Issues in Information Systems
Volume 26, Issue 4, pp. 512-525, 2025

DOI: https://doi.org/10.48009/4_iis_2025_140

Management strategies to strengthen digital skills in accounting educators: A case study in a private university in Lima, Peru

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Abstract

The purpose of the research was to propose a management strategy aimed at providing methodological alternatives for teaching performance by promoting computer skills and the application of ICT. This is a qualitative study, descriptive in nature, focused from the socio-critical and interpretive paradigm. The study is directed towards generating knowledge to design, implement, and adjust a solution to the problem under study, with the aim of improving pedagogical practice. The dialectical nature of the research is highlighted by articulating a priori categories and contrasting them with data collected through relevant instruments, which allowed for a field diagnosis, analyzing the categories that gave rise to the problem. The sample, determined through convenience sampling, consists of four teachers and twenty-five students. Semi-structured interviews, an observation guide for teachers' classes, and questionnaires for students were used. These instruments allowed for the identification of both emerging categories in general and those that specifically affect the problematic subject of study. The results obtained were analyzed and interpreted, leading to the general conclusion that methodological strategies directly influence student learning. Therefore, a management alternative is proposed for teaching practice activities that contribute to the development of teachers' computer skills, thereby improving their performance in guiding the teaching-learning process across different curricular designs.

Keywords: Strategies, teaching management, computer skills, developmental didactics

Introduction

The rapid development of knowledge has led to its emergence as a paradigm of the 21st century, emphasizing its role as a means of information in the development of various disciplines, theories, organizations, and societies. According to Terrazas and Silva (2013), knowledge is defined as the appropriation and proposition of new ideas that, when logically organized, transform preliminary data into important elements considered as relevant information for decision-making and transformative action in society (p. 147).

From a theoretical perspective, the concept of the knowledge society is closely linked to the theory of intellectual capital. Drucker (1993) argues that intellectual capital is fundamental for organizational success in the knowledge economy, where the ability to create, share, and utilize knowledge becomes a strategic asset. This theory underscores the great utility and preponderance of knowledge management in an increasingly competitive environment.

Furthermore, the integration of various ICTs into the educational process is framed within constructivist theories of learning, thereby enriching the set of strategic alternatives available to educators to support the construction of meaningful learning in students. In this vein, Piaget (1976) and Vygotsky (1978) argue that knowledge is actively constructed through interaction with the environment and social

mediation. In this sense, ICTs act as a set of tools that foster collaborative learning and knowledge construction in educational contexts, allowing for more dynamic and adaptive teaching.

Thus, in this scenario, education plays a vital role as an emancipating force. Álvarez (1999) and Peñaloza (2003) argue that it is essential to innovate in educational methods and strategies to promote the improvement of skills and knowledge that prepare students for reflective, balanced, and productive social behavior. Consequently, the inclusion of ICTs is presented as a key strategy to address these challenges.

According to UNESCO (2013), contemporary education must face the challenge of integrating and elevating the quality of education through the use of ICTs. These technologies not only make the learning process more attractive but also offer effective tools for teachers to facilitate understanding and knowledge construction (Álvarez, 1999; Addine, 2013). Empirical evidence supports this claim, as the works of Díaz (2009), Oltolina (2015), and Vega (2017) argue that the application of ICTs in educational classrooms can facilitate content understanding and information accessibility.

However, the effectiveness of ICTs depends to some extent on the teacher's ability to use these tools effectively. Martínez (2009) highlights that communicative, scientific, and didactic skills are crucial to maximizing the influence of ICTs on learning. Therefore, it is relevant to develop these competencies to achieve collaborative and efficient learning.

From this perspective, UNESCO (2013) argues that the implementation of ICTs must be supported by public sector policy decisions that support educational activities, teaching practices that reflect the training and educational needs of students. This approach is also supported by the National Educational Project to 2021 (C.N. de Educación, 2016) and (C.N. de C. y Tecnología, 2006), which highlight the benefits of considering and integrating ICTs into education and coordinating these actions with the Digital Agenda in promoting technology development and innovation.

Finally, the professional profile of university teachers requires the management of knowledge, skills, and abilities in the use of ICTs as teaching strategies and means. Álvarez (2011) emphasizes that teachers must have a high level of knowledge of audiovisual techniques and ICTs to achieve effective student learning. However, it is observed that a significant percentage of university teachers lack the necessary skills to use ICTs effectively. This lack of competence limits the teachers' ability to stimulate interest and learning.

Therefore, the central objective of this study is to promote a management strategy that enhances computer skills and resources in teachers of the accounting area of a private university in Lima. The research focuses on identifying current deficiencies in the use of ICTs by teachers and designing and implementing a training plan that allows for the improvement of their digital competencies. In this way, the aim is to contribute to the professional improvement of teachers and, as a consequence, enhance the teaching-learning process; an event that will translate into a significant improvement in educational quality, thus becoming an innovative proposal of the university institution, raising student learning indicators as well as university quality standards.

Methodology

Design a management plan to improve the skills in the use of digital technological tools of the teachers of the Accounting School in a private university institution. The purpose is to articulate the theoretical foundations that support the management strategies and computer skills of the selected teachers. To this end, the current state of knowledge and computer skills presented by the teachers will be analyzed, and the theoretical and methodological guidelines that will guide the design of an effective management strategy will be established.

Table 1: A Priori Categories And Subcategories

Category	Subcategory
Computer Skills These are the scientific, communicative, and social skills that serve as prerequisites for implementing ICT in teaching-learning processes (Martínez, 2009). Management Strategy It is a deliberate process that integrates the pedagogical use of ICT and the knowledge possessed by teachers to manage knowledge effectively (Moreno y Paredes, 2014).	Communicative skills Scientific skills Social Skills Diagnosis and determination of objectives Thematic development plan Implementation and evaluation

Source: Own elaboration (2023)

The study corresponds to the socio-critical interpretive paradigm, with a qualitative approach, located in an applied educational field study. It is oriented towards the inquiry of knowledge to carry out, execute, construct, and propose alternatives for understanding the problem posed (Cisterna, 2005). Observation, analysis, and interpretation were the techniques applied to understand the problematic reality under the responsibility of the researcher, and through the application of rigorous scientific method, it is proposed to find the answer to the question posed to contribute to educational improvement. Thus, the dialectical development character is highlighted by being based on the methodological functions of the degree of knowledge in its correlation of being and thinking. Thus, the implementation of ICT innovations in teaching practice responds to the rapid changes occurring in the field of computing, which results in the understanding of the various subjects taught in university classrooms. Therefore, the university, as an institution that sets the pace in the development of knowledge, cannot lag behind in the use of technology and digital media.

Through the scientific method, the theoretical elements were systematically organized, the causes that give rise to the reality of the problem were evaluated, and strategies for teacher management in the application of ICTs in teaching practice were formulated to elevate student learning. This contributes to fostering the participatory role of the student in the effective assimilation of the knowledge imparted, contributing to meaningful learning that impacts thinking, feeling, and doing.

Population, Sample, and Sampling

The study population consisted of 35 professors from different disciplines and 567 students enrolled in the School of Accounting at a private university in Lima. Given the exploratory and applied nature of the study, a non-probabilistic convenience sampling method was used. This approach was selected because it allowed direct access to participants who were readily available and willing to provide in-depth information relevant to the research problem, as well as because they represented key informants in the academic context under study.

The final sample included four professors (three full-time and one part-time) teaching various subjects within the Accounting program. These professors had professional experience ranging from 5 to 20 years, and their profiles revealed heterogeneous levels of prior training in the use of ICT, from basic users of office software to teachers with intermediate management of digital platforms. The 25 students

selected were enrolled in different semesters of the program, with ages ranging from 18 to 25 years old, representing a mix of first-year and advanced learners. This diversity allowed for gathering insights from both novice and experienced students regarding the teaching practices of their professors and the integration of ICT in the classroom.

This sample composition provided a holistic perspective of the phenomenon under study by incorporating the viewpoints of educators directly involved in the teaching-learning process and students who experience the use (or absence) of ICT in their courses.

