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The Impact of AI Usage on Transforming Student Learning Culture in Indonesia in Alignment with SDG 4

Kharis[1], Ediyanto[2], Daya Negri Wijaya[3], Evania Yafie[4], Bagus Waluyo[5], Razeale G. Resultay[6]

Abstract

This research examines the transformative effects of AI on the learning culture of university students in Indonesia, contextualized within the goals of SDG 4 for quality education. Surveying 230 students across nine faculties, including arts, business, law, and sciences, the study uses questionnaires and interviews to understand AI's influence on students' learning behaviors and academic efficiency. Results indicate that AI enhances self-confidence, learning speed, and effectiveness, with students reporting that AI reduces time spent on academic research and improves task efficiency. However, the integration of AI also raises concerns about academic integrity and critical thinking. This shift toward AI-assisted learning encourages autonomy but requires careful monitoring to maintain academic rigor. As AI reshapes student priorities and influences learning habits, ongoing research and adaptive teaching methods are crucial to harness AI's full potential in fostering an equitable, effective, and responsible learning environment.

Keywords: *Autonomous Learning, Educational Technology, Academic Integrity, Self-Regulation, Critical Thinking.*

Introduction

Research on the transformation of student learning culture in Indonesia, particularly related to the use of AI among students, is an essential step toward gaining a deeper understanding of the educational dynamics in the country. By comprehending these shifts, the study can identify unique patterns that may exist, providing valuable insights for policymakers and education practitioners to enhance the quality of education in Indonesia.

Higher education reflects the ever-changing dynamics of learning culture in modern society (Fitzgerald et al., 2019; Jackson, 2019). The changing dynamics of learning culture are pushing for a more student-centered, inclusive, and technologically-driven approach, with a focus on developing critical thinking and soft skills. This can lead to a more engaging and effective learning experience for students, better preparing them for the challenges of the future. The rapid advancement of information and communication technology has led to shifts in educational paradigms (Akour & Alenezi, 2022; Núñez-Canal et al., 2022; Wit & Altbach, 2021). With the changing dynamics of learning culture, there is a shift towards more student-centered and self-directed learning approaches. This means that students are given more control and autonomy over their learning, leading to a more personalized and engaging learning experience. The external pressure in the form of changes in learning culture among students has become increasingly necessary to investigate.

Fundamentally, learning culture encompasses the patterns, values, and norms that shape the way students engage in the learning process (Fenwick & Tennant, 2004; D. Kim, 2020). As the world continues to rapidly evolve, the changing dynamics of learning culture have also highlighted the importance of continuous learning. This means that students need to be equipped with the skills and mindset to adapt to new technologies and changes in their chosen fields throughout their lives. Changes in learning culture can be reflected in preferences for learning methods, the use of technology, study habits, and social interactions

[1] Universitas Negeri Malang, Indonesia.
[2] Universitas Negeri Malang, Indonesia.
[3] Universitas Negeri Malang, Indonesia.
[4] Universitas Negeri Malang, Indonesia.
[5] Universitas Nahdlatul Ulama Blitar, Indonesia
[6] