Article

University job competences and their challenges in complex times

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Abstract: This study focused on the topic of competences and challenges faced by university teachers in Ecuadorian higher education. The objective of this study was to identify the essential competences that university teachers must possess to confront the current challenges in the Ecuadorian educational field. A mixed research methodology was utilized. A concurrent triangulation design (DITRIAC) was applied. The data collection technique was through documentary study and focus groups. Eight experts in Ecuadorian higher education participated as key informants. Among the findings, there was a consensus on 7 key competences (disciplinary mastery, pedagogical competences, technological skills, research and continuous updating, critical thinking development, ethical and social commitment, flexibility and adaptability to change). It was concluded that Ecuadorian higher education requires teaching professionals who not only master their disciplines and possess advanced pedagogical and technological skills, but who are also leaders in research, promoters of critical thinking, and exemplify ethical commitment and adaptability.

Keywords: university professor; competences; university; Ecuador

1. Introduction

Higher education worldwide has been influenced by the processes of globalization and the knowledge economy. Knowledge in contemporary society is a key element for the economic and social development of nations (Hargreaves, 2003). In this context, universities had to adapt to continuous changes and demands arising from the information era and digital technologies. They had to expand their academic offerings and promote research, given the strategic relevance of knowledge in today's globalized economy.

Since their beginnings in ancient educational institutions in places such as Takshashila in India, Al-Qarawiyyin in Morocco, or the University of Bologna in Italy, higher education had been seen as a means to cultivate minds, enrich cultures, and advance science and technology (Bhattacharyya and Guha, 2017). These institutions, which originally emerged as centers of religious learning or elite training, gradually transformed into places of innovation, research and development (Lin, 2023).

In this area, European universities began to establish themselves as centers of scholarship and knowledge, offering programs in areas such as theology, medicine and law. In this way, these spaces not only promoted learning, but also fostered intellectual debate and critical discussion (Basilotta et al., 2022). However, in the 19th century, when an unprecedented expansion of higher education was witnessed, significant changes were observed. The process of industrialization and the emergence of an educated middle class meant that universities ceased to be exclusive to a certain elite.

In places like the United States, Germany and Japan, higher education became a national priority, and new disciplines emerged to meet the demands of a rapidly changing society. The universities also became centers of research, and the paradigm of knowledge shifted significantly (Vare et al., 2022).

During the 20th century, the strategic role that education plays in the world was reiterated and conceptualized from multiple perspectives, all of which had repercussions for relevant decisions by institutions and their actors (Burns and Klingstedt, 1973). In the 20th century, several challenges and opportunities were introduced that still today reflect the technological boom, globalization, and socioeconomic demands which highlighted the need for diversified higher education (Basilotta et al., 2022). The profound changes brought about by the industrial revolution led to the new ideologies of the 20th century (Brabazón, 2016). It is likely that future revolutions in biotechnology and information technology will demand new perspectives. For this reason, the coming decades could be defined by intense spiritual quests and the emergence of new social and political models, in which education will play an important role. Concerns have also been raised about equity and access within higher education institutions, which has led to policies aimed at ensuring more people, regardless of their background, can benefit from higher education (Mihut et al., 2017).

Currently, this approach gains greater relevance within the framework of globalization and information and communication technologies, which tend to form institutionalized educational systems based on isomorphic patterns of organization and growth, establishing themselves as new educational paradigms (Pérez et al., 2018). Therefore, contemporary scenarios of higher education are no longer limited to a purely pedagogical dimension, but are in a constant search to take on the great challenges implicit in its processes (Morejón and Mitjans, 2021). Although many solutions assume that educating implies multiple activities and actions, the focus is no longer exclusively on schooling. On the other hand, the interest lies in acquiring basic, specific and cross-cutting competences, as well as achieving more relevant and meaningful learning that responds to the demands of an environment governed by a productive paradigm (Baker et al., 2021; Vare et al., 2022).

