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The Impact of Artificial Intelligence on Students' Academic Performance from University Teachers' Perspectives

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Abstract

Artificial Intelligence is rapidly transforming various sectors, including education. This study investigates the impact of artificial intelligence on students' academic performance across different fields from the perspective of university teachers at different universities in Algeria. The study employed a descriptive analytical approach and a questionnaire was administered to a sample of 150 higher education university teachers. The results indicate that university teachers generally perceive a positive impact of artificial intelligence techniques on students' academic performance, citing improvements in critical thinking, problem-solving skills, independence in learning, and creativity. However, they also acknowledge challenges such as the potential for reduced human interaction, over-reliance on artificial intelligence, the need for teacher training, ethical considerations, and the digital divide. Overall, this study provides valuable insights into the perceptions of university teachers regarding the role of artificial intelligence in education and highlights the need for further research to address the challenges and maximize the benefits of artificial intelligence in higher education.

Keywords: Academic performance, artificial intelligence, higher education, perspectives, students

ملخص

تشهد مختلف القطاعات تحولا سريعا بفعل الذكاء الاصطناعي، بما في ذلك قطاع التعليم. تهدف هذه الدراسة إلى استكشاف تأثير الذكاء الاصطناعي على الأداء الأكاديمي للطلاب في مختلف التخصصات، من وجهة نظر أساتذة الجامعات الجزائرية. تم استخدام المنهج الوصفي التحليلي، حيث تم توزيع استبيان على عينة تضم 150 أستاذًا. أظهرت النتائج أن الأساتذة يعتبرون أن الذكاء الاصطناعي يؤثر بشكل إيجابي على الأداء الأكاديمي للطلاب، حيث لاحظوا تحسنًا في التفكير النقدي، ومهارات حل المشكلات، والاستقلالية في التعلم، والإبداع. ومع ذلك، أقروا بوجود تحديات مثل تقليل التفاعل البشري، الاعتماد الزائد على الذكاء الاصطناعي، الحاجة إلى تدريب الأساتذة، القضايا الأخلاقية، والفجوة الرقمية. تقدم هذه الدراسة رؤى مهمة حول آراء الأساتذة بشأن دور الذكاء الاصطناعي في التعليم، وتؤكد على ضرورة إجراء المزيد من الأبحاث لمواجهة التحديات وتعظيم فوائد الذكاء الاصطناعي في التعليم العالي.

الكلمات المفتاحية: ذكاء اصطناعي، أداء أكاديمي، تعليم عالي، الطلبة

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Introduction

The learning and education sector has witnessed remarkable advancements in recent years due to technological innovations. Internet searches have become an integral part of school learning, and tablets have increasingly replaced or supplemented traditional books in universities. Despite these significant developments, their impact may pale in comparison to the anticipated effects of Artificial Intelligence (AI) in education. (Ramo et al., 2022), Recent advancements in AI have led to a surge in educational applications, introducing new possibilities and challenges for teaching and learning in higher education. These innovations have the potential to fundamentally reshape the governance and internal structures of higher education institutions (Singh & Hiran, 2022). This study addresses the central question: "How do university teachers at Algerian universities perceive the impact of AI on students' academic performance?"

Understanding university teachers' perceptions of AI is crucial because they are at the forefront of implementing and observing the outcomes of AI applications in education. Their insights can provide valuable information on the practical benefits and challenges of AI integration in teaching and learning processes. This research aims to fill the gap in knowledge by providing empirical evidence on university teachers' views and experiences with AI in higher education.

The significance of this research lies in understanding the evolving role of AI in education and its direct implications on students' academic performance. By capturing the perspectives of university teachers, This research seeks to address the following questions:

- In what ways do university teachers believe that AI techniques enhance or hinder various aspects of students' academic performance?
- What are the primary benefits and challenges that university teachers associated with the integration of AI in higher education settings?
- What recommendations do university teachers offer for optimizing the use of AI in higher education to maximize its positive impact on student learning outcomes?

This study aims to provide insights into the practical effects of AI in educational settings and to guide policy and decision-making in higher education. Specifically, the study seeks to achieve several key objectives: first, to explore university teachers' perceptions of AI's influence on students' academic performance at Algerian universities; second, to examine the primary benefits and challenges associated with the integration of AI in higher education, as identified by university teachers; third, to analyze how university teachers' perceptions of AI's impact vary based on their demographic characteristics; and finally, to gather and present university teachers' recommendations for optimizing the use of AI in higher education to maximize its positive impact on student learning outcomes.

