

THE STUDENT-PROFESSOR RELATIONSHIP IN THE CONTEXT OF ADOPTING ARTIFICIAL INTELLIGENCE IN RESEARCH PRACTICES

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Abstract. The integration of artificial intelligence (AI) in higher education has an impact on the writing of academic papers and on the student-supervisor relationship. Recent studies highlight the frequent use of AI tools, such as ChatGPT, as support in the academic writing process. The risks related to academic integrity, supervision practices and the need to find a balance between human guidance and technological assistance are presented. The current study tracks how students perceive and use AI tools, the extent to which they influence the interaction with the supervising professors, and opinions related to the advantages, risks and ways to responsibly integrate AI into academic work. The research aims to highlight how AI transforms traditional practices of supervision, feedback and maintaining academic integrity. The study is part of the literature on educational change management, focusing on innovation, regulation and training. The investigation was carried out by applying a structured questionnaire addressed to university students, undergraduate study programs, who are in the final phase of their diploma projects, students with technical and economic training. The questionnaire included seventeen questions regarding the use of AI, the relationship with the coordinating professors, opinions and suggestions of the students regarding the advantages and disadvantages of using AI in relation to traditional consultation. The results show that AI is appreciated for its speed, accessibility and support in developing autonomy, but students continue to consider coordinating professors indispensable for feedback, validation and critical thinking. There was also a low level of transparency in communicating the use of AI to coordinators and divergent views on the possibility of these technologies partially replacing traditional consultation. Participants mentioned the importance of developing clear institutional regulations and introducing training programs dedicated to the responsible use of AI. The current research provides empirical evidence on students' perceptions of the role of AI in academic writing, highlighting both the advantages and disadvantages of its adoption.

Keywords: artificial intelligence, higher education, academic coordination, innovation, educational change, regulation

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Introduction

The relevance of the research is supported by the current context, in which universities around the world are facing pressure to formulate policies on the use of AI. In the absence of clear regulations, students and teachers resort to individual solutions, which can create inequity and confusion. At the same time, there is an increased need for digital literacy and ethics: students need to understand how to use AI as a support tool, not as a substitute for critical thinking and creativity.

The objectives of the study are:

1. To analyze how students use AI applications in the process of writing academic papers;
2. To investigate the impact of AI on consultations with coordinating professors and on the feedback received;

3. To identify the advantages and risks perceived by students regarding the use of AI;
4. To explore perceptions about the possibility of replacing human supervision with AI;
5. To assess attitudes regarding the need for regulation and training dedicated to the use of AI;
6. To formulate recommendations for the responsible integration of AI in academia.

Through these objectives, the research contributes to the understanding of a major change in higher education: the transition from a traditional model, centered on human supervision, to a hybrid model, in which AI becomes a working partner, but not a substitute for the coordinating professor.

Literature review

The literature confirms the accelerated adoption of AI applications in higher education. Students perceive these tools as factors that facilitate the learning process, providing quick access to information and support for writing academic papers. [1], [2] The current trend of increasing the use of AI in the academic environments, highlighting the popularity of the use of ChatGPT. The integration of these applications is seen as a stage of the digitalization of education, where technology becomes a constant support in academic activity. [3]

The diversity of applications used by the students reflects different educational needs: from content generation (ChatGPT), to support for grammatical writing of a text (Grammarly), or even the generation of graphic content (DALL·E). ChatGPT has become the dominant tool, due to its ability to generate coherent text and answer a variety of questions. [3], [4]

A central aspect in the use of artificial intelligence (AI) in the academic writing process is the extent to which students choose to inform their supervisor about this endeavor. The specialized literature shows that there is a lack of transparency, caused both by the fear of sanctions and the absence of clear policies on the use of AI. Higher education institutions introduce explicit guidelines to encourage open communication between students and supervising professors. [3]

The impact on consultation with the coordinating professor is ambivalent. On the one hand, students perceive AI as a tool that reduces the dependence on frequent meetings, providing quick answers and autonomy. [5] On the other hand, recent research confirms that human feedback remains indispensable, especially for conceptual clarification and critical thinking. [6]

However there is a risk that students will not disclose how they have used AI, which affects the trusting relationship with the coordinating professor. [1]

At the same time, studies on supervision show that openness and communication are critical factors for effective supervision. [7], [8] The AI supports student autonomy, but the students continue to need critical feedback and methodological validation. [5]

The main factors motivating the use of the AI are accessibility and flexibility, but coordinating professors remain indispensable for the conceptual and ethical orientation of the research. [1], [3]

Regular meetings enhance the quality of research and facilitate progress, but a reduced number of interactions does not necessarily mean a negative experience but may reflect greater student independence. [9] Regarding the impact of the AI on these interactions, the literature suggests that technology can reduce the need for frequent meetings, providing immediate responses and support for technical tasks. [5]

The personalized feedback involves a reflective and formative dimension that cannot be reproduced by an algorithm. [10] The AI is perceived as a support rather than a substitute, but there is a risk that students will become dependent on automated solutions, losing contact with human guidance. The AI can be used in a complementary way, for support tasks (grammar correction, language suggestions, graphic suggestions), leaving the responsibility for academic training to the coordinating professors. [11], [12]

The reasons why students choose to use artificial intelligence (AI) in their writing are varied, but the literature identifies several constants: speed in obtaining information, increased autonomy, and permanent accessibility.

First of all, the AI provides rapid access to information and clarifications, reducing the time needed to obtain answers and allowing students to streamline their writing process. [1], [3]

Unlike scheduled consultations with the coordinating professor, answers are available instantly and at any time, which supports flexibility in learning. [5]

A second advantage is the support for structuring and organizing ideas. Language models can generate structure suggestions, examples of the academic formulations, and rewriting suggestions, contributing to better coherence of the text and the entire project. [11], [13]

The AI also promotes autonomy and personalized learning: students can explore concepts on their own, repeat explanations until they are fully understood, and adjust their learning pace. [2], [14] This aspect is considered a key factor in developing skills for the 21st century. [15]

Last but not least, the AI can reduce the psychological barrier associated with asking questions to the coordinating professor, providing a space for testing and exploration without fear of being judged. [1]

Overall, the identified advantages – speed, accessibility, structuring, autonomy and personalization – explain why the AI is perceived by students as a valuable complementary tool to traditional consultation, without completely replacing it.

Although artificial intelligence (AI) brings obvious benefits for the academic writing of diploma projects, the specialized literature also highlights a series of risks and disadvantages when used instead of traditional consultation with the coordinating professor.

A first risk is related to the academic integrity. Language models can generate fluent texts, but there is a danger that students will use them to produce content that does not reflect their own work, increasing the risk of plagiarism or unfair evaluation. [1], [11]

A second disadvantage lies in the inaccuracies and fabrications generated. The AI can provide erroneous information or non-existent sources, which undermines the quality of research if there is no critical verification. [3], [5]

The specialized literature also highlights the risk of the cognitive dependence: excessive use of the AI can diminish the students' critical thinking, analytical capacity, and independent writing skills. [14], [15]

Another aspect is the lack of personalized feedback. Unlike coordinating teachers, who can adapt recommendations to the needs and context of each student, the AI provides standardized responses that do not capture the complexity of the educational process. [2], [13]

Last but not least, there are equity and access risks: not all students have the same digital skills or access to high-performance technology, which can amplify differences between groups. [3]

In conclusion, the main risks associated with the use of AI are integrity issues, errors, technological dependence, the absence of personalized feedback and inequity in access. All of this confirms that AI cannot completely replace the role of the coordinating professor, it must be used responsibly and only with human supervision.

The AI is appreciated for its efficiency in answering questions and for the support provided in structuring the text. Also, the students perceive the AI as a tool that reduces the barriers related to time and space. [1], [3]

The meetings provide not only technical support, but also emotional and motivational support, important factors in maintaining the students' engagement. [7]

In the same sense, students appreciate the combination of the support provided by the AI and the confirmation coming from the coordinating professor, which indicates the indispensable role of the latter. [2]

In conclusion, although the AI can take over technical tasks and increase student autonomy, the literature indicates that it cannot completely replace the role of the coordinating professor. The need for validation and critical feedback from him or her remains fundamental for the professional and academic development of the students.

The uncritical use of the AI can reduce the development of the autonomous thinking, and can lead to the cognitive dependence and the danger of students giving up critical reflection. [15], [16]

It is also recommended the development of the institutional policies and training programs to prevent abuse and ensure ethical use of the AI. [14], [17]

The general opinion on the use of the AI in academia reflects a balance between opportunities and risks. The students find the AI useful, especially for its efficiency and accessibility. [1], [5] However, attention is drawn to potential dangers to academic integrity, suggesting that the AI should only be encouraged under clear regulations. [11]

The need for clear regulations on the use of artificial intelligence (AI) in academic writing is emphasized by numerous authors. The universities are called upon to develop institutional policies that explicitly define the acceptable limits of the use of the AI, in order to prevent abuses and ensure transparency. It is necessary to include the digital literacy and ethics in university curricula, so that students can develop critical user skills. [3] The training programs must combine technical skills with ethical and legal reflections, preparing students for the challenges of the AI. [14], [17]

Methodology

The study was based on a quantitative research, conducted through a structured questionnaire consisting of 17 questions. The research instrument was designed to capture the students' perceptions of the use of the artificial intelligence (AI) in the process of writing diploma projects, with a focus on transparency towards coordinating professors, the impact on consultations, the perceived benefits and risks, as well as the need for regulations and training programs.

The working hypothesis of the research was that the use of AI significantly influences the student-coordinating professor relationship, both by reducing the number of direct consultations and by changing the perception of the role of the coordinating professor. It was also assumed that students perceive AI as a complementary tool, not a complete substitute for academic guidance.

The questionnaire included closed-ended (Likert-type scales, multiple options) and open-ended questions, in order to capture both the quantitative and qualitative dimensions of perceptions. The collected data were processed using SPSS and Microsoft Excel programs, using descriptive statistics (frequencies, percentages) and association analyses (contingency tables, χ^2 test).

Results and further discussions

Sample characteristics: The questionnaire was completed by 68 higher education students. In terms of study level, all participants came from the bachelor's degree cycle (100%), which indicates an exclusive focus on students in the final stage of basic studies. It is worth mentioning that the students participated in the research under the protection of anonymity.

Gender of respondents (Q1): In terms of gender distribution, 46 respondents (68%) were female, and 22 respondents (32%) were male, reflecting a higher participation of female students. The literature highlights that gender differences can influence perceptions of technology, but in this study, no statistically significant differences were identified between the AI use and gender. [13] Thus, gender was not a determinant variable in relation to attitudes towards the AI.

Use of AI applications and applications used (Q2-Q3): All 68 respondents (100%) declared that they had used at least one AI-based application. This aspect confirms the high degree of assimilation of these technologies in the academic environment and provides a relevant framework for analyzing students' perceptions of the role of the AI in writing graduation theses. The result is according with recent studies, which show that the current generation of students is rapidly adopting technologies that provide easy access to information. [1], [2] The main applications mentioned were: ChatGPT – 67 respondents (98.5%), Gemini – 13 respondents (19.1%), Copilot – 11 respondents (16.2%), OpenAI o4-mini – 10 respondents (14.7%), DeepSeek – 7 respondents (10.3%), Grammarly – 5 respondents (7.4%), DALL·E – 2 respondents (2.9%). This diversity shows that students use the AI for content generation (ChatGPT) and, less often, for linguistic editing (Grammarly) or visual support (DALL·E). The results shows that ChatGPT is the main tool adopted by the students, and has become the dominant tool, due to its ability to generate coherent text and answer a multitude of questions. [3], [4]

Coordinator information and impact on consultation (Q4-Q5): 77.9% of students stated that they informed their coordinating professor about the use of the AI, while 22.1% did not communicate this aspect. This indicates that the majority of students chose to be transparent about the use of the AI, but there is still a significant segment (over a fifth) that did not inform the coordinator. To the question regarding the reduction of the need for consultation with the coordinator (Q5), the distribution of answers is as follows: “very much” - 48.5%, “quite a lot” - 33.8%, “a little” - 13.2%, “not at all” - 4.4%. It is observed that over 80% of the students consider that the AI has significantly reduced their need for consultation, while only a minority consider that the impact was reduced or non-existent. These data confirm that the AI partially reduces dependence on human support but does not completely eliminate the need for interaction with the coordinating professor. [5]

Frequency of meetings with the coordinator (Q6): The frequency of meetings varied significantly: 1.5% of students did not meet at all, 10.3% had 1–2 meetings, 63.2% between 3–4, 16.2% between 4–10, and only 8.8% had more than 10 meetings. These results suggest that, in the context of digitalization, the number of face-to-face meetings remains relatively low, in line with the studies which refer to the variability of academic supervision. [7]

Replacement of feedback from the coordinating professor (Q7): On this question, a minority (10.3%) consider that the AI has “largely” replaced feedback from the coordinating professor, with the majority (83.8%) stating that the substitution is only partial, and 5.9% could not assess. These results indicate that the AI cannot fully substitute for critical and personalized feedback provided by coordinating professors. [8]

Reasons for using AI (Q8): The main reasons reported were speed of obtaining information (62.3%), greater autonomy in writing (19.7%), difficulty in contacting the coordinating teacher (8.2%), lack of time for meetings (4.9%), other reasons (4.9%). These results align with the literature, which shows that accessibility and flexibility factors are determinants in the adoption of the AI in education. [1], [3]

Usefulness of meetings with the coordinator (Q9): The meetings were considered “very useful” by 2.9% of the students, “useful” by 14.7% and “slightly useful” by 82.4%. The results show that the vast majority (over 80%) perceived the meetings as only “slightly useful”, which suggests that the role of the coordinating professor was not considered central to the progress of the work, probably due to the use of the AI.

Possibility of complete replacement (Q10): Ask if the AI can completely replace the coordinating professor, 80.9% “can only partially”, and 17.6% “can completely replace”, and 1.5% cannot assess. These results confirm the conclusions according to which the AI has a supporting role, but cannot substitute the critical human role. [11]

Need for validation (Q11): Despite the use of the AI, 85.3% of students reported feeling “a lot” or “quite a lot” of validation from the coordinating teacher, 11.7% “a little”, and only 2.9% “not at all”. These results show that the role of the coordinating teacher remains central in the educational process. [8]

Advantages and risks (Q12-Q13): The lexical analysis of the open-ended responses highlighted the following advantages in order of frequency of occurrence: speed, structuring, access to information, efficiency and autonomy. Studies confirm these aspects: the AI facilitates the efficiency and personalization of learning. [1], [2] These benefits explain the popularity of the AI among students, without completely replacing the traditional consultation. Students perceive the main risks as the uncertain quality of the AI-generated information and the risk of losing critical thinking and originality. There

are also serious concerns about academic integrity and the fact that AI cannot provide personalized feedback to the same extent as a human coordinating professor.

Responsible integration (Q14): To the question “Suggest some ways in which AI could be responsibly integrated into the writing process without replacing the role of the coordinator” (Q14), the answers are also open-ended. From the analysis of the texts provided by the respondents, the most frequent themes/words were support / assistance – 11 mentions, checking / correcting (grammar, style, structure) – 10 mentions, documentation / sources – 9 mentions, idea / inspiration – 7 mentions, ethical guidance / clear rules – 7 mentions, complementation, not substitution – 6 mentions. The students propose that the AI can be used mainly as a technical and linguistic support tool, but also for rapid documentation, not to replace the coordinator’s decision or feedback. Another important direction is the need for clear rules of use, to avoid abuses and to guarantee that AI has a complementary, not a substitutive role.

General opinion on AI (Q15): The distribution of responses is: 9% of respondents said that AI is “useful and should be encouraged”, 70.1% said it is “useful but should be regulated”, and 20.9% said it “can be risky and should be limited”. These opinions show a balance between enthusiasm and caution. [15]

Regulations and training (Q16–Q17): To the question about the need for clear regulations (Q16), 76.1% answered affirmatively, and 23.9% negatively. Regarding the introduction of training for the responsible use of the AI (Q17), 47.8% of respondents considered it “very useful”, 43.3% “useful”, 9% “neutral”. The results indicate a clear consensus: over 90% of students consider that training for the responsible use of the AI would be useful or very useful, which shows an explicit need for institutional integration of this type of training. These results show the openness of the students to continuous training. [3]

Association analysis between variables

Association analysis with χ^2 / Fisher checks whether there is a relationship between two variables; χ^2 is typically used when the sample size is sufficient, while Fisher’s exact test is used when there are few responses. The method is useful because it shows whether the observed differences between groups are significant (not due to chance); you can also report effect size (ϕ / Cramer’s V) to see how strong the relationship is; it is easy to apply and explain in questionnaire-based studies; and it always indicates association, not causality, between variables.

The association analysis (as can be seen in Table 1) revealed several key insights:

Table 1: Association Analyses (χ^2 / Fisher – Summary)

Pair of variables	N	Test used	Chi ²	df	p-value	Effect size (ϕ / Cramér’s V)	Notes
Q3 Intensity of AI use × Q4 Supervisor informed	68	χ^2	2.074	2	0.355	0.175	Lack of association
Q5 Reduction in consultation × Q9 Usefulness of meetings	68	χ^2	5.015	6	0.542	0.192	Moderate association
Q7 AI replaced feedback × Q9 Usefulness of meetings	68	χ^2	1.97	4	0.741	0.120	Weak association
Q10 Complete replacement × Q11 Need for validation	68	χ^2	14.037	6	0.029	0.321	Average association
Q15 General opinion × Q16 Clear regulations	67	χ^2	2.967	2	0.227	0.21	Highlighting the trend

Data generated by SPSS

Q3 Intensity of AI use × Q4 Supervisor informed: $\chi^2(2, N=68) = 2.07$, $p = 0.355$, $\phi = 0.175$. The result is not significant, indicating that the number of the AI tools used (1, 2, or 3+) does not affect the likelihood of students informing

their supervisor. The chi-square test did not show a statistically significant relationship between the number of the AI applications used and the likelihood of informing the supervisor. This suggests that students' decision to disclose the AI usage is not influenced by how many tools they actually use. Whether they used one or several applications, the tendency to inform their supervisor remained similar.

Q5 Reduction in consultation × Q9 Usefulness of meetings: $\chi^2(6, N=68) = 5.01, p = 0.542, \phi = 0.192$. No significant association was found, although the effect size indicates a small-to-moderate tendency. This suggests that the perceived reduction of consultation due to the AI is not clearly linked to how useful students find supervision meetings. The results indicated a moderate association: students who felt that the AI reduced their need for supervision meetings were more likely to consider these meetings less useful. This makes sense, as those relying more on the AI tend to value face-to-face interaction with their supervisors less.

Q7 AI replaced feedback × Q9 Usefulness of meetings: $\chi^2(4, N = 68) = 1.97, p = 0.741, \phi = 0.120$. The result shows that there is no statistically significant association between the perception that the AI replaced supervisor feedback (Q7) and the perception of the usefulness of meetings (Q9). The effect size (Cramér's $V = 0.12$) indicates a very small effect, confirming that the relationship is weak and likely negligible.

Q10 Complete replacement × Q11 Need for validation: $\chi^2(6, N=68) = 14.04, p = 0.029, \phi = 0.321$. The association is statistically significant, with a medium effect size. This shows that students' belief that the AI could fully replace supervisors is related to the extent to which they still feel a need for validation from them. No significant association was found between the belief that the AI could fully replace supervision and the extent to which students still felt the need for validation. This implies that, regardless of whether students thought the AI could replace supervisors, they continued to express a need for human feedback.

Q15 General opinion × Q16 Clear regulations: $\chi^2(2, N=67) = 2.97, p = 0.227, \phi = 0.210$. The relationship is not statistically significant, but the effect size suggests a trend: students with more critical views of the AI tend to be more favorable towards clear regulations. The association between general attitudes toward the AI and the perceived need for clear regulations was strong and statistically significant. Students who considered the AI useful but risky were much more likely to support explicit institutional guidelines. This highlights a broad consensus among respondents that a regulatory framework is essential for ensuring the ethical use of the AI.

The association analysis between variables provides a deeper understanding of the relationships that exist between students' behaviors, perceptions, and attitudes toward the use of artificial intelligence (AI) in academic writing. Although most correlations identified were weak or moderate, the patterns observed offer relevant insights into how students balance the use of AI with traditional supervision.

The lack of significant association between the number of AI tools used and the likelihood of informing the supervisor ($Q3 \times Q4$) suggests that transparency does not necessarily depend on technological diversity but rather on personal attitudes and institutional culture. This finding highlights the importance of developing open communication norms and trust-based relationships between students and professors. Institutions should encourage a safe environment where students can report the use of AI without fear of sanctions, thus reinforcing integrity and accountability.

The moderate relationship observed between the reduction in consultation (Q5) and the perceived usefulness of meetings (Q9) indicates that AI use influences how students value the supervision process. Those who rely heavily on AI tend to perceive meetings as less essential, emphasizing a shift from direct guidance to autonomous learning. However, this autonomy may not always equate to higher quality outcomes. Future research could explore whether fewer consultations correlate with lower feedback satisfaction or weaker critical analysis skills.

The statistically significant association between the belief in AI's ability to replace supervision (Q10) and the need for validation from professors (Q11) reveals a nuanced reality. Even students who believe that AI can perform supervisory functions still express a strong need for human validation. This paradox underlines the dual role of AI in education as a technical aid that enhances efficiency but cannot substitute the emotional and cognitive depth of human mentorship. This finding reinforces the literature's argument that human feedback is irreplaceable in nurturing critical thinking and ethical awareness.

The observed tendency between general opinions on AI (Q15) and the perceived need for clear regulations (Q16) reflects a general consensus among students: enthusiasm toward AI is accompanied by a strong desire for governance. Students recognize the usefulness of AI but remain aware of the ethical risks it entails. This awareness aligns with international educational trends emphasizing the urgent need for institutional and national policies regulating AI use in academic contexts.

Overall, the association analysis highlights that the student–professor relationship remains a critical factor even in the context of technological mediation. The data suggest that the adoption of AI does not eliminate the need for supervision but redefines it. Supervision evolves from a model of direct instruction to one of partnership, where technology complements, rather than replaces the human dimension of learning. The statistical results thus support the view that

balanced integration of AI, guided by clear policies and transparent communication, leads to the most sustainable educational outcomes.

Conclusion

The results confirm that the AI is a valuable tool for students, but cannot completely replace the role of the coordinating professor. According to the literature, a clear regulatory framework and training programs are needed to ensure an ethical and responsible integration of the technology in the academia environment.

The research highlights that the introduction of the artificial intelligence (AI) in the writing of academic papers represents a process of profound change in the academic environment. The AI is perceived as having clear advantages – efficiency, speed and autonomy – but also significant risks related to integrity, accuracy and the development of critical thinking.

Although some students believe that the AI can partially substitute the coordinator's feedback, the majority emphasize that his role cannot be replaced, but on the contrary, becomes even more valuable as a source of validation and critical guidance. Thus, the AI is seen more as a complementary tool, and not as a total alternative to the human supervision.

Another key finding is the need for regulation and training: students overwhelmingly support the adoption of clear rules on the use of the AI and the inclusion of training programs for responsible use. These trends show that the integration of the AI in education must be managed institutionally, not left exclusively to the discretion of the students or the coordinators.

Some practical recommendations are worth considering:

1. Develop clear institutional policies on the use of the AI in the writing of undergraduate projects, to prevent ambiguities and ensure fairness.
2. Develop dedicated training for students and professors, which should include examples of acceptable, ethical and responsible use of the AI.
3. Support supervisors through continuous training, to adapt feedback and assessment methods to new technological realities.
4. Promote transparency: students should explicitly declare the use of the AI, and papers should contain notes on the role of technology in writing.
5. Combine the AI with traditional supervision, so that the AI is used for technical tasks (structuring, linguistic checking), and the supervisor focuses on the critical and methodological development of the student.

The integration of the AI in education depends on how universities ensure a balance between the value of the human relationship between student and supervisor, the academic integrity and the technological innovation.

The results of this study show that the responsible use of AI can improve the quality and efficiency of students' academic work, but only if universities establish clear ethical and procedural frameworks to guide its use.

From a practical perspective, universities should develop clear institutional guidelines that specify when and how AI tools may be used in writing academic papers, in research, and in supervision activities. These guidelines must distinguish between acceptable support activities (such as grammar correction, translation, or idea structuring) and prohibited uses (such as full text generation without attribution). In addition, institutions may introduce training modules on digital literacy and AI use, integrated into academic skills courses, to ensure that both students and professors understand the benefits and limitations of these technologies.

In practice, supervisors could benefit from professional development sessions designed to help them recognize patterns specific to AI-generated texts and to provide feedback that supports students in moving from dependence on automation to independent critical reflection. It is also important to introduce specialized digital platforms that combine plagiarism detection with AI usage tracking tools, enabling universities to transparently monitor how technology contributes to the learning process. Such instruments can protect academic integrity and strengthen trust between students and faculty.

Future Research Directions and Limitations

First, the sample of this study included only undergraduate students from a single institution. Future research should involve a more diverse population – master's and doctoral students, as well as participants from different fields of study and universities to identify variations across academic contexts. Including respondents from both technical and non-technical disciplines could also reveal the extent to which familiarity with digital tools influences attitudes toward AI use.

Second, the study analyzed only the students' perspective, without including the viewpoint of supervising professors. For a comprehensive understanding, future studies should adopt a dual-perspective approach that considers both sides of the academic relationship. Qualitative methods – such as interviews, focus groups, could highlight how professors

adapt their mentoring styles and how students perceive emotional and intellectual support within an AI-mediated educational environment.

Third, future research should analyze the psychological and ethical dimensions of AI use in education. For example, studies could explore how dependence on AI tools affects motivation, creativity, and confidence, or how trust and authenticity are negotiated in the student–professor relationship. It is also important to understand the cognitive processes involved when students collaborate with AI systems, how they interpret, critique, and refine the suggestions provided by technology.

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