Research techniques and instruments

Appropriate techniques for qualitative research were applied to gather the required information, including:

Observation of teachers in class

Through this technique, data was collected about the strategies that the teacher applies in their teaching-learning process to understand how they manage their teaching practice, whether or not they apply ICTs. Observation is a technique that leads to firsthand knowledge of the record of responses that are expressed as they are presented in the senses, identifying situations, characteristics of the element of study, transferring to the need to organize them systematically (Rodríguez, 2005). For this purpose, an observation guide was prepared and applied, containing aspects conducive to achieving the objective proposed in the study.

Surveys of students

Through the survey technique, a questionnaire was applied to identify the teaching management strategies used in the development of computer skills. In accordance with what Martínez (2004) expresses, the objective of applying the survey is to obtain appreciations of reality, seeking to find reliable data regarding the synonym of the indicated phenomena. The reference period was from September 5 to 20, 2023. The data collected were very useful to confirm the research proposal.

Expert judgment

In the opinion of Escobar and Cuervo (2008), expert judgment is conceptualized as "an informed opinion of subjects with full knowledge of the topic, who are recognized as professionals with the appropriate competencies who have the wisdom to provide diverse information, judgments, and relevant assessments that will support the objective of answering the research questions." In the context of this study, expert judgment was used as a validation procedure to ensure the effectiveness of the suggested management strategy, aimed at elevating the skills and abilities in computing of the teachers of the study unit. The experts evaluated the proposal in terms of its relevance, applicability, and potential impact. Additionally, a statistical validation of the questionnaire used to collect the opinions of the experts was performed. This process included internal consistency analysis and reliability tests to ensure that the responses obtained were valid and representative.

Relationship Between Research Questions and Data Collection Instruments

To ensure coherence between the research objectives and the data collection process, the semi-structured interviews with teachers, classroom observations, and student questionnaires were directly aligned with the research questions. This alignment allowed for a deeper understanding of the problem and for triangulating data from different sources.

Research Question 1: What are the theoretical references that support management strategies and computer skills in accounting teachers?

- Instrument: Semi-structured interview with teachers.
- Key questions:
    - How do you conceptualize the role of ICT in your teaching practice?
    - What training or theoretical foundations do you consider necessary to integrate ICT into your classes?
    - Which pedagogical approaches do you use when incorporating digital tools?

Research Question 2: What is the current state of the development of computer skills in accounting teachers?

- Instruments: Semi-structured interview, classroom observation guide, student questionnaire.
- Key questions:
    - To what extent do you use ICT tools (PowerPoint, Word, Excel, virtual platforms) in your courses?
    - How do you assess your own skills in using ICT for educational purposes?
    - (Observation) Does the teacher incorporate collaborative or interactive strategies supported by ICT?
    - (Questionnaire for students) How often do your teachers use ICT tools during classes?

Research Question 3: What theoretical and methodological criteria should be considered when modeling a management strategy to contribute to the development of computer skills?

- Instruments: Semi-structured interview with teachers, expert validation.
- Key questions:
    - What elements do you consider essential for improving your digital competencies?
    - What kind of training or support would you find most effective for integrating ICT into your classes?
    - (Expert validation) Are the proposed management actions relevant and applicable to the current educational context?

Research Question 4: How can the effectiveness of the proposed management strategy be validated?

- Instruments: Expert judgment, statistical validation of the questionnaire.
- Key questions:
    - Do you consider the proposed strategy feasible for implementation in the Faculty of Accounting?
    - What adjustments would you recommend to ensure its applicability and impact?

By structuring the instruments in this way, each data collection technique directly informed one or more research questions, enhancing the reliability and validity of the study through methodological triangulation.

Data Validation and Analysis Procedures

To ensure the reliability and validity of the collected data, a triangulation of sources and techniques was applied, combining the perspectives of professors, students, and experts. The instruments (interview guide, classroom observation guide, and student questionnaire) were subjected to a content validation process by expert judgment, in which five specialists in education and educational technology reviewed the instruments for relevance, clarity, and consistency with the study objectives. Each expert rated the items using a structured rubric, and the Content Validity Index (CVI) was calculated, ensuring that all items met the minimum required agreement level.