The study employs a descriptive approach by exploring theoretical frameworks and an analytical approach by examining the impact of Artificial Intelligence on students' academic performance from the university teachers' perspective. This is achieved through the distribution of an electronic questionnaire and the subsequent presentation and analysis of results using SPSS version 26.

.Literature Review

The integration of Artificial Intelligence (AI) in education has been a subject of growing interest and research. Numerous studies have explored the potential benefits and challenges of

using AI techniques to enhance the learning experience and improve academic outcomes, The study conducted by Mallillin (2024) specifically aimed to examine the influence of AI on students' academic performance, focusing on factors like improved student performance, attitudes toward learning, motivation for study habits, and learning mechanisms. The research findings indicated that AI effectively caters to the specific learning needs of students, leading to comprehensive and improved learning experiences. Additionally, AI was found to assist in identifying struggling learners and providing necessary interventions, enhancing students' attitudes toward learning, boosting motivation, and offering adaptive learning mechanisms. In contrast, Chang et al. (2024) utilized data analysis and machine learning to quantitatively evaluate the impact of AI on university students' learning. Their study aimed to demonstrate the positive effects of AI on student learning. The research findings revealed that AI positively influences college students' learning primarily through factors like learning purposes, safety of tool use, motivation, usage time, and satisfaction. The study also proposed an evaluation system to assess and enhance students' learning abilities in the AI era. Mei et al. (2024) conducted a comprehensive review of research on the impact of AI on learning, employing Citespace knowledge mapping analysis. The objective was to identify key trends, hotspots, and research gaps in the field. The study indicated that research on AI and learning has witnessed significant growth in recent years, with a focus on areas like learning science, machine learning, deep learning, and higher education. The research highlighted AI's profound impact on education, transforming learning methods and promoting educational change. It also acknowledged the existing gaps in the research and called for further exploration of AI's potential in education.

Sîrghi et al. (2023) identified the skills necessary for encouraging undergraduate students to adopt AI technologies within the Romanian higher education digital learning environment. Their findings highlighted that students' intention to adopt AI applications depends significantly on factors such as perceived usefulness, attitudes toward the technologies, perceived hedonic value, expected performance, and compatibility, with application interactivity having an important but indirect influence. Maia et al. (2023) examined the use of AI to evaluate educational performance in basic education across multiple countries. They found limited practical application of AI methodologies, a focus on specific datasets, and a tendency to emphasize computational methods over educational implications. (Fazlollahi et al., 2022) compared AI tutoring with expert instruction in surgical simulation, finding that AI tutoring significantly outperformed expert instruction in terms of performance scores and skill transfer.

In the Algerian context, Fassi and Sabti (2024) examined the impact of artificial intelligence technology, specifically Chat GPT, on the academic achievement of university students in the context of a knowledge-based economy. This study, conducted on a sample of students from the University of Algiers 2, found that the use of Chat GPT significantly enhanced students' academic performance by providing interactive and intelligent support in their research and studies, promoting a more efficient and engaging learning environment. Another study by Ben Ferhat and Ben Thamer (2024) investigated the prospects and challenges of adopting artificial intelligence. This research aimed to formulate a procedural definition of AI, discuss the levels of its adoption across various sectors, and explore the role of new technologies in driving AI. The study also addressed the dynamic forces enhancing AI adoption and the potential challenges, emphasizing the need for infrastructure, skilled labor,

and an innovation culture. Furthermore, a study, led by Werghi (2022) focused on the contributions of artificial intelligence outputs in education, aiming to highlight the roles AI plays in enhancing educational processes. The research emphasized that AI technologies, including Chat GPT, can significantly aid in developing educational strategies, providing personalized learning experiences, and supporting teachers in delivering more effective instruction.

