to understand the educational management strategies required for the effective implementation of the MCC within a school located in the province of Tungurahua. Semi-structured interviews were conducted with department heads and school authorities. The analysis was structured around four key categories: understanding of the framework, teacher competencies, competency-based curriculum planning, and institutional change. The findings reveal notable progress in the incorporation of methodologies such as STEAM, interdisciplinary approaches, and neuroeducation, indicating a strong commitment among teachers to continuous improvement. However, challenges remain, particularly in relation to limited specialized training, technological constraints, and resistance to change. Competency-based planning encounters difficulties in ensuring curriculum progression, especially in public institutions with limited resources. Moreover, weaknesses in pedagogical leadership and institutional coordination further hinder the comprehensive adoption of the new approach. The study concludes that proactive educational management—centered on sustained teacher support, coordinated stakeholder engagement, and strategic investment in training and resources—is critical for consolidating the implementation of the MCC and effectively addressing the challenges of 21st-century education.

Keywords: Competency-Based Curriculum, Educational Management, Competency-Based Planning, STEAM, Teacher Training, Pedagogical Leadership

Resumen

La implementación del Marco Curricular Competencial (MCC) en Ecuador constituye un proceso complejo que demanda transformaciones estructurales en la planificación, la enseñanza y el rol docente. Este estudio cualitativo, de enfoque fenomenológico, tuvo como objetivo comprender las estrategias de gestión educativa necesarias para implementar eficazmente el MCC en una institución educativa de la provincia de Tungurahua. Se aplicaron entrevistas semiestructuradas a jefes de área y autoridades, organizando el análisis en cuatro categorías: comprensión del marco, competencias docentes, planificación curricular y cambios institucionales. Los hallazgos mostraron avances en la incorporación de metodologías como STEAM, interdisciplinariedad y neuroeducación, evidenciando un compromiso docente con la mejora continua. Sin embargo, persisten obstáculos relacionados con la escasa formación específica, las limitaciones tecnológicas y la resistencia al cambio. La planificación por competencias enfrenta retos vinculados con la progresión del currículo, especialmente en contextos públicos con recursos limitados. Asimismo, se evidencian debilidades en el liderazgo pedagógico y la coordinación institucional, lo cual dificulta la adopción plena del nuevo enfoque. Se concluyó que una gestión educativa proactiva, centrada en el acompañamiento docente, articulación entre actores e inversión en recursos y capacitación, es clave para consolidar la implementación del MCC y responder a los desafíos del siglo XXI.

Palabras clave: marco curricular competencial, gestión educativa, planificación por competencias, STEAM, formación docente, liderazgo pedagógico

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Introduction

Education is a formative process that seeks to foster the evolution of new generations through the acquisition of knowledge and learning, grounded in scientific, humanistic, and practical approaches aimed at shaping ethical citizens with critical thinking skills. Achieving this goal depends on a series of changes proposed in curricular educational projects and on the new attitudes adopted by teachers as key agents in building a better society (Cassanova et al., 2018, p.114).

Therefore, the educational curriculum model must undergo constant restructuring in response to the evolving demands and expectations of contemporary society. In other words, the new curricular dynamic is oriented toward creating teaching and learning processes focused on scientific, practical, and reflective knowledge. In this way, new generations will be better equipped to face the challenges of the modern era (Cárcamo & Pineda, 2020, p.4).

In this context, the authors highlight that the competency-based curriculum aims to develop a comprehensive student profile. It begins with the conceptualization of "competence," understood as the development of skills and abilities across four essential domains: being, knowing, doing, and transcending. Each of these domains encompasses cognitive processes and the application of skills to solve real-life problems (Cárcamo & Pineda, 2020, p.6).

This theoretical orientation was adopted in the Ecuadorian context as part of a broader curricular transformation driven by a series of educational reforms intended to improve the quality of education and adapt it to the emerging needs of 21st-century society. Accordingly, the approval of the 2008 Constitution and the enactment of the 2011 Organic Law of Intercultural Education marked the beginning of a profound transformation of the national education system.