Once validated, the instruments were applied in the field, and the data were processed through two complementary analytical approaches:

Qualitative analysis
The information from interviews and observations was transcribed and coded using thematic analysis. Categories were first established a priori (based on the theoretical framework) and then complemented with emerging categories obtained from the data. The process followed the stages of reduction, organization, and interpretation, allowing for the identification of patterns and relationships between categories.

Quantitative analysis
The questionnaire results were analyzed using descriptive statistics (frequency tables and percentage distributions) to identify trends in students' perceptions about professors' use of ICT and their digital skills.

This mixed-method approach allowed for a comprehensive understanding of the phenomenon, integrating the subjective perspectives of participants with measurable data trends, and thus reinforcing the robustness of the findings.

Results

Results of the interview applied to the teachers

Through the application of an open-ended interview with four teachers from the Faculty of Accounting to understand the use and perception of ICTs during the teaching-learning process, the results obtained are interpreted as follows:

First, the teachers agree that the management of technological tools is crucial to achieve the development of computer skills, with one of them emphasizing the need for training on these technologies for pedagogical management in the classroom. Three teachers recognize that mastery of computing depends on the level of skill acquired, but one points out that they do not use these tools due to lack of time and knowledge, despite understanding that practice is essential for mastery.

Regarding the use of ICTs as an expository resource, three teachers believe that these tools improve classroom presentations. However, one of them considers that to improve discursive use, a higher level of training is necessary, as the design of learning sessions with images, videos, and audio would strengthen professional capabilities. Also, one teacher adds that the use of ICTs fosters greater participation and expectation from students, while two interviewees observe that these tools arouse greater interest and motivate students, facilitating a more solid explanation of the content.

Regarding communication and feedback, two teachers affirm that ICTs facilitate fluid and real-time communication with students, allowing for better academic follow-up and ensuring the necessary feedback. Regarding access to information, one teacher points out that audiovisual media help in the search and access to tools for meaningful learning, while two teachers mention that their use is limited to basic internet searches due to a lack of mastery of these tools.
Regarding the facilitation of teaching-learning, two of them believe that ICTs elevate the understanding and learning of a particular topic as well as foster the learners' interest in knowing the subjects. Another teacher considers that ICTs are important pedagogical strategies, although for their effective use, additional preparation or updating is necessary. In the curricular field, three teachers believe that it is crucial to characterize the learners to know their strengths and weaknesses. One of them highlights problems in student writing and motivation, as well as factors such as family responsibility and low knowledge of ICTs.

Regarding pedagogical planning, two teachers agree with the stages of short, medium, and long term, setting the achievements in each stage. Another teacher suggests that the objectives should be aligned with the graduate profile according to the curriculum, while the last one mentions that these objectives are elaborated by other responsible parties and they do not participate in this process. Regarding knowledge and use of computer tools, none of the four teachers know specific theoretical models about this practice, although all agree that tools such as Word, Excel, and PowerPoint facilitate learning and improve teaching performance.

The teaching-learning methods with ICTs vary among the teachers. One uses ICTs to collect prior knowledge and perform group tasks, another for the case method and problem-solving, and another interviewee in participatory, interrogative, and active methods. However, deficiencies in infrastructure and ICT training are identified, which is necessary to boost the teaching-learning process.

It is evident that teachers face challenges in managing technological tools and their effective application in the educational field, despite recognizing their usefulness as an expository resource.

Regarding the observation of teachers' classes, the results reveal the following:

It is noted that only one teacher develops active practice at the beginning of the class session, generating dialogue related to the topic, while the other three teachers start directly with the content. The teacher who explores prior knowledge achieves greater participation and a more dynamic exchange of ideas among the students. Of the four teachers mentioned, only two indicate the achievement of the class, while the other two start immediately with the session topic.

During the teaching-learning process, all teachers use PowerPoint presentations, but only two pause to dialogue with the students about the topic, showing good mastery of the content. The other two teachers follow the PPT content without verifying student understanding. Three teachers ask questions to gather concerns about the content, but one of them answers the questions themselves.

Two teachers present examples on the use of ICTs and communicative skills, although one does not use ICTs to stimulate student communication. All teachers practice learning activities in a traditional way without student participation, avoiding collaborative work and the use of ICTs as an innovative didactic resource.

