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STUDENT PERCEPTIONS ON THE ADOPTION OF ARTIFICIAL INTELLIGENCE IN THE UNIVERSITY ENVIRONMENT

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ABSTRACT
This research employs a quantitative exploratory approach aimed at gaining a preliminary understanding of a phenomenon, issue, or situation. To determine the sample, a non-probabilistic convenience sampling technique was used, selecting 87 students from the Autonomous University of Nayarit. Data collection was carried out through a closed-ended questionnaire, whose reliability was validated using Cronbach's Alpha coefficient, yielding a value considered acceptable. The data was analyzed using statistical software SPSS, through which frequency tables were generated. Based on the results, most respondents (66.7%) believe that their institution is moderately prepared; 25.3% think their institution is poorly prepared to integrate AI, suggesting that about a quarter of the institutions face significant challenges in this area. Additionally, 5.7% of respondents are unsure about their institution's level of preparedness. The findings indicate that AI education in higher education is an area that could benefit from further research to explore students' perceptions and knowledge levels, as well as the barriers and limitations they face in accessing and understanding these technologies. From this, it is evident that students are increasingly aware of AI's presence in higher education, which reflects a strong interest in learning about and applying this type of technology in academic activities. Furthermore, these technologies contribute to academic development and enhance the ability to understand new strategies for problem-solving. Therefore, engaging with AI can be seen as an opportunity to advance the field of education by effectively promoting both individual and collaborative active learning.
Keywords: Machine Learning (ML), Deep Learning (DL), Teaching, Innovation, Artificial Intelligence

INTRODUCTION (SECTION)

Artificial Intelligence (AI) has established itself as a sophisticated and analytical tool capable of emulating—or at least attempting to emulate—human thought, transforming everyday activities through the lens of intelligent processing. Over the years, this technology has refined its processes and learning capabilities, expanding its influence into fields such as science, education, and related areas. Its potential lies in its ability to leverage complex algorithms that intuitively adapt to human needs.

In a globalized and interconnected world, where information is generated, enriched, and shared efficiently, AI has contributed to the development of an information-driven society, driving the automation of standardized processes. In the realm of higher education, it has been integrated as a support resource that facilitates the management and organization of information, offering accessible and comprehensible solutions to reduce workloads. Its impact goes beyond operational functions, significantly influencing key strategies for the advancement of university-level education.

Therefore, this research seeks to understand students' perceptions, experiences, and knowledge regarding the use and adoption of AI-based tools in higher education institutions, aiming to contribute to quality education. This objective aligns with the following research question: What attitudes do students hold toward the incorporation of artificial intelligence in the educational process, and how do they perceive its use and learning potential in enhancing the quality of teaching? Indeed, by providing information in a structured and concise manner, AI facilitates the integration of content and materials that promote high-quality teaching [1]. The creation of digital elements supports academic development and responds to the educational needs of university students. In fact, some educational institutions have incorporated artificial intelligence through chatbots or virtual tutors to interact with students and enhance their learning [2]. These tools allow for academic progress monitoring, task evaluation, and the provision of immediate, effective support.

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THEORETICAL REVIEW

Artificial Intelligence in University Education

Artificial Intelligence is transforming how we learn, how we work, and even how we live our daily lives—and education is no exception. It is evolving alongside these advancements, adapting to better prepare us for a future that is already here [3]. Without a doubt, AI represents a generational shift among the most prominent technological tools, revolutionizing teaching and learning through effective methods. This highlights the importance of AI in higher education, offering a new landscape of ways to collaborate and solve everyday tasks and problems. AI effectively guides students in strengthening skills that support autonomous learning, with the goal of developing the abilities and knowledge required to navigate this new technological era.

It's important to note that talking about AI doesn't refer to a single technological advancement, but rather to a vast universe of methods and tools [4]. From self-learning algorithms to systems that process human language or detect patterns in data, AI encompasses all these capabilities that impress us with their resemblance to human reasoning.

When used responsibly, AI has the potential to revolutionize education by creating more dynamic and meaningful learning experiences. It enables the early identification of student difficulties, allowing for timely interventions. Moreover, it functions as an always-available tutor, capable of explaining complex concepts in a clear and accessible way [5]. also encourages critical thinking by guiding students through problem-solving processes, while adapting content to their individual pace and learning style—making each educational experience unique and personalized.