In 1990, the World Conference on Education for All was held, which underlined that education should focus on the acquisition and effective outcomes of learning, beyond mere enrollment or final certification (Haddad, 1990). Over time, different international organizations, such as the OECD, the World Bank, UNESCO and the ILO, have agreed that higher education worldwide faces significant challenges for the 21st century (Haddad, 1990). For example, UNESCO (2020) highlights the importance of inclusion and equity as essential elements for addressing these challenges, ensuring access to higher education for all, regardless of socio-economic context (Khushik and Diemer, 2021). Likewise, digitization and the incorporation of new technologies have revolutionized pedagogy and teaching methods. In this sense, universities must ensure that their programmers remain relevant in a dynamic work environment. The World Bank (2021) emphasizes the importance of collaboration between academia and industry, considering the need to meet the employability demands of today's labor market (Ahmed et al., 2022; Lin, 2023). In addition, in relation to the Sustainable Development Goals, issues such as climate change and health crises require higher education to adopt a more interdisciplinary approach

focused on problem solving.

Two international organizations are of special importance for Latin America and the Ibero-American sphere in general. On the one hand, the Ibero-American Higher Education Space promotes internationalization, student mobility and cooperation between higher education institutions (Capilla, 2021). On the other hand, within the region, Mercosur constitutes an important framework for integration that has also influenced the harmonization of university systems in its member countries (de Sousa et al., 2018). The Ecuadorian higher education system is framed within this regional and international context.

2. Literature review

In the field of Higher Education, significant changes have been evident in recent years, and Ecuador has been no exception. With the enactment of the Organic Law on Higher Education in 2010, a concerted effort was undertaken to guarantee quality, accessibility and relevance in university (Khushik and Diemer, 2021; Morejón and Mitjans, 2021). This regulatory reform led to a rigorous evaluation and accreditation process of universities. As a result, institutions that did not meet minimum standards were closed and research and innovation were strengthened (Cheruvalath et al., 2023). Thus, there is a marked trend towards internationalization of higher education, with special emphasis on the active participation of university actors, also promoting global academic networks and student mobility.

The implementation of a competency-based education approach in Ecuador seeks to go beyond the simple transmission of knowledge, focusing on the development of skills, attitudes and abilities (Colby, 2017). This approach aims to prepare students to effectively respond to real and changing situations in the workplace and in society. This perspective requires a curricular integration that not only focuses on learning concepts, but also on how to apply them in practical and real contexts (Dodge et al., 2018).

As a result of these transformations, the governing body in Ecuador, the Higher Education Council, has promoted various workshops in the country of the University and Polytechnic Schools Support Program (UEP) (Mendoza et al., 2021). These workshops are linked to the implementation of new approaches that seek a more comprehensive education based on competences. The curriculum proposed within a systemic-complex approach. In this framework, the objective is to articulate and concretize educational objectives in a critical, dynamic, participatory and creative pedagogical and training proposal (Cejas et al., 2020). In this way, higher education allows the transformation of its curriculum, generating learning experiences that unite knowledge with reality, building meanings on the part of the student and enhancing an amalgam of knowledge and skills that impact on their personal, professional and civic identity (Navarro et al., 2020). This proposal is developed considering productive, political, social, environmental and cultural contexts, seeking the transformation of the individual.

As Bruner (1963) pointed out in his constructivist theory of learning, knowledge is acquired through experience and interaction with the environment, so students must be active protagonists in its construction. Bruner conceived learning as a process of

guided discovery, in which the teacher guides and facilitates the experiences that allow the student to elaborate new mental categories based on previous knowledge (Bruner, 1963). Following this line, the teaching role is fundamental to enable meaningful learning experiences.

Lamarra (1987) analyzed the nature of teaching competence and established three major dimensions of it: Psycho-pedagogical competences, disciplinary didactic competences and social competences. The first dimension includes aspects related to educational orientation, evaluation of the teaching-learning process and interpersonal relationships. Regarding disciplinary didactic competences, it refers to the ability to explain, illustrate and link the contents specific to each discipline. Finally, social competences refer to the ability to relate to different sections of the educational community (Lamarra, 1987).