Within this same context of change, the role of the teacher has evolved into that of a guide who facilitates or mediates the construction of knowledge. This requires a reflective perspective on competencies, grounded in an educational paradigm that contextualizes knowledge and seeks meaningful, solution-oriented learning. The goal is for students to find learning engaging and become social agents capable of interacting with their environment (Navas & Ospina, 2020, p.3).

Given the above, it is imperative to establish educational management strategies that actively involve teachers in the development and implementation of the competency-based curriculum framework. These strategies should provide clear methodological guidelines to support teachers in the planning, design, and assessment of their instructional units. Thus, teachers must possess the necessary tools to monitor student learning effectively, as well as the assertiveness to guide pedagogical interventions. This can be achieved through a systematic, planned, and intentional educational approach that aims to promote dynamic and participatory learning experiences.

In this way, teacher-led educational management opens the door to new opportunities for meaningful learning that can be applied to various real-life situations. Teachers have the capacity to redirect the learning process toward the achievement of educational goals. It is important to note that not all learning yields the same results; therefore, teachers—through their academic training

and daily practice—can propose challenges that are relevant to students and, in doing so, make a meaningful impact on their lives (Administración Nacional de Educación Pública, 2022, p.54).

In light of this, the present study aimed to understand the educational management strategies required by the institution to implement Ecuador's Competency-Based Curriculum Framework, by identifying teachers' prior knowledge, the challenges faced, and their perception of change, in order to improve teaching practices and support the development of the new curriculum.

1.1. Curricular Approaches within Ecuador's Competency-Based Framework

The need to adapt to the new realities of the 21st century—marked by rapid and constant social and educational change—is now unavoidable. While access to information, the integration of new technologies, the emergence of innovative ideologies in societal values, and the pressing need for social transformation are all vital, it is equally important to recognize the urgent need to reshape the educational landscape toward a more ethical and humanistic paradigm aligned with the demands of the current era.

In other words, teaching professionals must engage with the times and adopt models that are coherent with contemporary society. This requires self-directed professional development that incorporates autonomous learning, cooperation, collaboration, and competency-based work. In doing so, educators can reconfigure both themselves and their pedagogical approaches to address individual and collective needs (Arderiu & Brasó, 2020, p. 40).

Within this context, it is essential to understand the competency-based framework in order to ensure its advancement and practical application. As López (2021, p. 55) notes, the competency-based curriculum is designed as an international model that addresses current challenges in the educational field. Its central goal is grounded in a humanistic approach built upon four core principles: learning to know, learning to do, learning to live together, and learning to be. This humanistic vision promotes a broad conception that not only embraces curriculum but also integrates knowledge and experience in an explicit and systematic way.

A key component of the curricular framework is the inclusion of STEAM methodology and interdisciplinarity. STEAM—an acronym for Science, Technology, Engineering, Arts, and Mathematics—emphasizes integrative learning in which various disciplines collaborate to generate creative solutions to real-world problems. This methodology presents knowledge from a holistic, constructivist perspective, empowering students to learn dynamically and develop competencies needed to address the challenges of modern society.

Interdisciplinarity is embedded within the framework, enabling students to learn at their own pace and in a flexible manner. It is based on collaborative competencies that foster the ability to solve societal problems (Alcívar et al., 2023, p. 38). In connection with the competency-based approach, the curriculum opens pathways to the labor market by preparing students to perform specific functions while achieving personal and professional fulfillment. From this perspective, competency integration engages all dimensions of the human experience, supporting motivation, employability,

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and personal development, all of which contribute to improved interpersonal relationships (Ramírez, 2020, p. 24).