It is not observed that the teachers explain the actions to be carried out in the activities or that hetero-evaluation or self-evaluation is carried out. The teachers only use PPT as a digital visual medium in their teaching, without providing collaborative participation guides or indications on the use of additional ICTs. Most of the classes are expository, and critical thinking and collaborative work are not promoted.

Finally, it is observed that teachers use PPTs as a standard resource, without fully exploiting their capabilities to facilitate learning and problem-solving. The expository method predominates on the part of the teacher, and a lack of activities that stimulate collaborative work and formative evaluation is observed.

Regarding the questionnaire applied to 25 accounting students, the results are interpreted as follows:

Most students (84%) consider that ICTs represent useful strategies for imparting classes, while 16% see it as important only sometimes. This is an indication of the need for teachers to emphasize the use of ICTs to increase student preference for the course.

Although 56% of the students mention that teachers apply ICTs in classes, 32% say they do so only sometimes and 12% not at all. This suggests that the use of ICTs is not common in learning sessions, with a tendency towards traditional methods.

All students indicate that the teacher uses content exposition as the main method, reflecting traditional teaching centered on exposition and not on the development of competencies. Only 4% observe the continuous application of the problematization method, while 56% mention the use of group work, with 32% not doing so and 12% doing so sometimes.

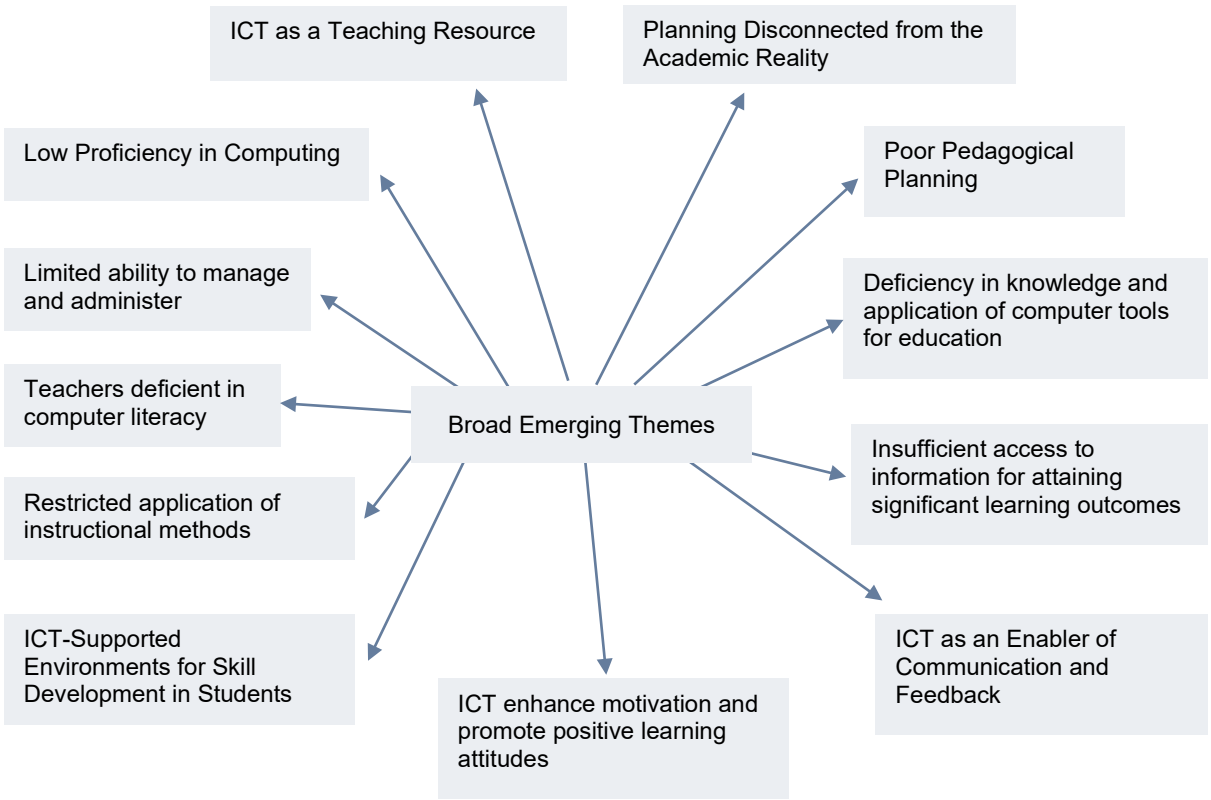
Regarding the use of ICTs for internet work, 80% of the students affirm that teachers do use them, although only 4% mention that ICTs are used for learning evaluation. This shows that most teachers do not implement formative evaluation with ICTs, despite their potential.

