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Using artificial intelligence to enhance study strategies among university business administration students

Uso de la inteligencia artificial para reforzar estrategias de estudio en estudiantes universitarios de administración

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Abstract

This study analyzes the use and perception of artificial intelligence in the learning practices of students at the Faculty of Administration of the National University "San Luis Gonzaga" in Ica, Peru. The main objective was to examine the ways in which students use artificial intelligence tools, identifying both the perceived benefits and the associated challenges. The research was conducted using a quantitative, applied approach with a non-experimental, cross-sectional, descriptive design. From a total population of 511 students, a probabilistic sample of 153 participants was selected. Data collection was carried out using a questionnaire whose validity was established by expert judgment and whose reliability reached a Cronbach's alpha coefficient of 0.731. The results showed that, although most students use artificial intelligence sporadically for academic work, they recognize its usefulness for accessing information, improving writing, and promoting autonomous learning. However, the absence of institutional training on the proper use of these tools and the risk of possible technological dependence were also identified. In conclusion, artificial intelligence can be a valuable resource in higher education, provided that its use is critical, ethical, and oriented toward strengthening cognitive and digital skills.

Keywords: artificial intelligence, university learning, teaching strategies.

Resumen

Este estudio analiza el uso y la percepción de la inteligencia artificial en las prácticas de aprendizaje de los estudiantes de la Facultad de Administración de la Universidad Nacional "San Luis Gonzaga" de Ica, Perú. El

objetivo principal fue examinar las formas en que los alumnos emplean herramientas de inteligencia artificial, identificando tanto los beneficios percibidos como los desafíos asociados. La investigación se desarrolló bajo un enfoque cuantitativo, de tipo aplicado y con un diseño no experimental, transversal y de nivel descriptivo. De una población total de 511 estudiantes, se seleccionó una muestra probabilística de 153 participantes. Para la recolección de datos se utilizó un cuestionario cuya validez fue establecida mediante juicio de expertos y cuya fiabilidad alcanzó un coeficiente alfa de Cronbach de 0,731. Los resultados evidenciaron que, aunque la mayoría de los estudiantes utiliza la inteligencia artificial de manera esporádica para realizar trabajos académicos, reconocen su utilidad para acceder a información, mejorar la redacción y promover el aprendizaje autónomo. Sin embargo, también se identificó la ausencia de formación institucional sobre el uso adecuado de estas herramientas y el riesgo de una posible dependencia tecnológica. En conclusión, la inteligencia artificial puede constituir un recurso valioso en la educación superior, siempre que su uso sea crítico, ético y orientado al fortalecimiento de habilidades cognitivas y digitales.

Palabras clave: inteligencia artificial, aprendizaje universitario, estrategias de enseñanza.

Introduction

In recent years, artificial intelligence (AI) has made significant strides, impacting various aspects of daily life, including work, routine activities, and, notably, education. In the latter field, AI has emerged as a powerful tool that aids students' learning processes. According to Aparicio (2023), AI has improved how students engage with knowledge by providing a vast array of information that serves as feedback and support for resolving inquiries and consolidating learning.

From this perspective, it can be asserted that students utilize AI as a direct support tool, as it offers precise data and explanations on specific content, adapting to the individual pace of each learner. Consequently, AI is regarded as a valuable resource for enhancing learning quality. However, its educational contribution is realized only when it is employed ethically and responsibly; that is, when the generated information is used to expand knowledge, rather than as a means to simply copy and paste content.

Castillejos (2022) warns that the learning process stagnates, and the role of educators is devalued when students misuse these tools, thereby demonstrating a lack of academic ethics. Thus, while AI is lauded for its informational conveniences, its reputation may be jeopardized by inappropriate practices adopted by some students.

Furthermore, various studies agree that although AI represents an opportunity to enhance learning, its effective implementation necessitates suitable conditions. Moreno (2019) asserts that despite its increasing presence in daily life, greater order and planning are still needed to integrate it appropriately into educational processes. Within this context, the objective of this study was to analyze the use and perception of AI in the learning practices of students from the Faculty of Administration at the National University "San Luis Gonzaga" in Ica.

In the Peruvian context, the use of AI has also shown positive manifestations in higher education. The research conducted by Acosta and Carcausto (2024) indicates that AI plays a significant role in higher education, with a positive relationship observed between its use and cooperative learning. However, these benefits are contingent upon students adhering to ethical principles. Castillejos (2022) adds that while the development of the internet has transformed how young people access knowledge, it has also led to irresponsible practices aimed solely at completing tasks without genuine learning.

In a similar vein, Bernilla (2024) asserts that while AI offers numerous benefits, it also poses challenges for higher education. This is consistent with the findings of Chávez et al. (2023), who caution that generative AI creates difficulties in educational settings by automatically generating texts, introducing uncertainty about the future of education. The authors emphasize the need to educate students about the risks associated with unethical use of these tools.

Consequently, various specialists emphasize the importance of promoting responsible AI usage. Tramallino and Zeni (2024) highlight the necessity of strengthening digital literacy, enabling students to use tools like ChatGPT, Gemini, Perplexity, Deepseek, and others appropriately, thereby avoiding harmful practices. They also underscore the importance of considering ethics, data reliability, and training at all educational levels.

In this context, Rivero and Beltrán (2024) propose that AI will continue to evolve, necessitating ongoing research into its role in education and the challenges associated with its integration, all while acknowledging the advantages it offers for knowledge acquisition.

Methodology

The study was conducted employing a quantitative approach, featuring a non-experimental and cross-sectional design with a descriptive scope. Its primary aim was to analyze the usage and perception of artificial intelligence in the learning practices of students at the Faculty of Administration at the National University "San Luis Gonzaga" in Ica. The descriptive approach allowed for characterizing the observed phenomenon without manipulating variables.

The population consisted of 511 students enrolled in the 2024-I academic cycle. From this population, a probabilistic sample was selected through simple random sampling, resulting in a total of 153 students. The inclusion criteria required students to be enrolled for the entire semester and to voluntarily agree to participate; students who were rejoining the university or taking isolated courses were excluded.

Data collection was carried out using a structured questionnaire comprising 20 items, developed in Microsoft Forms. This instrument assessed the frequency of AI usage and perceptions regarding AI in academic activities. Its validity was established through expert judgment, while reliability was determined using Cronbach's alpha coefficient, yielding a value of 0.731, indicating adequate internal consistency.

Table 1

Reliability statistics

Cronbach's Alpha	Number of Items
,731	20

Additionally, the information was supplemented through direct observation techniques and document review, which allowed for substantiating the state of the art with scientific sources from Scopus, SciELO, and various university repositories. The integration of these techniques facilitated a broader understanding of the phenomenon, articulating quantitative data with theoretical reflections on the ethical and pedagogical use of artificial intelligence in the context of higher education.

Results

To describe the use and perceptions of artificial intelligence (AI) among students, data collected through the administered questionnaire were analyzed. The most relevant findings are presented below, organized into five tables and figures that cover usage frequency, perceptions of ethical risks, and institutional roles.