Despite the extensive research on the integration of AI in education, there is a notable gap in understanding the specific perspectives of university teachers on the impact of AI on student academic performance. Previous studies have largely focused on technological aspects, student adoption rates, and the overall effectiveness of AI tools in educational settings. However, the viewpoint of university teachers, who play a crucial role in the implementation and effectiveness of these technologies, has been less explored. There is limited research on how AI technologies affect teaching methodologies and learning practices from the university teachers' viewpoint, as well as on the ethical considerations and practical challenges they face, such as reduced human interaction and over-reliance on technology. Furthermore, most existing research has been conducted in Western contexts, with a lack of studies focusing on university teachers in different cultural and institutional settings, such as universities in Algeria. This study aims to fill these gaps by examining the perspectives of university teachers at various universities in Algeria, providing valuable insights into the benefits and challenges of AI in education, and informing policy and practice to enhance AI integration in higher education.

Artificial Intelligence in the Educational Context

AI is a field of study focused on creating agents that can perceive their environment and make decisions accordingly. In this context, computers perform cognitive functions akin to human abilities, including learning, understanding, reasoning, and interacting (Maia et al., 2023). In research, AI is used to analyze large datasets, identify patterns, and generate valuable insights that can inform decision-making processes (Sîrghi et al., 2023). AI algorithms can process vast amounts of data quickly and accurately, enabling researchers to uncover hidden relationships and trends that may not be apparent through traditional analysis methods. For instance, in educational research, AI has been used to predict student performance, identify factors influencing learning outcomes, and develop personalized learning interventions (Ahajjam et al., 2022; Wang, 2023). By leveraging AI's capabilities, researchers can gain a deeper understanding of complex educational phenomena and make data-driven decisions to improve teaching and learning practices

AI is revolutionizing the field of education, particularly in higher education, by providing significant advancements in teaching, learning, and administrative processes. One of the primary reasons AI is important in education is its ability to offer personalized learning experiences. AI systems can analyze vast amounts of data to tailor educational content to meet the unique needs of each student, enhancing their learning outcomes (Akinwalere & Ivanov, 2022). This personalized approach ensures that students receive appropriate support and resources, addressing individual learning paces and styles.

Moreover, AI applications extend beyond personalized learning. Intelligent Tutoring Systems (ITS) utilize AI algorithms to provide real-time feedback and customized instructional content, which is especially beneficial in large classroom settings where individual attention from instructors is limited (García-Martínez et al., 2023). These systems can adapt to the

student's progress and provide targeted support, thereby improving the overall effectiveness of the educational experience.

In addition to enhancing learning experiences, AI plays a crucial role in streamlining administrative tasks within educational institutions. AI-driven systems can automate routine tasks such as grading, scheduling, and managing student records, allowing educators to focus more on teaching and less on administrative work (Ahajjam et al., 2022). This increased efficiency not only reduces the administrative burden on faculty but also ensures timely and accurate processing of information.

Furthermore, AI is instrumental in educational research and development. By leveraging machine learning and data analytics, researchers can analyze extensive datasets to uncover patterns and insights that drive innovation in educational practices. For instance, predictive analytics can forecast student performance and identify at-risk students, enabling early interventions to improve retention and academic success (Heba, 2023).

AI also enhances the accessibility and inclusivity of education. AI-powered language translation tools and virtual assistants can support multilingual students and those with disabilities, providing them with the necessary resources to succeed in their academic pursuits (Maia et al., 2023).

In summary, the integration of AI in education is vital for creating a more adaptive, efficient, and inclusive learning environment. Its applications range from personalized learning and intelligent tutoring to administrative automation and advanced educational research, all of which contribute to the continuous improvement and accessibility of education (Akinwalere & Ivanov, 2022).

The Impact of AI on Student Learning

The impact of AI on student performance is a subject of ongoing investigation. Research suggests that AI can positively influence student learning by providing personalized feedback, adaptive assessments, and intelligent tutoring systems (Al-atal et al., 2021). These AI-powered tools can cater to individual student needs, identify knowledge gaps, and offer tailored support, ultimately leading to improved learning outcomes (Heba, 2023). Moreover, AI can enhance student engagement by providing interactive and immersive learning experiences, such as virtual reality simulations or gamified learning environments (Maia et al., 2023) .AI systems can also automate routine tasks such as grading and assessment, allowing teachers more time to focus on providing personalized support and guidance to their students (Seo et al., 2021). This personalized approach has been found to enhance student engagement and improve academic achievement (García-Martínez et al., 2023). Additionally, AI can provide valuable insights into student performance through learning analytics, enabling educators to identify areas where students may be struggling and provide timely interventions (Akinwalere & Ivanov, 2022).