Meanwhile, Keengwe and Gikandi, (2023) analyzed the role of research in university teaching and established four fundamental functions of it. Firstly, the capacity for inquiry to generate new scientific knowledge. Secondly, as a basis for the permanent updating of teachers. Thirdly, research allows innovation in teaching processes (Bengson et al., 2022). Finally, it facilitates self-guided student learning motivation by integrating them into research projects. Thus, for this author it is essential that university teachers develop investigative competences that enhance their work.

Curricular models must emphasize the development of cognitive abilities, which are manifested in skills, competences and performances. Therefore, it is vital to strengthen key competences in teaching professionals and promote the development of generic and specific competences oriented towards knowledge management (Burke, 1989). The emergence of the so-called "new scenarios" has promoted the renewal of discourses on the relevance of education to face the accelerated transformations imposed by globalization in contemporary society, covering all sectors, including education (Adetoro, 2014; Delpit, 2021; Mutiah, 2023). In an interconnected and constantly evolving world, higher education faces challenges such as adapting to the digital age, training global citizens and the urgency of addressing sustainability and climate change issues. Universities, in their role as centers of thought, innovation and action, are crucial in training teachers and students committed to a sustainable and equitable future (Keengwe and Gikandi, 2023).

However, despite the evolution and transformation over the centuries, the essential purpose of higher education remains the same: Cultivating minds, driving discovery, and enriching humanity through knowledge and understanding. In this globalized context, it is crucial that higher education institutions continue adapting and evolving to face the challenges of the 21st century and beyond (Brauer, 2021).

Competency-based education is oriented towards comprehensive education. It not only focuses on the cognitive domain, but also encompasses ethical, emotional, and socio-cultural dimensions. If implemented properly, this approach could be essential to prepare Ecuadorian students for current challenges, providing a holistic education adapted to the needs of the 21st century (Inamorato dos Santos et al., 2023). From this perspective, work is being done on an innovative and dynamic curriculum model, supported by the Academic Regulations. A "competency-based" curriculum design, instead of a "competency-based" one (van Berkum et al., 2023). It refers to an

interaction and relationship between contents and experiences that promote the development of skills and competences, allowing students to apply what they have learned in real and complex work situations (Keengwe and Gikandi, 2023).

The Higher Education Council (CES) has been fundamental in promoting this innovative process and curricular reforms in Ecuadorian universities. The Organization for Economic Co-operation and Development (OECD, 2019) analyzed higher education systems, emphasizing the need to integrate competences into the education system, including social and emotional competences such as critical thinking and metacognition (Maffini and González, 2023). On the other hand, UNESCO (2014) promotes strategies to strengthen higher education, adapting to the complexity of current times, guaranteeing quality education. Currently, with the support of Ecuador's Council for Quality Assurance in Higher Education (CACES), the competency-based education model has taken on strategic relevance in academic institutions globally. However, its approach, which can sometimes lean towards an efficiency perspective, has generated debates about its suitability for university objectives and the demands of the productive sector (Rokhim, 2022).

In Ecuador, the higher education system seeks to achieve high levels of quality and academic excellence. It has undergone major transformations, especially within the internal sphere of educational institutions. Within this process, the advance towards a systemic-complex educational approach is influenced by the competency-based paradigm. The objective of this research is to analyze the labor competences of university teachers in relation to their ideal job performance within the current complexity.

2.1. Competences and their conceptual implication: A challenge for the academic space

Competences are conceived from the Latin "cum" and "petere", meaning "capacity to coincide in direction", meaning "being able to keep pace". In general terms, this meaning is proposed in the academic literature (Maffini and González, 2023). Competence is the ability to stay in the given area; it is a direct comparative situation and is located at a given moment. From the 15th century, "competere" began to acquire the meaning of "belonging to, titling, corresponding", thus constituting the term "competences" and the adjective "competent", whose meaning began to be that of suitable or suitable.