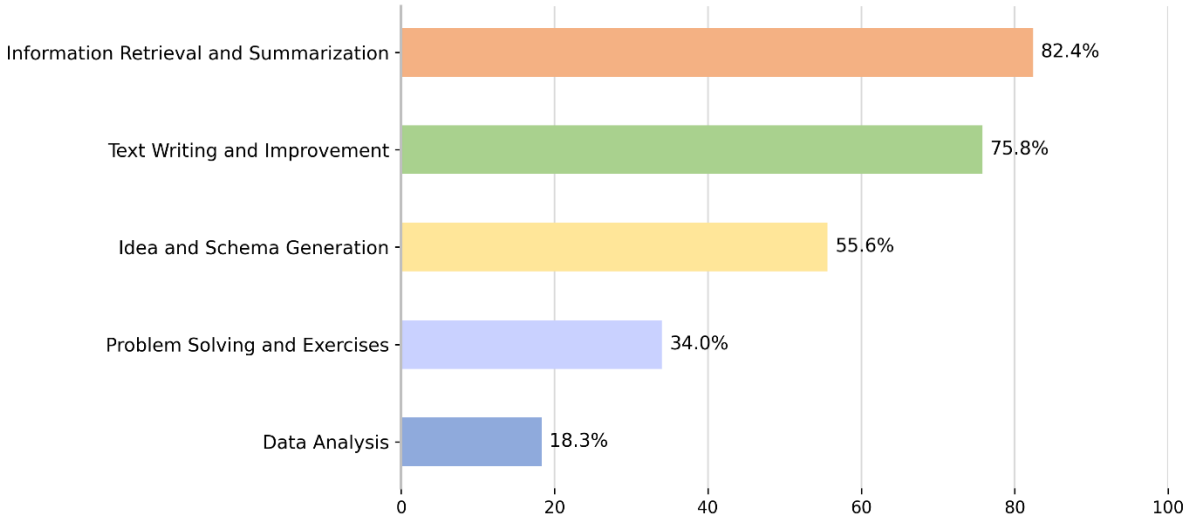
Table 2

Frequency of use of artificial intelligence tools for academic tasks

Frequency of Use	Frequency (n)	Percentage (%)	Cumulative Percentage (%)
Never	4	2.6	2.6
Almost Never	11	7.2	9.8
Sometimes	78	51.0	60.8
Almost Always	45	29.4	90.2
Always	15	9.8	100.0
Total	153	100.0	

The data in Table 2 indicate that the use of artificial intelligence is widespread among students. Approximately 90.2% of participants use these tools with a frequency categorized as "Sometimes" or "Always" in their academic activities. The predominant category was "Sometimes" (51.0%), suggesting a functional but not fully systematic application. Only 9.8% reported not using these tools or doing so very sporadically, confirming that AI has become a common resource in the university environment.

Figure 1
Main academic tasks for which artificial intelligence is used



Note: Percentages sum to more than 100% because students could select multiple options.

Figure 1 details specific applications of AI. The most frequent tasks are information search and summarization (82.4%), followed by writing and text improvement (75.8%). This suggests that students primarily utilize AI to optimize the initial stages of research and written production. Additionally, idea generation and outlining (55.6%) represent a significant use case, reinforcing AI's role as a creative assistant. In contrast, more specialized activities, such as problem-solving (34.0%) and data analysis (18.3%), are less common, indicating that such applications have not yet been widely adopted for more complex analytical tasks.

Table 3
Perception of improvement in the quality of academic work due to AI

Level of Agreement	Frequency (n)	Percentage (%)	Cumulative Percentage (%)
1 - Strongly disagree	2	1.3	1.3
2 - Disagree	8	5.2	6.5
3 - Neutral	41	26.8	33.3
4 - Agree	79	51.6	84.9
5 - Strongly agree	23	15.1	100.0
Total	153	100.0	

Regarding the perceived benefits, the results in Table 3 reveal a predominantly favorable trend. A total of 66.7% of students expressed "Agree" or "Strongly Agree" that AI enhances the quality of their academic work, which is a significant finding as it links the use of this technology with a perceived positive impact. Approximately 26.8% took a neutral stance, possibly reflecting doubts or a lack of tangible improvement in their performance. Only 6.5% indicated disagreement.

Table 4
Primary perceived ethical risk in the use of artificial intelligence

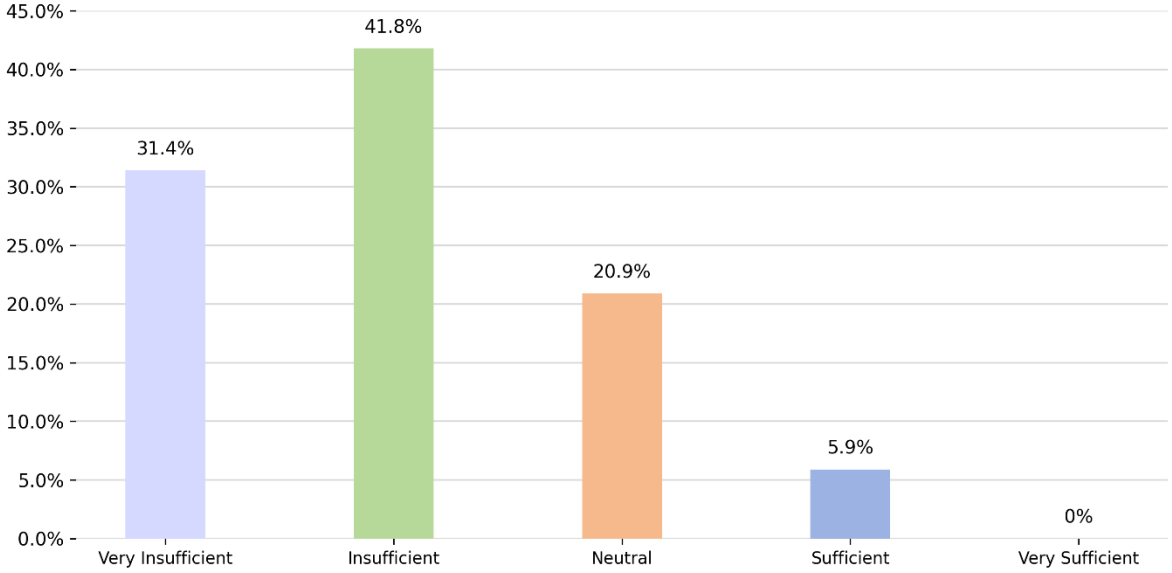
Primary Ethical Risk	Frequency (n)	Percentage (%)	Cumulative Percentage (%)
Dependence and loss of skills	62	40.5	40.5
Plagiarism and academic dishonesty	45	29.4	69.9
Incorrect or biased information	31	20.3	90.2
Data privacy	10	6.5	96.7

None	5	3.3	100.0
Total	153	100.0	

With respect to perceived risks, Table 4 highlights that the primary concern among respondents relates to technological dependency and the potential loss of critical skills, cited by 40.5% of participants. This outcome reveals a growing awareness of the possible negative effects of intensive AI use on their education. Other notable concerns include plagiarism and academic dishonesty (29.4%), as well as the risk of receiving incorrect or biased information (20.3%). The concern regarding data privacy was lower (6.5%), indicating that students prioritize academic risks over those linked to digital security.

Figure 2

Perception of the adequacy of AI training provided by the university



Finally, Figure 2 illustrates a significant gap between the need for artificial intelligence training and the institutional offerings. A total of 73.2% of students considered the training they receive to be "Insufficient" or "Very Insufficient," while only 5.9% rated it as "Sufficient." This finding aligns with recent studies warning about the slow adaptation of higher education institutions to technological advancements, emphasizing the need to enhance digital literacy and promote the ethical and effective use of artificial intelligence.

Discussion

The findings of this study demonstrate that the use of artificial intelligence (AI) is widespread among university students, with 90.2% reporting that they employ it at least occasionally for their academic activities. This result aligns with the assertions made by Aparicio (2023), who states that AI has transformed knowledge access processes by offering immediate, organized information adaptable to the learner's pace, thereby enhancing autonomous learning. The most common applications—information search and summarization (82.4%) and writing or text improvement (75.8%)—suggest that AI has solidified its role as a key resource in the early stages of research, structuring, and written production. From this perspective, AI's function transcends mere technical support to become a cognitive mediator that amplifies processing capacity and fosters continuous feedback.

The general perception of benefits is predominantly positive: 66.7% of students believe that AI improves the quality of their academic work. This finding is consistent with the insights of García et al. (2024), who highlight that these technologies replicate human cognitive processes to optimize tasks and generate precise solutions. However, students exhibit a clear awareness of the associated ethical risks. A significant 40.5% identify technological dependence and the loss of critical skills as the primary risk, followed by plagiarism and academic dishonesty (29.4%). These concerns resonate with Castillejos (2022), who warns that inadequate or uncritical use of AI may hinder the development of higher cognitive competencies and compromise academic integrity.

One of the most noteworthy findings is the perception of insufficient institutional training in AI usage, reported by 73.2% of participants. This educational gap aligns with Bernilla (2024), who describes the integration

of AI in higher education as a structural challenge requiring coherent institutional policies and ongoing training for both faculty and students. In this regard, Tramallino and Zeni (2024) emphasize the need to promote literacy in generative AI to ensure the ethical and effective use of tools like ChatGPT, Gemini, Perplexity, and Deepseek. Such literacy encompasses not only technical competencies but also critical thinking, criteria for evaluating information reliability, and a solid understanding of the ethical principles involved.

These findings also engage with the theoretical considerations of Granados (2022) and Erazo et al. (2023), who argue that AI represents an intelligent processing system capable of supporting personalized tutoring functions, immediate feedback, and predictive analyses of performance. However, as McCarthy et al. (2023) caution, the accelerated expansion of AI following the pandemic has raised challenges related to privacy, data accuracy, and potential technological dependence. While students acknowledge these risks, they tend to prioritize those that directly affect their academic performance over concerns related to digital security.

From a pedagogical perspective, these findings must be contextualized within the transformation of learning models driven by digitalization. Mamani et al. (2021) and Rivero et al. (2024) argue that the health crisis accelerated the transition toward holistic and flexible educational experiences, where AI emerges as a key mediator. In this scenario, learning is no longer conceived as a linear process but rather as a dynamic construction where exploration, interaction, and co-creation of knowledge converge. Reyes (2021) reminds us that lifelong learning constitutes essential cultural capital, underscoring the responsibility of educational institutions to promote digital competencies and critical thinking. In the Peruvian context, where inequalities persist, AI could serve as a mechanism for democratizing access to quality resources, provided that adequate infrastructure and relevant teacher training are guaranteed.

Moreover, Helal et al. (2018) and Valverde et al. (2020) assert that the pursuit of educational quality is closely linked to the incorporation of emerging technologies that facilitate the understanding of complex concepts and enhance student engagement. In this way, AI can act as a catalyst for pedagogical innovation, fostering strategies based on active, adaptive, and problem-based learning. However, its effective impact hinges on appropriate training and the development of a responsible digital culture.

Finally, the results resonate with Chinguel and Minaya (2024), who caution that while AI is a useful starting point for research and idea generation, it cannot replace human judgment. Its usage demands continuous analysis, validation, and critical scrutiny to prevent uncritical content reproduction or excessive dependence. Consequently, AI should be understood as a cognitive complement that enhances human capabilities, rather than a replacement.

Overall, the findings of this study highlight the necessity of strengthening institutional policies aimed at digital literacy and ethical use of AI, fostering a culture of responsible innovation, and ensuring that students remain active protagonists in their learning. Only under these conditions can higher education fully leverage the transformative potential of artificial intelligence while maintaining its humanistic and formative focus.

Conclusions

The results of the study indicate that the use of artificial intelligence is widespread among students in the Administration program at the National University “San Luis Gonzaga” in Ica, as 90.2% employ it at least occasionally in their academic activities. This indicator confirms that AI has become a common resource within the university environment, especially in tasks such as information search and synthesis (82.4%) and writing or text improvement (75.8%), illustrating its role as a supportive tool in the initial processes of research and written production.

Additionally, student perception of its benefits is predominantly positive: 66.7% believe that AI improves the quality of their academic work. However, there is also a critical awareness of the ethical risks associated with its use. The primary concern is technological dependence and the potential loss of fundamental cognitive skills (40.5%), followed by the risks of plagiarism and academic dishonesty (29.4%). This coexistence of benefits and risks underscores the need to promote a balanced, reflective, and responsible use of these technologies.

A relevant finding is the existence of a significant gap between the need for training in AI and the available institutional offerings. A total of 73.2% of students consider the training they receive to be insufficient or very insufficient, revealing the urgency of implementing digital literacy programs focused on the ethical, critical, and effective use of these tools. This involves not only strengthening technical competencies but also developing sustained institutional policies that include ongoing training for both students and faculty.

Ultimately, while AI tools play an important role in facilitating access to information, idea generation, and text improvement, their use must be accompanied by pedagogical guidelines that promote critical thinking, source validation, and the enhancement of complex cognitive skills. Only in doing so can we avoid technological dependence and ensure autonomous, responsible learning aligned with the formative objectives of higher education.

References

Acosta, V., & Carcausto, W. (2024). Inteligencia artificial y aprendizaje cooperativo en estudiantes universitarios. https://doi.org/10.5281/zenodo.12812908

Aparicio, W. (2023). La inteligencia artificial y su incidencia en la educación: Transformando el aprendizaje para el siglo XXI. *Revista Internacional de Pedagogía e Innovación Educativa*. https://doi.org/10.51660/ripie.v3i2.133

Benites, R. (2021). La educación superior universitaria en el Perú post-pandemia. *Políticas y Debates Públicos*. https://repositorio.pucp.edu.pe/index/handle/123456789/176597

Bernilla, E. (2024). Docentes ante la inteligencia artificial en una universidad pública del norte del Perú. *Educación*. https://doi.org/10.18800/educacion.202401.m001

Castillejos, B. (2022). Inteligencia artificial y los entornos personales de aprendizaje: Atentos al uso adecuado de los recursos tecnológicos de los estudiantes universitarios. *Educación*. https://doi.org/10.18800/educacion.202201.001