However, it is important to acknowledge the potential challenges associated with AI in education. One concern is the risk of over-reliance on AI systems, which may hinder the development of critical thinking and problem-solving skills in students (Sîrghi et al., 2023). It is crucial to strike a balance between AI-assisted learning and fostering students' independent learning abilities. The use of AI-powered tools can lead to a decrease in students' motivation and engagement if not implemented thoughtfully (Seoet et al., 2021). Additionally, ethical considerations regarding data privacy and algorithmic bias need to be carefully addressed to ensure fair and equitable use of AI in educational settings ((Slimi & Carballido, 2023). As AI

continues to advance, educators, researchers, and policymakers need to collaborate and establish guidelines for the responsible and ethical integration of AI in education, ensuring that it truly benefits students and enhances their learning experiences.

Methods and Materials

Participants

The study population consisted of some university teachers from various faculties at Algerian universities, such as the University of Algiers3 and the University of Algiers2 during the academic year 2023/2024. A sample of 150 university teachers was selected using a stratified random sampling technique to ensure representation from different faculties and departments. This sample size was chosen to ensure sufficient representation from different faculties and departments while maintaining feasibility in terms of time and resources for data collection and analysis. Despite the large population, a sample of 150 is considered statistically significant to provide reliable insights and generalizable results within the context of this study.

Research Instruments

An online questionnaire was developed to collect data on university teachers' perceptions of the impact of AI on students' academic performance. The questionnaire consisted of three sections:

- **Section I:** Demographic information (gender, academic rank, specialization, years of teaching experience).
- **Section II:** Impact of AI techniques on students' academic performance (6 statements using a 5-point Likert scale).
- **Section III:** Benefits and challenges of using AI in education (5 statements each, using a 5-point Likert scale).

Research Procedures

The questionnaire was administered online to the selected university teachers. Participants were provided with an informed consent form and were assured of the confidentiality of their responses. Data were collected over four weeks and were analyzed using SPSS version 26.

Results

Questionnaire

Section 1: Demographic Parameters.

Table 1. *Characteristics of respondent*

Variable	Category	Frequency	Percentage
Gender	Male	60	40,0%
	Female	90	60,0%
Academic Rank	Professor	20	13,3%
	Associate Professor A	28	18,7%
	Associate Professor B	28	18,7%
	Assistant Professor A	7	4,7%
	Assistant Professor B	17	11,3%
	Temporary Contract	50	33,3%

Specialization	Scientific	27	18,0%
	Humanities	72	48,0%
	Economics	49	32,7%
	policy science	2	1,3%
Years of Teaching Experience	Less than 5 years	57	38,0%
	5-10 years	41	27,3%
	11-15 years	22	14,7%
	16-20 years	11	7,3%
	More than 20 years	19	12,7%

The demographic items of the respondents, including gender, academic rank, specialization, and years of teaching experience, were examined through a survey. Table One displays the characteristics of the respondents. The distribution of individuals according to their gender revealed a higher proportion of females (60%) compared to males (40%).

With the distribution of academic rank, the largest percentage of the sample consists of Temporary Contract Lecturers (33.3%), followed by Associate University teachers A and B (18.7% each). The data shows that the largest percentage of the sample belongs to Humanities (48%), followed by Economics, Business, and Management (32.7%).

The largest percentage of university teachers have less than 5 years of experience (38%), followed by those with 5-10 years of experience (27.3%).

Table 2. *Impact of artificial intelligence techniques on students' academic performance*

Number	Content of Statements	Mean	Standard Deviation	Response Trend
1	I have noticed an improvement in students' academic performance (e.g., grades, class participation,	2.68	1.222	Positive
2	I see that students are using critical thinking and analytical skills more effectively when using AI	2.65	1.154	Positive
3	I believe that AI techniques help students develop their problem-solving and decision-making skills.	3.28	1.205	Positive
4	I have noticed that students have become more independent in their learning thanks to AI	3.17	1.145	Positive
5	I believe that AI techniques help improve students' creativity in completing tasks and projects.	3.45	1.168	Positive
6	I have noticed that students have become more capable of applying theoretical knowledge to practical contexts thanks to their use of AI techniques.	2.92	1.162	Positive

The table presents the mean and standard deviation for each statement, which explores the impact of AI techniques on students' academic performance. The mean values for all statements are above 2.5, indicating a positive response trend. The standard deviation values are relatively consistent, ranging from 1.145 to 1.222, suggesting a moderate level of variability in the responses. Overall, the data suggests that faculty members generally perceive a positive impact of AI techniques on students' academic performance.

Table 3. *Benefits of using AI in education*

Number	Content of Statements in Axis III (Benefits)	Mean	Standard	Response Trend
1	I believe that AI techniques (e.g., chatbots, and automated assessment systems) help improve the	3.87	0.907	Positive
2	I believe that AI techniques may help detect cases of cheating and plagiarism in assignments and exams.	3.95	0.972	Positive
3	I believe that AI techniques help create a more interactive and engaging learning environment.	3.78	1.002	Positive
4	I believe that AI techniques help facilitate the assessment process and provide faster and more	3.87	0.877	Positive
5	I believe that AI techniques help provide equal educational opportunities for students from different backgrounds and abilities.	3.70	1.048	Positive

The table presents the mean and standard deviation for each statement in the "Benefits of Using AI in Education" section of Axis III. The mean values for all statements are above 3.7, indicating a positive response trend. The standard deviation values are relatively consistent, ranging from 0.877 to 1.048, suggesting a moderate level of variability in the responses. Overall, the data suggests that faculty members generally perceive the benefits of using AI in education positively.

Table 4. *Challenges of using AI in education*

Number	Content of Statements in Axis II	Mean	Standard Deviation	Response Trend
1	I am concerned that AI techniques may reduce human interaction between me and my students.	3.99	0.990	Positive
2	I believe that overreliance on AI techniques may cause students to become overly dependent on them and	4.43	0.718	Positive
3	I see that there is a need for more training and professional development for teachers on how to	4.41	0.770	Positive
4	I see that there is a need to develop clear policies and procedures to ensure the ethical and responsible use of	4.45	0.747	Positive
5	I fear that the use of AI techniques may increase the gap between students with access to technology and those who do not.	4.29	0.832	Positive
6	I believe that AI techniques may make it easier for students to cheat on assignments and exams.	4.37	0.790	Positive

The table presents the mean and standard deviation for each statement in the "Challenges of Using AI in Education" section of Axis III. The mean values for all statements are above 3.99, indicating a positive response trend. It is important to note that in this context, a positive response indicates agreement with the challenges presented by AI in education. The standard deviation values are relatively consistent, ranging from 0.718 to 0.990, suggesting a moderate level of variability in the responses. Overall, the data suggests that faculty members generally acknowledge and agree with the potential challenges of using AI in education.

Discussion

The study sought to answer three key research questions regarding the integration of AI in higher education and its effects on student's academic performance, specifically from the perspective of university teachers. The first research question explored how university teachers perceive AI techniques in enhancing or hindering students' academic performance. Results indicate that university teachers generally view AI as positively impacting performance, especially in areas like problem-solving and decision-making. This aligns with Mallillin's (2024) findings, which highlight the capacity of AI to improve learning outcomes through adaptive and personalized support. Nevertheless, the study also reveals concerns about the potential limitations AI may impose on critical thinking and creativity. University teachers noted that while AI provides structured learning environments, it might restrict the development of deeper analytical skills—a concern echoed by Chang et al. (2024) regarding the constraints of AI-driven education.

The second research question focused on the benefits and challenges of integrating AI in higher education settings. University teachers reported various advantages, including enhanced learning environments, more efficient feedback mechanisms, and improved academic integrity monitoring. These findings are consistent with García-Martínez et al. (2023), who observed similar benefits in the use of Intelligent Tutoring Systems. However, the study also highlighted significant challenges, such as the risk of over-reliance on AI and reduced human interaction in educational contexts. These challenges resonate with the concerns raised by Sîrghi et al. (2023) regarding the potential detachment AI might cause. Additionally, the need for equitable access to AI technology was emphasized, reflecting the findings of Maia et al. (2023) on the importance of addressing digital divides in educational settings.

The third research question investigated the recommendations offered by university teachers to optimize the use of AI in higher education. The study found a strong emphasis on the need for comprehensive training programs and ethical guidelines to ensure responsible AI use. These recommendations align with Slimi and Carballido's (2023) call for educator training and the establishment of clear policies governing AI integration. The findings also support the suggestion by Akinwalere and Ivanov (2022) that AI should be leveraged to provide personalized learning experiences while maintaining a balance with traditional educational methods.

The findings of this study indicate that university university teachers perceive a positive impact of AI technologies on students' academic performance. However, the extent of this impact varies across different skills. For instance, while university teachers reported a significant improvement in problem-solving and decision-making abilities, their perceptions regarding the influence of AI on critical thinking and creativity were more nuanced.

The study further highlighted the multifaceted benefits of AI integration in education, including enhanced learning quality, streamlined assessment processes, and more engaging learning environments. Nonetheless, participants acknowledged several challenges associated with AI implementation, such as reduced human interaction, overreliance on technology, and the need for adequate teacher training.

Pedagogical Implications

Based on the findings of this study, it is recommended that educational institutions prioritize the development of AI literacy programs for students. By integrating AI concepts and skills into core curricula, students can be equipped to become critical consumers and creators of AI technologies. Additionally, teacher training initiatives should focus on developing pedagogical expertise in leveraging AI tools to enhance teaching and learning experiences.

Algerian university university teachers have outlined a comprehensive approach to ensure the ethical and responsible integration of AI technologies into higher education. Their recommendations encompass several key areas:

- **Establishing Clear Governance and Regulations**: To effectively harness the benefits of AI while mitigating risks, university teachers advocate for robust regulatory frameworks. These include developing clear policies, defining boundaries, and establishing accountability measures. Incentivizing positive AI use and penalizing misuse are essential, as are delineating responsibilities among stakeholders.
- **Fostering AI Literacy and Awareness:** Raising awareness about AI's potential and limitations is crucial. University teachers emphasize the need for comprehensive training programs for faculty and staff to promote responsible AI use. Equipping students with critical thinking skills and understanding the risks of overreliance on AI is equally important.
- **Ensuring Accountability and Transparency:** To maintain trust and integrity, university teachers recommend implementing robust monitoring systems to oversee AI applications. Providing faculty with tools to detect unethical AI use is essential. Additionally, using anti-plagiarism software and promoting continuous research to improve AI systems are vital for ensuring fairness and inclusivity.
- **Integrating AI into the Curriculum:** Incorporating AI into the curriculum is seen as essential for preparing students for the future. Introducing AI-related courses, particularly in the early years of study, can provide students with a solid foundation. However, maintaining a balance between traditional learning and AI-driven approaches is crucial.
- **Prioritizing Human Interaction:** Recognizing the importance of human connection in education, university teachers emphasize the need to encourage in-person attendance and increase face-to-face interactions. This approach aims to complement AI technologies with the benefits of human engagement.
- **Protecting Privacy and Data:** Safeguarding student and faculty data is paramount. Implementing strict data protection policies and maintaining transparency in data usage are essential for building trust.
- **Fostering Innovation and Evaluation:** To maximize the benefits of AI, university teachers advocate for ongoing research and development in AI ethics. Developing tools to detect fraud and bias is crucial, as is continuously evaluating the impact of AI on student learning.

By implementing these recommendations, higher education institutions can effectively integrate AI while upholding ethical standards and preserving the core values of education.

Conclusion

This study aimed to investigate university university teachers' perceptions of the impact of AI on students' academic performance and to explore potential strategies for its ethical and effective integration into higher education. The findings reveal a generally positive outlook among university teachers regarding AI's potential to enhance student learning outcomes. However, the study also highlights the importance of addressing challenges such as privacy concerns, the digital divide, and the need for ongoing professional development.

Key findings indicate that university teachers perceive AI as a tool to improve student engagement, critical thinking, and problem-solving skills. While acknowledging the potential benefits, they also expressed concerns about overreliance on AI, the need for human interaction, and the ethical implications of its use.

The study emphasizes the importance of a balanced approach to AI integration, combining technological advancements with pedagogical expertise. By implementing appropriate policies, providing comprehensive training, and fostering a culture of ethical AI use, higher education institutions can maximize the benefits of AI while mitigating its risks.

Future research should delve deeper into the long-term impacts of AI on student outcomes, explore the effectiveness of different AI applications across various disciplines, and investigate the role of institutional culture in shaping AI adoption. By addressing these areas, researchers can contribute to the ongoing development of best practices for AI integration in higher education.

Ultimately, this study underscores the potential of AI to transform higher education for the better. By carefully considering the findings and recommendations presented herein, educational institutions can harness the power of AI to create more effective, equitable, and engaging learning environments for all students.

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Declaration of AI Refined

This research paper titled "The Impact of Artificial Intelligence on Students' Academic Performance from University Teachers' Perspectives" has undergone language correction using the AI-powered tools ChatGPT and Gemini to address grammatical and spelling errors only. It is acknowledged that the use of such tools may introduce standardised patterns typical of AI-generated content. However, the intellectual content and analysis remain entirely the work of the authors.

Statement of Absence of Conflict of Interest

The authors mentioned above hereby solemnly declare that they are not and shall not be in any situation that could give rise to a conflict of interest in what concerns the findings and recommendations contained in this academic article.

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Appendices

Appendix A

Academic Research questionnaire

Dear Madam/Sir,

As part of the completion of an academic research project at the University of Algiers 3, we are pleased to invite you to participate in this brief survey, which aims to explore the views of university teachers on the impact of artificial intelligence on education. Through your valuable participation, we aim to gain a deeper understanding of the trends and challenges of using artificial intelligence in the educational process. Your answers will contribute to drawing a clearer picture of how to leverage this technology to improve the learning experience for our students. Thank you for taking the time to complete this survey. We also inform you that your answers will be treated with complete confidentiality. Please accept our sincere respect and appreciation.

*Required question

1. Are you a university professor (Professor, Lecturer A, Lecturer B, Assistant Professor A, Assistant Professor B, Temporary Contract Professor)? *
   - Yes
   - No
2. Gender *
   - Male
   - Female
3. Academic Rank *
   - Professor
   - Lecturer A

- Lecturer B
- Assistant Professor A
- Assistant Professor B
- Temporary Contract Professor

4. Specialization *
   - Scientific (Science, Engineering, Medicine...etc.)
   - Humanities (Literature, Languages, History...)
   - Other:
5. Years of teaching experience *
   - Less than 5 years
   - 5-10 years
   - 11-15 years
   - 16-20 years
   - More than 20 years

Part Three and Last

Please indicate your level of agreement with the following statements:

6. Artificial Intelligence					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I have noticed an improvement in students' academic performance (e.g., grades, class participation, assignment quality) since using artificial intelligence techniques in learning.					
I see that students use critical thinking and analysis skills more effectively when using artificial intelligence techniques in learning.					
I believe that artificial intelligence techniques help students develop their problem-solving and decision-making skills.					
I have noticed that students have become more independent in their learning thanks to artificial intelligence techniques.					
I believe that artificial intelligence techniques help improve students' creativity in completing tasks and projects.					
I have noticed that students have become more capable of applying theoretical knowledge in practical contexts thanks to their use of artificial intelligence techniques.					
7. Benefits					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I believe that artificial intelligence techniques (e.g., chatbots, and automated grading systems) help improve the quality of education.					
I believe that artificial intelligence techniques may help detect cheating and plagiarism in assignments and tests.					
I believe that artificial intelligence techniques help provide a more interactive and engaging learning environment.					
I believe that artificial intelligence techniques help facilitate the assessment process and provide faster and more accurate feedback to students.					
I believe that artificial intelligence techniques help provide equal educational opportunities for students from different backgrounds and abilities.					
8. Challenges					

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I am concerned that artificial intelligence techniques may reduce human interaction between me and the students.					
I believe that over-reliance on artificial intelligence techniques may make students completely dependent on them and reduce their self-effort.					
I believe that there is a need for more training and professional development for teachers on how to effectively use artificial intelligence techniques in teaching.					
I believe that there is a need to develop clear policies and procedures to ensure the ethical and responsible use of artificial intelligence techniques in education.					
I fear that the use of artificial intelligence techniques may widen the gap between students who have access to technology and those who do not.					
I believe that artificial intelligence techniques may make it easier for students to cheat on assignments and exams.					

9. What procedures do you suggest to ensure the ethical and responsible use of artificial intelligence techniques in university education?

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