Additionally, this technological innovation significantly advances the field of education by helping to reduce the digital divide among members of academic institutions. It empowers both faculty and students by granting greater freedom in developing course content. AI is becoming a reliable companion in the educational journey. Teachers and students alike are using it to make classes more engaging and effective, and its impact is such that many universities and schools are already integrating guidelines and recommendations into their curricula to make the most of it—always with a human-centered and critical approach [6].

1.1. AI and Critical Thinking

Developing critical thinking is like learning a superpower—it doesn't happen overnight, but rather grows with us over time. This skill allows us to see beyond the obvious, to better understand the society we live in, and to make wise decisions, even in the most challenging moments [7]. Therefore, equipping individuals with these tools is not just useful; it's a way of giving them the power to write their own story with full awareness. The synergy between AI and critical thinking strengthens essential skills for both academic and professional life. By promoting a more rigorous and methodological approach to analysis, technology has driven the creation of pedagogical tools that transform passive information intake into an active process of knowledge construction.

Critical thinking is like an intellectual compass. It encourages us not only to listen to arguments but to examine them with curiosity, recognize their nuances, and evaluate them honestly. When students regularly engage in this practice of analysis, something extraordinary happens—they begin to build a deep inner confidence in their ability to reason [8]. They no longer merely repeat ideas; they learn to question them, compare them, and ultimately make well-founded decisions. In this way, critical thinking moves beyond theory and becomes a daily superpower for navigating a world overflowing with information.

Critical thinking is about exploring ideas with curiosity—it involves taking arguments apart to see how they work, detecting hidden biases, and opening ourselves to other perspectives [9]. What's most valuable is that this isn't a one-time exercise; it's a habit of constant self-reflection, where we remain open to changing our minds if reason and evidence lead us there. Artificial intelligence is already a part of our everyday lives, assisting us in a wide range of intellectual tasks [10].

1.2. Deep Learning (DL) Through Artificial Intelligence

Artificial intelligence-based technologies can enrich the educational experience by offering personalized learning pathways for each student and fostering greater interaction and engagement in the learning process [11]. Clearly, AI has taken on the role of strengthening knowledge development through personalized and autonomous learning, encouraging the inclusion of new ideas and strategies to achieve optimal results for the advancement of lifelong education.

Deep learning, in particular, uses a type of technology known as neural networks, which are composed of multiple layers. These layers help computers identify complex patterns and relationships within data—much like the human brain does [12]. Deep learning continues to expand and is emerging as a key pillar in the evolution of education, as it integrates technologies such as automation, quantum computing, and artificial intelligence. These tools drive the creation of new knowledge and support the transition toward more sustainable and innovative educational models [13].

As a result, deep learning remains in constant development, promoting the generation of new knowledge and methodologies that enhance students' intellectual growth and strengthen the educational process. In this context, AI has established itself as a highly automated technological tool that supports various areas within education, adapting and updating current curricula to meet evolving needs.

1.3. Machine Learning (ML) Through Artificial Intelligence

Machine Learning (ML) and Artificial Intelligence (AI) are emerging as key tools for optimizing outcomes in higher education. By integrating ML techniques, access, progress, and academic performance among university

students can be significantly enhanced. Additionally, technological advancement plays a decisive role in reducing educational inequalities at this level [14]. In this way, digital developments in education offer significant contributions for both students and educators by providing materials based on interdisciplinary and cross-curricular programs—innovative models built on machine learning approaches. Digital media now have a massive presence in today's digital society and exert a notable influence on students' intellectual, cognitive, ethical, and social development [15].

Certainly, these are comprehensive technological environments designed to help developers create, train, and deploy AI models based on machine learning [16]. These platforms offer a range of tools, libraries, and computational resources that automate and optimize many of the complex tasks involved in developing predictive models. They also facilitate data management, algorithm selection, parameter tuning, result evaluation, and solution scaling—greatly streamlining the development and implementation process across various sectors such as healthcare, finance, education, and e-commerce.

METHODOLOGY

This research employs an exploratory quantitative approach aimed at gaining a preliminary understanding of a phenomenon, problem, or situation [17]. This type of study is characterized by its exploratory nature, as it seeks to identify patterns, relationships, or trends without the need to formulate specific hypotheses in advance [18]. A non-probability convenience sampling technique was used to determine the sample, selecting 87 students from the Autonomous University of Nayarit.