Over time, the term "competences" has been increasingly used in discourses with multiple meanings, adapting it to different socio-labor, academic, business situations, among others (Burke, 1989). In Education, specifically, the notion of competence does not come from a single paradigm alone, but from different theoretical fields (philosophy, psychology, linguistics, sociology, economics, and vocational training). However, their strategic importance is increasingly important.

Definitions of competences in various fields (Cheruvalath et al., 2023):

- They are combinations of knowledge, skills, abilities, and values.
- Those that coexist in a relationship between conceptual, procedural, and attitudinal knowledge.
- Professional competences are the set of knowledge, skills and attitudes that

describe the learning outcomes of a title or qualification of an academic degree, even in a correct way that can be learned and taught.

- Competence as training refers to the degree to which people are prepared to perform a particular profession.
- Competence as suitability refers to the qualification of aptitude or not with respect to job performance.
- Competence as a requirement for professional performance refers to the skills, abilities, skills, and knowledge for a particular job, demonstrating ideal performance.

However, it should be noted that the meaning of competences themselves and their characterization today is highly complex; Many writers from different disciplines address them from their field of execution. Therefore, competences are linked to people's training and are part of the set of policies, strategies and processes that are internally linked to the organization/institution and its actors (León et al., 2024). The objective is to train, qualify and enhance competence in a continuous and permanent manner in the ideal performance of both teachers and students.

The characterization of new management models highlights continuous training, competences, technologies and the adaptations and transformations that occur daily in the contemporary world; This is being noticed more and more in the global economic environment (Furtschegger, 2024). Competence contemplates the conditions and factors established in educational models with a view to the desired labor condition to be developed.

Therefore, the concept of "competence" in the teacher refers to the set of knowledge, skills, attitudes and values they possess that allow them to carry out educational activities effectively (Yılmaz et al., 2023). These competences allow teachers not only to transmit information, but also to facilitate learning, adapt to students' needs, evaluate progress, among other important aspects of education. T**able 1** mentions the characteristics and importance of competence in the field of higher education according to Blanchard et al. (2022) and Lamarra (1987).

Table 1. Typology of competences of university teachers (Blanchard et al., 2022; Lamarra, 1987).

Competences	Characteristics
Work-related personal attributes	They refer to those that identify the skills, motives, personality traits, self-concept, aptitudes, attitudes, and values, as well as the personality characteristics and individual resources linked to the professional level of the university professor.
Professional Attributes	It refers to the attributes that enable an ideal job performance, identified as flexible, creative, and competitive in a professional field of teaching
Scientific Skills	These are the attitudes required to explore facts and phenomena, thus allowing problems to be analyzed, observed, and obtained from information through the various options that allow the teacher to define, develop, and evaluate the methods of analysis.
Competences for citizenship	These are the cognitive, emotional, and communicative knowledge, attitudes and skills that, when articulated with each other, enable university teachers to act constructively in the formation of the student as a citizen.
Core competences	They highlight the intellectual abilities that are essential for learning a profession, among which cognitive, technical, and methodological skills are identified and identified.
Specialized competences	They are those that allow the integration of theoretical and practical knowledge, incorporating criteria and evidence of knowledge, skills, and abilities for an ideal performance.

When a teacher effectively integrates these elements into their professional

practice, they are said to be competent. It is important to consider that teaching competence goes beyond mere mastery of contents; it implies reflective teaching, the ability to respond to the changing challenges of the classroom and educational context, and an ongoing commitment to professional and personal development (Claus and Wiese, 2019).

The concept of competences in education has emerged as a utilitarian and functionalist response to traditional and academic approaches that do not enrich the educational process. This vision proposes cultivating skills and competences relevant to job performance. On the other hand, the difficulty of defining "competences" is due to the multiple facets from which they can be addressed, whether as skills, abilities, knowledge or performance criteria. However, they underline that an adequate understanding of "competence" suggests an objective towards optimal performance in professional practice derived from the training provided. Thus, the term ranges from confrontational connotations to references to individual skills, reflecting its multifaceted character and its relevance in the educational context (Rokhim, 2022).