Finally, students express their desire for teachers to use more ICT tools in classes to improve understanding and learning. 68% indicate that other subjects already use them, which facilitates the teaching-learning process and reflects greater acceptance of these tools among learners.

According to the analysis, students value the use of ICTs in teaching and expect greater integration in class sessions to improve their learning and skill development, highlighting the need for greater theoretical and practical training of teachers in these tools.

Categorization and interpretation process

Figure 1: Emerging General Categories Resulting From The Field Diagnosis

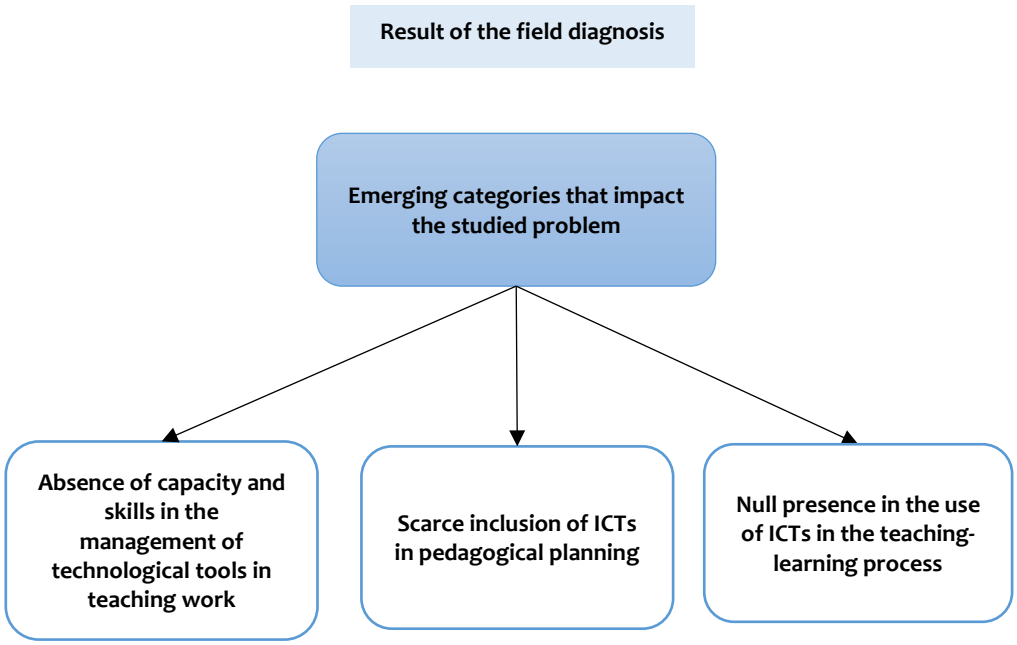


Source: Own elaboration (2023)

The triangulation technique allowed for contrasting the results of the applied instruments and determining the coincidences and discrepancies of the obtained data. Thus, it was possible to identify the emerging general categories illustrated in Figure 2.

The emerging categories identified in the holistic analysis of the research data reveal key problems in the integration of ICTs in educational training. The lack of knowledge and skills to manage technological tools emerges from interviews with teachers who recognize the relevance of ICTs but admit deficiencies in training and mastery. The deficient planning of learning sessions with the absence of ICTs is observed in current pedagogical practices, where the integration of technologies in the planning and execution of classes is insufficient. Finally, the lack of implementation of ICTs in the teaching-learning function is evidenced both in class observation and in student questionnaires, who report that the use of ICTs is sporadic and not always effective, highlighting a persistence in traditional methods and limited integration of technologies.