To collect the data, a closed-ended questionnaire was administered. The reliability of the instrument was validated using Cronbach's Alpha coefficient, yielding a value considered acceptable. This result is suitable for exploratory studies, as it suggests that the set of items demonstrates appropriate internal consistency—meaning they are reasonably correlated and effectively measure the same construct or concept. The data analysis was conducted using the statistical software SPSS, which was used to generate frequency tables. The results were graphically represented and presented in a detailed manner.

RESULTS

The high proportion of students who have heard about AI in higher education (72.4%) may reflect a growing interest in the topic, possibly driven by media coverage or recent educational initiatives. However, since only 27.6% feel well-informed, there is a clear need to provide more information and resources on AI in higher education (Fig. 1).

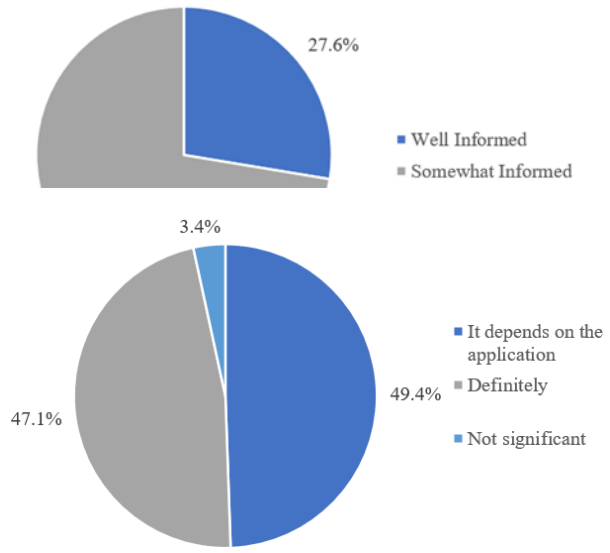

Fig. 2. Do you believe that the implementation of Artificial Intelligence can improve the quality of education in higher education institutions?

Do you believe that the implementation of Artificial Intelligence can improve the quality of education in higher education institutions? 47.1% believe that AI will definitely improve education, 49.4% think the impact will depend on how it is implemented, and 3.4% do not believe AI will have a significant impact. This chart highlights the prevailing confidence in AI's potential to enhance education, although many respondents believe its success will depend on the way it is specifically implemented (Fig. 2).

48.3% have used AI tools in their current educational experience, 29.9% have used them in the past, and 21.8% have never had this experience. Thus, most students have had some form of contact with AI tools, whether currently or in the past, indicating a growing adoption of these technologies in education (Fig. 3).

Most respondents (66.7%) believe that their institution is moderately prepared. This is an encouraging finding,

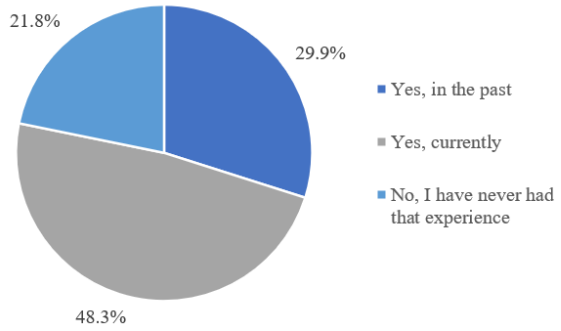

Fig. 3. Have you personally experienced the incorporation of Artificial Intelligence-based tools in your higher education experience?

as it shows that institutions are in the process of preparing to adopt these technologies but have not yet reached an optimal level. 25.3% of respondents believe their institution is poorly prepared to integrate AI, suggesting that a quarter of institutions face significant challenges in this area. 5.7% are unsure about the level of preparation at their institution, which could reflect a lack of information or clear communication regarding institutional efforts related to AI (Fig. 4).