2.2. Typology and different approaches to Competences in University Teaching

Within the field of competency typology (generic and specific), there are transversal competences, which are those that can be conceptualized as the set of teacher capacities derived from permanent changes occurring in the work framework (new technologies, new processes, modifications in educational organizations and structures); Similarly, they are those that allow the teacher to respond effectively and efficiently to the requirements of the educational institution, focusing on skills that are not considered technical, but also refer to the development of competences such as: teamwork, communication, planning, work organization, lifelong learning, among others.

A distribution of key competences considering the following classification (Muni and Naranjo, 2018):

- Basic competences: Higher-order competences that allow vertical transfer in different contexts of knowledge use (respond to specific application requirements and various occupational and social demands).
- Horizontal competences: Strengthen the ability to process information in such a way as to expand each person's knowledge bases, thus preparing them for transfer between different spheres of knowledge.
- Cross-curricular knowledge elements: Components of knowledge or skills required or used as elements of a shared knowledge base in different contexts.
- Professional competence: Is defined as the ability to independently perform a job in a specific field of activity and without supervision.
- Methodological competence: Refers to the ability to respond to any difficulty systematically and adequately and to meaningfully apply the experience acquired to problems arising in the workplace.

The typology and approaches to competences in university faculty cover a wide range of essential skills, knowledge, and attitudes to address contemporary pedagogical challenges. From didactic, methodological, socio-emotional, and

technological competences, each plays a crucial role in the holistic training of students and in the quality of education. It is imperative that higher education institutions recognize and promote the constant development of these competences in their teachers, as they are the ones who, armed with the proper tools, have the potential to transform and elevate university education to the next level.

3. Materials and methods

3.1. Research focus

The study used a mixed methods approach. This approach is likely the most popular as it allows researchers to aim to confirm or corroborate findings, as well as perform cross-validation between quantitative and qualitative data (Islam et al., 2022).

3.2. Research design

A concurrent triangulation design, labeled DITRIAC, was employed for this study (Hernández and Mendoza, 2018). The DITRIAC approach entails the concurrent collection and analysis of quantitative and qualitative data pertaining to the research problem, culminating in a unified interpretation and discussion of the two types of results. Through analogies or comparisons between corresponding databases, qualitative and quantitative data mutually support and reinforce the overall findings. This design is also referred to as a "side-by-side" approach (Creswell, 2021).

3.3. Key informants of the research

Eight experts in the fields of university teaching and competences in Ecuador were selected. Two experts from the Universidad Nacional del Chimborazo UNACH, two experts from the Universidad de las Fuerzas Armadas ESPE, two experts from the Universidad Técnica de Ambato UTA, and two experts from the Universidad Técnica del Cotopaxi UTC. The inclusion criteria included expert teachers with Doctorate degrees and scientific publications in competences. Belonging to different universities in Ecuador to obtain a broader perspective (UNACH, ESPE, UTA, UTC). A virtual session was scheduled with the objective of analyzing the experiences and domains of the informants. The faculty expressed their criteria on current university competences (Aros and Mejía, 2018).

The research applied a convergent parallel design catalogued as DITRIAC. According to the DITRIAC, quantitative and qualitative data on the research problem are collected and analyzed simultaneously. During interpretation and discussion, the two types of results are further explained and unified. The qualitative and quantitative data ultimately provide support through analogies or comparisons of the respective databases. This design is also called "side by side" (Creswell, 2021).

3.4. Data collection techniques and instruments

Qualitative information was obtained through a bibliographic search. Priority was given to the detailed examination of documents of diverse nature, such as scientific articles, academic publications, books and primary sources relevant to the field of study less than 5 years old (Mendoza et al., 2024). It is worth noting that inclusion and

exclusion criteria were established to filter the relevant literature, based on the thematic relevance, as well as preference for the scope of the dates of the sources consulted. For the search of mixed (quantitative and qualitative) data, the focus group technique was applied. Which is constituted by the initiative and interest of the researcher in planning the (virtual) meeting with the invited group of expert teachers.