Figure 2: Emerging General Categories Resulting From The Field Diagnosis



Source: Own elaboration (2023)

Analytical and interpretative relationships between data and emerging categories

The triangulation technique allowed for contrasting the results of the applied instruments and determining the coincidences and discrepancies of the obtained data. Thus, it was possible to identify the emerging general categories illustrated in Figure 2.

Capacity and skills in technology management

All teaching activities aimed at strengthening student learning must start by strengthening the practice and skills in emerging technologies of teachers. This implies leaving behind outdated methods to be replaced by innovative methods and strategies in line with the competencies that the student must develop to be useful in organizations and society as a whole. It is not just a matter of obtaining

technologies, but of managing them adequately to achieve better teaching capacity and apply them for the benefit of university students who are the objective (Agudelo, et al, 2005).

In the opinion of Duart and Lupiáñez (2005), institutions must address decisions that allow teachers to apply dynamic teaching techniques, but for this, university management must implement technological infrastructure and ICT pedagogical resources. This would represent a true motivating element for the student, increasing their interest in learning, as well as facilitating the achievement of digital technological competencies demanded by users of university accounting services. This would respond to self-regulated learning that contemplates the increasingly demanding demand of the business sector, in the solution of their information and data processing problems with quality, agility, and opportunity.

In this order of ideas, for Aguirre (2018), a genuine application of ICTs in the teaching process must be a matter of public policies that must consider several aspects, in addition to structural environment and economic means. Thus, effective management must be applied that leads to the active participation of the protagonists in this process. It is imperative that there is an opportunity for training and decisions that facilitate access to ICTs in collaborative environments based on platforms and guidelines that allow a critical understanding of their benefits (Hanna and Silver, 2005; Bou, et al, 2003; Uribe-Tirado, 2010). In the opinion of (Kehm and Wit, 2005; and Lanuza 2018), the implementation of these technological strategies facilitates the reinforcement of multidisciplinary participation, as well as the development of professional groups of interuniversity work.

Pedagogical planning with the inclusion of ICTs

The importance of ICTs in the educational field, specifically in the context of curricular planning, lies in the fact that it is not only directed towards academic functions but also towards the management of activities aimed at improving learning based on the use of ICTs. These activities include the formation of an adequate environment, a comfortable space or community with technology that fosters learning. For this to occur, certain components are required, as expressed earlier, as well as a pedagogical action centered on the management of various academic learning, teaching, materials, tutoring, evaluation activities, among others relevant; the relevant technology (tools that are related to the pedagogical model) and the organization of suitable physical spaces, the programming of the calendar, the administration of the community (Uribe et al, 2010 and Lanuza. 2018).

In the elaboration of the plan and implementation of activities in the teaching-learning process, the application of ICTs in university educational work should result in a significant change, becoming an effective tool in learning. Therefore, the teacher must plan accompaniment, guidance, follow-up, and support activities for the student so that they can be autonomous with the capacity to learn to learn. Considering the applications that exist in the virtual world of the internet that can be managed in favor of learning, these are available to venture into the educational field through various platforms that facilitate the development of an autonomous attitude in student performance in the learning process, discarding the paradigm that the teacher is the only alternative for the student to achieve learning (Lugo, 2010; Uribe-Tirado, 2010 and Lanuza. 2018). Thus, the achievement of competencies in the university student is not only the responsibility of the teacher who becomes a facilitator, but also of the student themselves who independently constructs their knowledge and self-facilitates their own learning.

Application of ICTs

The increasingly latent development of ICTs proposes that university institutions adopt new strategies in the imparting of knowledge in the classroom, as it requires the presence of basic conditions such as physical space, computer resources, economic resources, and teacher participation. The effectiveness of ICTs lies in the presence of their attributes, as well as in the versatility or qualities both technological and pedagogical design, as well as in the model of the pedagogical approach that is implemented, taking into account that technology is included and used didactically. In this scenario, the level of knowledge,

skills, abilities, knowledge, perceptions, and attitudes of the environment that the teacher possesses will be decisive factors for their inclusion in the construction of curricular schemes (García-Valcárcel, 2007).