Chávez, M., Labrada, E., Carbajal, E., Pineda, E., & Alastriste, Y. (2023). Inteligencia artificial generativa para fortalecer la educación superior. *LATAM Revista Latinoamericana de Ciencias Sociales y Humanidades*. https://doi.org/10.56712/latam.v4i3.1113

Chinguel, D., & Minaya, C. (2024). Inteligencia artificial - ChatGPT: Un estudio bibliométrico y su aplicación en el caso de gases de efecto invernadero. *Manglar, 21*(1), 149–157. https://doi.org/10.57188/manglar.2024.015

Erazo-Luzuriaga, A., Ramos-Secaira, F., Galarza-Sánchez, P., & Boné-Andrade, M. (2023). La inteligencia artificial aplicada a la optimización de programas informáticos. *Journal of Economic and Social Science Research, 3*(1), 48–63. https://doi.org/10.55813/gaea/jessr/v3/n1/61

García, F., Llorens, F., & Vidal, J. (2024). La nueva realidad de la educación ante los avances de la inteligencia artificial generativa. *RIED. Revista Iberoamericana de Educación a Distancia, 27*(1), 9–39. https://doi.org/10.5944/ried.27.1.37716

Granados, J. (2022). Análisis de la inteligencia artificial en las relaciones laborales. *CES Derecho, 13*(1), 111–132. https://doi.org/10.21615/cesder.6395

Helal, S., Li, J., Liu, L., Ebrahimie, E., Dawson, S., Murray, D. J., & Long, Q. (2018). Predicting academic performance by considering student heterogeneity. *Knowledge-Based Systems, 161*, 134–146. https://doi.org/10.1016/j.knosys.2018.07.042

Jara, I., & Ochoa, J. (2020). Usos y efectos de la inteligencia artificial en educación. *Banco Interamericano de Desarrollo (BID)*. https://doi.org/10.18235/0002380

Leyva, M., Estupiñán, J., & Vega-Falcón, V. (2022). La inteligencia artificial y su aplicación en la enseñanza del derecho. *Estudios del Desarrollo Social: Cuba y América Latina, 10*, 368–380. https://revistas.uh.cu/revflacso/article/view/148

Mamani-Cori, V., Padilla, T., Cervantes, S., Caballero, L., & Sucari, W. (2021). Estrategias y recursos didácticos empleados en la enseñanza/aprendizaje virtual en estudiantes universitarios en el contexto de la COVID-19. *Revista Innova Educación, 4*(1), 78–91. https://doi.org/10.35622/j.rie.2022.01.006

McCarthy, A., Maor, D., McConney, A., & Cavanaugh, C. (2023). Digital transformation in education: Critical components for leaders of system change. *Social Sciences & Humanities Open, 8*(1), 100479. https://doi.org/10.1016/j.ssaho.2023.100479

Moreno, R. (2019). La llegada de la inteligencia artificial a la educación. *Revista de Investigación en Tecnologías de la Información*. https://doi.org/10.36825/RITI.07.14.022

Moreno, J., Mena, A., & Zerpa, L. (2024). Modelos de aprendizaje en la transición hacia la complejidad como un desafío a la simplicidad. *Sophia, Colección de Filosofía de la Educación, 36*, 69–112. https://doi.org/10.17163/soph.n36.2024.02

Reyes, R. (2021). El aprendizaje significativo como estrategia didáctica para la enseñanza–aprendizaje. *Polo del Conocimiento: Revista Científico-Profesional, 6*(5), 75–86.

Rivero, C., & Beltrán, C. (2024). La inteligencia artificial en la educación del siglo XXI: Avances, desafíos y oportunidades. *Educación*. https://doi.org/10.18800/educacion.202401.p001

Salas, E., & Amador, M. (2023). Uses of ChatGPT for the revision of academic texts: Some considerations. *Innovaciones Educativas, 25*(Especial), 59–77.

Tramallino, C., & Zeni, A. (2024). Avances y discusiones sobre el uso de inteligencia artificial en educación. *Educación*. https://doi.org/10.18800/educacion.202401.m002

Valverde, J., Romero-Zúñiga, M., & Vargas-Fonseca, L. (2020). Tendencias actuales, retos y oportunidades de

los procesos de aprendizaje universitario aplicados a las Ciencias Forestales. *Revista Científica, 39*, 262–277. https://doi.org/10.14483/23448350.16030

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