A guide of mixed questions was designed as the data collection instrument. In a mixed methodology or multimethod study, the instrument is designed by researchers to collect qualitative and quantitative data, usually through interviews or focus groups (Creswell, 2021). The mixed questions guide covers open and scalar questions. Among the answer options are open opinions, option 1 "Strongly disagree", option 2 "Neither agree nor disagree" and lastly option 3 "Strongly agree" (**Table 2**).

Table 2. Guide to applied questions in the focus group of expert researchers.

N.	Question	Competences	Options		
			1	2	3
1	Do you always feel confident applying your knowledge in your work?	Disciplinary domain			
2	Do you always feel confident in planning and implementing learning activities?	Pedagogical competences			
3	Do you always feel confident using the technological tools available?	Technological capability			
4	Do you always feel motivated to conduct research in your field of work?	Research			
5	Do you always critically analyze the information you receive and the situations you face in your work?	Critical Thinking			
6	Do you always act with integrity and responsibility in your work?	Ethical and Social Commitment			
7	Do you always adapt easily to changes in your work environment?	Flexibility and adaptation to change			
	Any input or opinion:				

3.5 Techniques for analysing the results

A holistic documentary analysis was developed combining theoretical perspectives and studies derived from practice (Crossman and Bordia, 2021). The thoroughness of the documentary review allowed not only to identify trends and patterns in the literature, but also to understand the dynamics and transformations of the university teaching role over time. This made it possible to descriptively propose the competences resulting from the specialized bibliographic search (Hammersley, 2021).

To ensure quality and relevance of materials, a protocol for systematic review was adopted. For this reason, a comprehensive approach to competences was presented (Hernández and Mendoza, 2018). This process involved identifying key academic databases during the study development. Thus, access to documentary sources (Scopus preview, Google Scholar, Google Book, Connect Paper) made it possible to use keywords that, together with the combination of related terms, allowed knowing the key competences of university teachers. This search approach favors the exploration of multiple resources, thus ensuring an integral perspective on the topic (Goyal et al., 2021). The documentary analysis adopted in this research not only focused on extracting data and identifying key information, but also allowed a process of reflection and synthesis (Daverne-Bailly and Wittorski, 2022). It sought to identify relationships, discrepancies, and gaps in existing literature. Technological tools played

an essential role in this process, facilitating the organization, storage, and retrieval of information, and allowing the construction of a coherent and logical framework that served as the basis for later research phases.

To analyze the data obtained from the guide of questions applied to the experts, the researchers used descriptive and interpretive analysis techniques. Descriptive analysis allowed summarizing basic statistics. The information gathered in a systematic way. In this way it was possible to identify general patterns and trends. On the other hand, through interpretive analysis they sought to find meanings and understand the findings in depth. In this way, they examined the qualitative and quantitative data in detail in order to discover themes, concepts and relationships to explain the phenomenon under study (Betti, 2021). Thanks to this double analysis strategy, the researchers were able to interpret the reality studied in a more complete way. All the information obtained was finally contrasted using the triangulation of results technique. Triangulation allowed validating and enriching the findings by contrasting diverse sources and perspectives. Contracting allowed building a deep and well-founded narrative about university teachers' competences (Umesh and Dubey, 2022).

4. Results and discussion

The findings of this study are derived from a meticulous integration of qualitative and quantitative techniques, applied through a convergent parallel design (DITRIAC). This mixed methodology made it possible to obtain a deep and holistic understanding of the key competences that university teachers must have in the current Ecuadorian context (Thomas, 2021). Initially, an exhaustive documentary review was carried out, analyzing specialized literature of high relevance in the field of higher education. This process initially identified a total of 10 competences considered essential for teaching practice in universities. This set encompassed fundamental aspects such as:

- C1-Subject matter expertise: Defined as the competence that teachers must have, as in-depth knowledge of their subject for a comprehensive teaching-learning process.
- C2-Pedagogical skills: Studies the competences that teachers must have in teaching methodologies that promote active and meaningful learning.
- C3-Technological skill: Refers to mastery of those digital tools and online learning platforms that have become essential in universities.
- C4-Research and updating: Teachers must be up to date in their fields of study and didactic competences, which is key to educational innovation and intellectual production.
- C5-Effective evaluation: Is the ability to design and apply evaluations that adequately measure university students' learning and competences in their classroom.
- C6-Classroom management: Is the ability to manage heterogeneous groups, promote inclusion and manage conflicts.
- C7–Development of critical thinking: Refers to the ability for analysis and critical reflection that university teachers currently require.
- C8-Ethical and social commitment: Refers to teachers' ability to promote ethical

values and awareness.

- C9-Flexibility and adaptation to change: Refers to the need for teachers to adapt to new educational policies, social demands, and technological changes.
- C10-Internationalization of knowledge: Refers to the need for teachers to develop the ability to integrate international perspectives in the classroom.

However, to strengthen these initial findings and obtain a more contextualized perspective, a focus group was formed consisting of 8 experts in university teaching and competences from different institutions of higher education in Ecuador. Through a guide of mixed questions, specifically designed for this study, the assessments and opinions of these key informants were collected. Through a dialogical and collective knowledge construction process, the experts agreed that 7 competences were the most transcendental and priority for the effective performance of current university teachers (**Figure 1**).
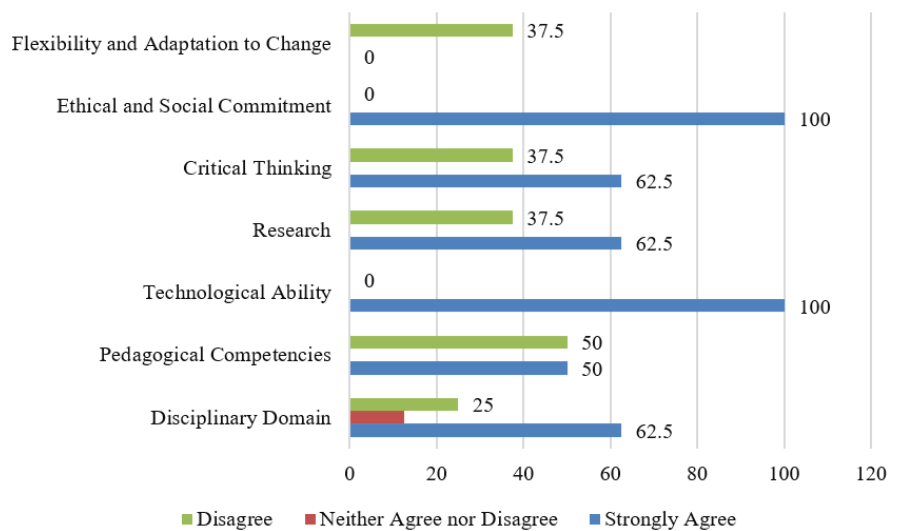
Figure 1. Results obtained from the guide of questions applied to Ecuadorian university research experts.

Firstly, subject matter expertise was recognized as a fundamental pillar, with 62.5% of experts stating they strongly agreed with its relevance. This finding underscores the importance of teachers having in-depth and solid knowledge in their respective areas of specialization, which constitutes the basis for quality teaching (Claus and Wiese, 2019). Pedagogical skills were also highly valued, with almost 100% of experts agreeing on their need. This shows that while subject matter expertise is important, teachers must complement it with didactic and methodological skills that promote active and meaningful learning in students (Brabazon, 2016).

Unanimously, the experts recognized the importance of technological skills in today's digital era. 100% of participants stated they strongly agreed with this competence. The need was evidenced for teachers to keep up to date and effectively integrate technology tools and platforms into their educational practice (Adetoro, 2014). Among these is the use of new technological trends such as the application of Artificial Intelligence. Another widely supported competence was continuous research and updating, with 62.5% of experts strongly agreeing. This assessment reflects the importance of teachers maintaining a proactive attitude toward lifelong learning,

constantly updating their knowledge and contributing to the generation of new knowledge through research (Burns and Klingstedt, 1973).