The inclusion of ICTs in curricular planning requires all the protagonists of student learning to assume a reflective attitude regarding three major aspects related to innovation or renewal that, in turn, will impact the organizational culture of the university, teacher training, and the active collaboration of the educational administration by formulating improvements in educational objectives and updating the understanding of the teaching-learning process; modifications in teacher performance, student performance, and the scheme of the university organizational structure (Cabero et al, 2006; Uribe et al, 2010 and Lanuza, 2018). In relation to what is expressed by the aforementioned authors, university learning involves committing the institution to assume a leading role in the implementation of innovative curricular programs that include the application of technology in favor of a modern education that meets the requirements of society. Likewise, implement a teacher training plan in the use of the aforementioned technology and thereby close the gap of absence in the knowledge of ICTs.

A central aspect of the indicated change, which affects what the teaching-learning process pursues, is located in the achievement of specific and generic competencies by a student who transforms into an actor of their own learning. It is recognized that the presence of the teacher is to facilitate access to information, promote greater closeness between educators and students. In summary, the implementation of ICTs facilitates adaptation, making it more ductile, a better scenario to implement innovative learning resources, stimulate closeness and communication between teachers, fostering the exchange of experiences, knowledge, and resources. Therefore, decision-making by managers must be integral: a curricular plan that includes relevant ICTs, implementation of technology centered on hardware, software, and various current ICT tools, and teacher training in the use of these technologies.

Discussion

By identifying deficiencies in teacher performance regarding the use of ICTs, the need for specialized and systematic training is revealed to allow educators to effectively integrate ICTs into their pedagogical practices. This study provides a significant contribution by highlighting the existing gaps in teachers' knowledge and skills to manage technological tools. The research underscores the importance of educational institutions not only providing technological tools but also the necessary training for their effective use, which can contribute to a notable improvement in the quality of teaching and learning. In this sense, it is imperative that the management team develop a training and teacher development plan emphasizing the use of technology in classroom practice.

The study also highlights the lack of adequate pedagogical planning that incorporates ICTs in an integral manner. The deficiency in the characterization of students and in the formulation of specific learning objectives reveals a gap in the alignment between pedagogical methods and the real needs of students. This observation indicates that more detailed and individualized curricular planning could enhance the influence of ICTs in the educational process. Based on these findings, it is suggested that the management propose and guide teachers in the design of a teacher activity plan that considers the application of ICTs. This formulates a strategy that makes it possible to close the gap in the need of accounting university students regarding the use of tools in line with the demands of society. Also, it is suggested that the educational management evaluate the curricular plan and consider introducing a set of methodologies centered on the various relevant technological tools for the accounting career, thereby updating this instrument and placing it at the forefront of modern universities.

Likewise, the research highlights the scarce practical application of ICTs in teaching-learning practice. The lack of theoretical foundation and the limited use of innovative didactic strategies suggest that teachers could benefit from deeper guidance on how to integrate technologies into their methodologies.

This aspect reveals the need to create resources and guides that support educators in the effective implementation of ICTs, promoting a more dynamic and participatory learning environment. In this aspect, it is essential that the university management identify the technological alternatives applied in the work of the accounting professional, as well as hardware that meets qualitative characteristics, which will result in elevating student learning. But it will also improve teacher performance in the classroom, making teacher-student interaction more agile and awakening greater interest on the part of students to learn.

Despite the limitations presented by the research, such as the small sample, the focus directed to a single discipline, few previous studies focused on ICTs for university accounting education, as well as the limited availability of managers given their heavy workload to attend to our queries and gather relevant information that helps the study; the research offers supported and valid data on the analyzed problem, which are important and very useful as a source of consultation in future research on the topic, as it has a solid foundation.

Teacher self-evaluation is an aspect that could also be influenced in the accuracy of the information obtained. Therefore, this study provides practical recommendations that can guide the development of strategies to improve the integration of ICTs in the educational field, proposing alternative solutions to the problem of the lack of ICT application and low teacher knowledge in the use of ICTs. Likewise, it adds complementary theoretical value to the knowledge and understanding of ICTs in the field of university education, especially in the accounting specialty.

In general, it is concluded with the urgent need to adopt decisions by managers and directors linked to university education under a holistic approach that contemplates the curricular plan, teacher training, and the implementation of information and communication technology in line with the demands and needs of the social environment.

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