Furthermore, the competency-based model is characterized as an integrative framework composed of the dimensions of knowing, doing, being, and coexisting. Its foundations draw from behaviorist, cognitivist, constructivist, and humanistic pedagogical models, all of which converge in the development of skills, abilities, attitudes, and values within a sociocultural context to effectively address real-world problems (Campos de Rivas, 2023, p. 6). Competency-based planning, in this regard, entails the organization of learning situations from a perspective that goes beyond theoretical knowledge to prioritize its application in the immediate future, incorporating interdisciplinary approaches.

To achieve this, case studies and project-based learning are recommended, as they provide a didactic sequence aligned with specific learning objectives (Pineda & Ruiz, 2021, p. 161). Teachers, in turn, must possess competencies in information and communication technologies, collaborative work models, and the design of dynamic, creative strategies that can be integrated with a variety of educational resources.

1.2. Educational Leadership and School Reform

Similarly, the strategic leadership necessary for implementing the Competency-Based Curriculum Framework (MCC) must be supported by effective leadership, planning, and coordination—not only on the part of school administrators but also the broader educational community. In this process, school leadership plays a pivotal role, as administrators are responsible for guiding the development of the Institutional Educational Project (PEI) within their schools, based on the learning outcomes they aim to achieve. However, there are still groups of school leaders who remain disconnected from these principles and believe that such responsibilities fall solely on teachers, given the autonomy teachers have in planning and designing their lessons.

To realize this integrative, competency-based model, institutions must establish structures that promote professional development and support for teachers. This includes access to workshops and training sessions that guide them in implementing the competency-based curriculum. Likewise, institutional articulation is essential: all teachers should work toward a common goal through collaboratively designed activities, organized in supportive work teams with ongoing guidance and access to the necessary tools and resources to implement effective learning strategies.

UNESCO (2022) warns that technological inequality and the digital divide negatively impact educational equity. For this reason, competency-based planning must incorporate strategies aimed at reducing these disparities and ensuring that all students can benefit from digital learning environments.

Interdisciplinarity is a core feature of the curriculum, allowing students to learn at their own pace and in a flexible manner. It is grounded in collaborative competencies that help students develop the skills to solve societal problems (Alcívar et al., 2023, p. 38). In connection with the competency-based curricular approach, the curriculum also opens pathways to the workforce,

preparing students for specific roles while enabling them to find fulfillment in their daily and productive activities. Here, competency integration encompasses various dimensions of the human experience, where motivation, employability, and personal development contribute to interpersonal relationships (Ramírez, 2020, p. 24).

The curricular framework includes STEAM methodology and interdisciplinarity. STEAM—an acronym for Science, Technology, Engineering, Arts, and Mathematics—promotes integrative learning across disciplines with the goal of developing creative solutions to complex problems. This methodology emphasizes a holistic, constructivist approach to knowledge, allowing students to engage in dynamic learning experiences that strengthen their competencies to face the challenges of society.

The implementation of the Competency-Based Curriculum Framework requires effective coordination between instructional leadership, competency-based planning, the integration of technology, and the adoption of interdisciplinary approaches such as STEAM. Although various challenges persist, efficient educational management and well-designed training strategies can support the transition toward a more relevant and responsive teaching model aligned with the demands of the 21st century.

Methodology

2.1. Study Design

The study supporting this paper adopted an a priori qualitative approach, meaning that the analysis was conducted using pre-established categories defined during the operationalization phase (Denzin, 2000). The aim was to understand teachers' perceptions regarding the curricular change involved in the Competency-Based Learning Framework approved by Ministerial Agreement No. MINEDUC-MINEDUC-2023-00086-A (Ministry of Education, 2023).

2.2. Type of Study

This work is classified as a phenomenological study. It analyzed the perceptions of school leaders and teachers based on pre-established categories and interpreted findings through the lens of lived educational experience. According to Husserl, as cited by Jiménez Tecillo and Valle (2016, p. 38), "it is a matter of reflecting on what can be called educational experience, from a phenomenological disposition," without altering the perspective and using induction as a methodology to build pragmatic constructs derived from interview data. The phenomenological analysis helped to understand the educational phenomenon not only as a process, but as a lived experience of each individual shaped by classroom pedagogical practice.

2.3. Participants

Due to its qualitative and phenomenological nature, the study required the participation of teaching staff from an educational institution located in the province of Tungurahua, Ecuador. This institution

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includes 38 teachers working across the Basic and Upper Secondary Education levels it offers. For participant selection, department heads and the vice-principal were chosen in order to ensure a comprehensive view that included both school leadership and teachers involved in curriculum and pedagogical oversight.

2.4. Data Collection Instruments

In alignment with the study's qualitative and phenomenological nature, a semi-structured interview was used to explore participants' experiences and perceptions regarding the curricular reform. The interviews were constructed around the study's core dimensions, as follows:

- **Understanding of the Competency-Based Curriculum Framework:** explored the strategies used by school management to integrate interdisciplinary approaches and enhance teacher collaboration.
- **Competencies to Develop Competencies:** examined the mastery of interdisciplinary projects and the use of ICT and TAC in daily teaching.
- **Leadership-Level Changes:** investigated the strategies recognized by teachers in response to the challenges described in previous categories, aiming to improve educational management.
- **Institutional-Level Changes:** explored new organizational structures adopted by schools in response to the challenges of competency-based education.

2.5. Procedure

The study followed an inductive qualitative logic to thoroughly capture participants' experiences in shaping strategies aligned with Ecuador's Competency-Based Curriculum. A literature review was also conducted to support the development of the analytical categories and the research instrument. Once the interview protocol was developed, it was validated using expert judgment, allowing refinement of the questions and preparation for the interview sessions.

The study focused on curricular approaches such as STEAM, interdisciplinarity, and neuroeducation in the context of the framework in effect at the time of research. Once informed consent was obtained from participants, interviews were audio-recorded and transcribed using Google's free tool, *Journalist Studio*. Data were analyzed using a simple citation and semantic structure review, enabling the identification of a coding system to pseudonymize teacher identities. The code included the teacher identifier (e.g., T1), the question number, and, in cases of lengthy responses, the paragraph number (in accordance with the Organic Law on Personal Data Protection, 2021).

Once the data were processed, the analytical categories were saturated to derive a comprehensive analysis of strategies that address the needs of teaching staff. This analysis contributed to a deeper understanding of teachers' experiences and perceptions, highlighting both successes and challenges in the implementation of the new curriculum, and providing valuable insights for future improvements in educational management.

2.6. Ethical Considerations

In accordance with research ethics, participants provided a signed consent form prior to the interview, confirming their voluntary participation, free from coercion, and their right to withdraw at any time. Participants were assured that their personal identity would be protected through a simple coding system that anonymized their responses. As there was no express authorization from the educational institution to use its name in the study's results, this information was kept confidential.

Results

This section presents qualitative data obtained from semi-structured interviews conducted with teachers and administrators at the participating educational institution. The information is based on their experiences and perceptions regarding the implementation of the Competency-Based Curriculum Framework in their educational context. Additionally, it highlights emerging themes identified during the thematic coding process, discussing the implications of these findings, emphasizing both achievements and challenges, and suggesting recommendations to improve pedagogical practice and curriculum management.

3.1. Understanding the Competency-Based Framework

The combination of interdisciplinary approaches such as STEAM and neuroeducation has proven effective in capturing and stimulating students' attention. However, some teachers initially struggled to connect different subject areas. One teacher noted: "My experience integrating interdisciplinarity and neuroscience was interesting, but at first, I struggled to connect topics across different areas. These methods sparked a desire to learn and increased students' attention." (T1.01)

Santamaría et al. (2022) suggest that educational institutions that adopt the STEAM model are those that most successfully foster fundamental skills such as critical thinking, creativity, and problem-solving, especially in science and technology fields. However, they stress that proper implementation is essential to ensure educational quality. Valle et al. (2023) argue that insufficient training and lack of resources are the main challenges teachers face when implementing STEAM projects. Similarly, Zapatera (2025) emphasizes the urgent need to rethink current educational models to strengthen scientific and technological competencies that prepare students to adapt to ongoing societal changes.