Additionally, experts highlighted the relevance of developing critical thinking, with 62.5% expressing their strong agreement. This competence implies that teachers must encourage students' abilities for analysis, reflection and questioning, which are fundamental skills for facing today's complex societal challenges (Haddad, 1990). Ethical and social commitment was also unanimously recognized by experts as a key competence for university teachers. This finding suggests that higher education should transcend mere transmission of knowledge. Similarly, promoting ethical values and social consciousness in students, training professionals committed to the common good and sustainable development.

Finally, although most experts recognized the importance of flexibility and adaptation to change, 37.5% did not take a firm position in this regard. This result may indicate that while the need for teachers to adapt to constant changes in the educational field is recognized, there are significant considerations regarding the challenges and limitations that this adaptability entails, such as institutional structures or resistance to change (Rokhim, 2022). The findings of this study, obtained through the mixed methodology and triangulation of results, reveal a consensus among experts on the importance of seven key competences for Ecuadorian university teachers: subject matter expertise, pedagogical skills, technological skills, continuous research and updating, development of critical thinking, ethical and social commitment, and flexibility and adaptation to change. These competences reflect the complex and multidimensional demands facing teachers in contemporary higher education, and their development is fundamental to ensuring comprehensive and quality training for students.

5. Conclusion

Based on the results obtained in this research, it is possible to arrive at revealing conclusions about the key competences that university teachers must have in the current Ecuadorian context. These findings have significant implications both for higher education institutions and for teachers and their professional development. Firstly, it is evident that subject matter expertise remains a fundamental pillar in university teaching. The experts consulted underscored the importance of teachers having in-depth and up-to-date knowledge in their respective areas of specialization. This expertise constitutes the solid foundation on which the other competences and skills necessary for effective teaching are built (Pérez et al., 2018).

However, the study also revealed that subject matter expertise alone is not sufficient in today's educational context. Teachers must complement it with sound pedagogical skills that allow them to effectively convey their knowledge and promote active and meaningful learning in students. This implies managing innovative teaching methodologies adapted to students' diverse learning needs and styles. The findings also underscore the importance of university teachers developing advanced technological skills. In today's digital age, incorporating technology tools and platforms into the educational process is essential to stay at the forefront and provide training aligned with labor market demands (Vare et al., 2022).

Another key aspect highlighted by experts is the need for teachers to actively engage in continuous research and updating their knowledge. This will not only allow them to stay current with advances in their disciplines but also contribute to the generation of new knowledge and educational innovation. Research also represents a valuable opportunity to involve students in practical and contextualized learning processes (Yılmaz et al., 2023). Beyond technical and disciplinary competences, the study emphasizes the importance of university teachers promoting the development of critical thinking in their students. This skill is a priority to train professionals capable of analyzing, questioning, and effectively addressing the complex challenges they will face in their respective fields and society in general.

Additionally, experts agreed that ethical and social commitment is an essential competence for today's university teachers. Higher education should not limit itself to transmitting technical knowledge but should promote ethical values and social awareness in students, training professionals committed to collective well-being and sustainable development. However, it was also revealed that while flexibility and adaptation to change are recognized as relevant competences, there are significant challenges and considerations regarding their effective implementation. Teachers must be prepared to face constant changes in the educational field, adapting to new policies, social demands, and technological advances. Nevertheless, this adaptability can be limited by structural factors or institutional resistance to change.

In conclusion, the research underscores the need for Ecuadorian higher education institutions to promote the holistic development of the key competences identified in their teachers. This implies providing continuous training opportunities, promoting educational research and innovation, and creating environments that facilitate the adoption of new methodologies and technologies. Similarly, teachers themselves must assume an active commitment to professional development, keeping up to date, exploring new pedagogical and technological strategies, and cultivating an open mindset towards change and continuous improvement. Only through this joint effort between institutions and teachers can quality, relevant education in line with 21st century demands and challenges be guaranteed.

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