44.8% of respondents are fully interested in taking AI courses or training for their professional development. This reflects a strong interest from nearly half of the respondents in enhancing their skills and knowledge about AI in

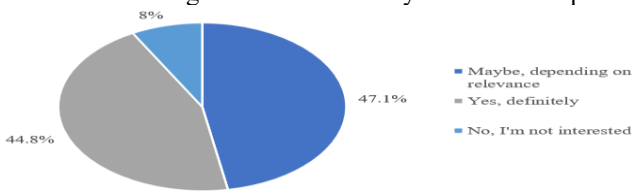

Fig. 5. Would you consider taking courses or training related to Artificial Intelligence as part of your professional development in the educational field?

the educational field. 47.1% are open to the idea, but their decision depends on the relevance of the training to their

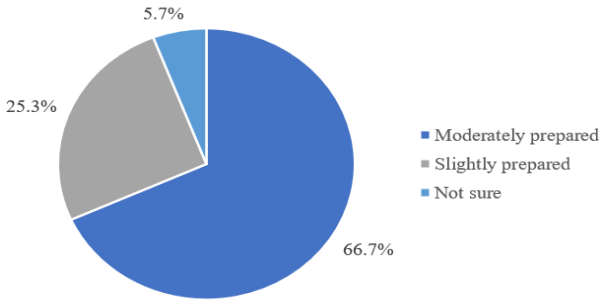

Fig. 4. What level of preparedness do you perceive in your educational institution to effectively adopt and integrate Artificial Intelligence in teaching and administration?

area of work or interest. This group is willing to engage in AI training as long as they see a clear benefit or practical application in their educational work. 8% of respondents are not interested in taking AI courses or training. This small group may not perceive a direct value of AI in their professional development or may feel less familiar with the topic (Fig. 5).

DISCUSSION

As a result of the previous findings, it is evident that the incorporation of AI in higher education is noticeable among students, indicating a strong interest in learning about and applying this technology in academic activities. Authors such as Chao-Rebolledo and Rivera-Navarro [19] believe that AI will transform the way we learn and teach, establishing autonomous learning that facilitates the acquisition and understanding of knowledge. Furthermore, these technologies contribute to academic development and the understanding of new strategies that guide problem-solving. In this way, interacting with AI can be seen as an opportunity to advance in the field of education, effectively promoting active individual and collective teaching. This could include workshops, seminars, or online courses that help deepen knowledge and understanding of the applications and benefits of AI in this field.

Therefore, it is considered that education could improve through the use of AI, with a significant impact on enhancing the quality of education and leading to a more versatile and personalized model [20], adapted to the needs of students, as determined through interaction with and manipulation of AI. It was observed that the vast majority of students are willing to take disciplinary courses on AI in order to maintain active knowledge and proficiency in handling the various tools that AI presents. This focus on supporting skills and competencies in educational tasks is crucial. As Arizmendi and Carrillo [21] argue, training in artificial intelligence is not just a technical enhancement but a fundamental transformation that prepares educators and students to face the challenges and seize the opportunities of a digital future. This can be understood in the context of rapid technological advancements that are globalizing academic activities, addressing the primary needs those educational institutions may encounter, and having a positive impact on the acceptance of these technologies, which will remain active through education.

In the educational context, where changes are constant, technology has become a key component, with artificial intelligence (AI) being one of the main drivers of this transformation [22]. The integration of pedagogical approaches with technological innovations has led to the creation of various AI-based tools that are profoundly changing the processes of teaching and learning. In the educational field, the use of AI has experienced significant growth, moving away from the traditional view that associated it solely with supercomputers, now encompassing integrated computer systems [23]. Its implementation has expanded into key areas such as administrative management, teaching processes, and learning experiences, which are the primary focal points of analysis in this paper.

CONCLUSION

The findings indicate that the teaching of artificial intelligence in the university setting is an area that requires further research, especially to analyze how students perceive this technology, their level of familiarity with it, and the barriers they face in accessing and understanding its applications. Educational institutions, through appropriate policies, could implement actions that strengthen AI training, aiming to ensure that both students and professors are prepared to integrate these tools into their teaching and learning processes.

However, AI is not a rival but an ally; it acts as a digital magnifying glass that amplifies our ability to make connections, interpret information, and organize the collective knowledge humanity has built up to this point. From this, it is understood that this technology is a resource that fosters the friendly growth of critical knowledge, which fluctuates within a vast network of information that, through analytical processes, provides a global perspective, offering new ideas for the continuous strengthening and improvement of every individual.

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