STEAM projects are recognized for fostering scientific and technological interest among students from an early age. However, limited internet access remains a significant barrier. A teacher explained: "The problem we've noticed is that we don't have—or can't access—reliable internet service, which would allow us to work more effectively with this system." (T2.01.1) Additionally, some teachers indicated a lack of training and familiarity with these approaches in the country: "There's a lack of teacher training and, frankly, a lack of awareness on our part because it was something new." (T2.01.2) Jimbo and Bastidas (2024) describe STEAM education as an approach

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that integrates disciplines to promote both critical and creative competencies in basic education. Nonetheless, they highlight the difficulties in applying it, particularly due to insufficient teacher preparation and the scarcity of resources in vulnerable areas. Likewise, López (2021) notes that implementing virtual programs based on the STEAM model presents significant challenges, including limitations in technological infrastructure and the ongoing need for teacher training.

3.1.1. Competency-Based Curriculum Approach

Adopting a competency-based curricular approach has brought significant changes in both teaching and assessment. One teacher observed: "It's been challenging, mainly because it requires a shift in how we teach and assess—from content-based teaching to a focus on developing specific skills and competencies." (T1.02) These transformations, though necessary, often encounter resistance and highlight the need for continuous professional development: "When something new begins, there's always resistance to change, and in the education system, of course, that was no exception." (T2.02) Technological limitations also hinder the process: "The lack of didactic materials using technology makes teaching and integration a bit more difficult." (T3.02) Florez (2021) argues that competency-based education, under a socio-formative approach, aligns with current demands for knowledge and skills development in modern society. Similarly, Moreta (2024) asserts that this approach can improve educational quality, although it faces challenges such as a tendency to focus more on subject mastery than on developing transversal competencies. Ramírez (2020) also stresses the importance of the competency-based approach in vocational guidance, emphasizing the need for a comprehensive education that prepares students to face complex challenges.

3.1.2. Competency-Based Planning

Competency-based planning depends heavily on available resources. One teacher shared: "When we've had more resources or access to tools, planning becomes much more dynamic and aligned with competency objectives." (T1.03) However, limited technology and resources in public schools pose challenges: "When we try to deliver our lessons, we face the unfortunate reality that we lack the technology to implement them the way we would like." (T2.03) Still, teachers have found ways to adapt to existing conditions: "Being a public school makes it a bit harder to compare... we just need to be more organized, but it can be done." (T3.03)

Vinces et al. (2023) argue that proper planning is essential for effective school management. Conversely, weak strategic planning can negatively affect educational quality. In this regard, Florez (2021) asserts that a collaborative approach ensures that key factors such as learning evidence and curricular adaptation to student needs—especially in higher education—are addressed. Ramírez (2020) also emphasizes the role of planning in creating a curriculum that supports effective, skill-centered teaching.

3.2. Competencies for Developing Competencies

3.2.1. Mastery of Interdisciplinary Projects

Working with interdisciplinarity has helped both teachers and students broaden their learning perspectives. One teacher shared: “A rewarding experience was working with science and art teachers on a STEAM project—it was satisfying to see students apply concepts in a more real-world context.” (T1.04) However, limited coordination time and differing levels of familiarity among teachers posed difficulties: “The lack of time to coordinate and the fact that some colleagues are less familiar with this type of project made it challenging.” (T1.04) Additionally, teachers had to adapt to disciplines they were less comfortable with: “Personally, I don’t like chemistry, so including it in a project is a bit difficult.” (T3.04)

Valle et al. (2023) explain that STEAM projects have become widely used pedagogical strategies in secondary education, though they face significant challenges—including the need for targeted teacher training and integration into school programs. Similarly, Castro et al. (2021) show that integrating the STEAM approach into the education system can lead to meaningful change by promoting connections among educational fields and real-life application. Jiménez Tecillo (2022) emphasizes that collaboration is key to STEAM’s success, fostering research and interaction among teachers and academic disciplines.

3.2.2. Use of ICT and Learning & Knowledge Technologies (TIC/TAC)

Technology has transformed learning, creating dynamic and self-directed educational opportunities. One teacher remarked: “ICT and TAC had a huge impact… they opened up opportunities for students to participate more actively in class.” (T1.05) However, unequal access to technology, especially in rural areas, limits their application: “Without good internet access... mobile data doesn’t work properly.” (T2.05.2) Additionally, the lack of training and familiarity with platforms reduces effectiveness: “The lack of continuity and unfamiliarity with the platform prevents us from using it effectively.” (T2.05.1) Ziegler et al. (2020) noted that approximately 50% of the world’s population lacked internet access in 2020, creating major inequities in online education and reinforcing the urgency of closing the digital divide. Similarly, UNESCO (2022) states that gender inequality in technology access can negatively impact digital skills and limit professional opportunities for women and girls in tech-related fields.

3.2.3. Teaching Strategies and Instructional Resources

The availability of teaching materials plays a crucial role in implementing the competency-based curriculum. One teacher stated: “The lack of specific resources adapted to this approach prevents students from developing competencies.” (T1.06) They also noted that the Ministry of Education should provide clearer guidelines for implementation: “Sometimes these agreements are very hard to understand and apply.” (T2.06.1) Limited access to technology in public schools also restricts resource availability: “Due to our geographic location, internet access is very poor.” (T3.06)

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Valle et al. (2023) highlight the importance of proper teaching materials and teacher training for effective STEAM implementation. Castro et al. (2021) emphasize the need to integrate STEAM into the educational curriculum to move beyond traditional teaching methods and strengthen the relationship between disciplines and real-life applications. Ziegler et al. (2020) also stress that a lack of connectivity and technical resources leads to serious inequalities in digital education, underscoring how crucial it is to close the digital divide so all students have access to the tools they need for effective learning.

3.3. Changes at the Management Level

3.3.1. Leadership Roles

Support from school leadership is essential for implementing the competency-based curriculum. One teacher noted: "The support and involvement of school leaders has been fundamental […] it has provided more clarity and guidance regarding expectations for implementing competencies." (A1.01) However, a lack of oversight can lead to teacher overload: "When communication is poor or there's no proper follow-up, it results in an increased workload for teachers." (A2.01)

According to the Organisation for Economic Co-operation and Development (OECD, 2021), principals who exercise pedagogical leadership play a more active role in designing and developing the school curriculum. This type of leadership allows them to more effectively guide classroom teaching strategies aligned with educational objectives and also to support the professional growth of teachers. Likewise, the OECD (2021) highlights that pedagogical leaders continuously monitor teaching practices and assess student learning outcomes based on institutional educational goals. Similarly, Fundación Santillana (2019) emphasizes that clear and effective communication from school leaders not only fosters a positive work environment but also facilitates the adoption of curricular and methodological innovations.

3.3.2. Leadership Communication

Effective communication between administrators and teachers is essential to ensure curricular coherence. One teacher stated: "They try to inform teachers and the academic community through study groups and, in some cases, digital platforms." (A1.02) Despite these efforts, challenges persist when information is delayed or incomplete: "Due to a lack of timely and appropriate feedback and information, uncertainty arises among teachers and the academic community." (A2.02)

Cayatopa and Pantigoso (2022) assert that clear and effective communication is vital for strengthening the learning process, since collaboration between teachers and administrators is crucial. Fundación Santillana (2019) also shows that strong communication from school leaders not only connects members of the academic community but also contributes to a positive work climate by boosting motivation. Furthermore, the OECD (2021) notes that principals who adopt a learner-centered approach actively participate in curriculum development and demonstrate a strong ability to align teaching strategies with institutional educational goals.

3.4. Changes at the Organizational Level

3.4.1. Work Teams

Open communication and a well-structured organization are essential for successful teamwork in educational settings. One interviewee emphasized: “The key to success is good communication and openness to share ideas and teaching methods from different disciplines.” (A1.05) However, poor coordination can limit the impact of innovative approaches: “If coordination between administrators and teachers is weak […] it affects the effectiveness of the work.” (A2.05) García-Peñalvo et al. (2020) argue that working in small teams is crucial for fostering creative environments, improving problem-solving, and encouraging deep thinking and both individual and collective development. Likewise, Herrera et al. (2017) maintain that teamwork is an essential skill for professionals, as it facilitates the integration of various abilities and knowledge. Rojas et al. (2010) also state that to improve the quality of educational services, it is essential to offer ongoing professional development and strengthen the competencies needed for interdisciplinary team work. In this regard, Suárez et al. (2023) stress that effective educational management prioritizes teamwork and involves all members of the school community to ensure the achievement of institutional goals.

3.4.2. Roles and Functions

Regarding the definition of leadership roles and functions within educational management to align with the competency-based curriculum, one teacher emphasized: “More specific definitions of roles and expectations would help us work more efficiently and in alignment.” (A1.06) In some cases, organizational deficiencies and workload imbalances lead to frustration: “The lack of clarity in roles or task overload for certain teachers negatively affects performance.” (A2.06) Manes (2004) states that “those responsible for these tasks must learn new techniques that enable them to lead, guide, or manage better educational projects—pedagogically effective and administratively efficient” (p. 12). Similarly, Mayorga et al. (2023) affirm that for institutions to function effectively and for staff to achieve better outcomes, proactive and inspiring leadership is essential. In another study, González and Agramonte (2024) highlight that well-organized educational management allows for the structuring and coordination of activities, contributing to the successful achievement of institutional goals. Indeed, they argue that well-structured school management ensures mission success and addresses the challenges posed by educational reforms.

Conclusions

This study provided a comprehensive understanding of the strengths and weaknesses of the teaching staff regarding the implementation of Ecuador’s Competency-Based Curriculum Framework. Teachers’ reflections reveal a genuine commitment to continuous improvement and the transformation of their pedagogical practice, in alignment with curricular principles. The integration of approaches such as STEAM, interdisciplinarity, and neuroeducation marks a turning point for the education system, demanding not only the effective use of ICT and TAC, but also a deep restructuring of the school organization, teaching processes, and the teaching role itself.

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Despite these advancements, resistance to change persists—mainly linked to insufficient training for the new approaches and limited development of digital and informational competencies—negatively impacting pedagogical management. Likewise, competency-based planning faces the challenge of ensuring curricular continuity and progression, especially in diverse and dynamic contexts.

Interdisciplinarity demands greater collaboration among educational stakeholders, requiring effective coordination for the implementation of meaningful, contextualized projects. Urgent needs remain in terms of continuous professional development, technological investment, and the adaptation of educational resources—critical factors for effective STEAM implementation.

In terms of educational management, the study highlights the need for active and sustained involvement of school leaders—moving beyond administrative leadership to embrace committed pedagogical leadership, characterized by effective communication and close support for teachers. Accordingly, a reconfiguration of institutional roles and a school culture centered on teamwork, continuous improvement, and professional development are proposed as essential conditions for consolidating the Competency-Based Curriculum Framework.

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- Results: should present the information gathered during the research process. If necessary, the results should be presented in figures and/or tables.
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- References: citations should be listed as references to the text. Bibliography not cited in the text should not be included. The number of bibliographic references should be at least 12 and no more than 20, the necessary amount to contextualize the theoretical framework, methodology used, and research results. References should be presented alphabetically by the first author's last name (adding the second name only if the first is too common). APA 7th edition guidelines should be followed.
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Francisco Pizarro E4-142 and Marieta de Veintimilla
Phone: (593) 2 255-5741
rcientifica@uisrael.edu.ec
Quito - Ecuador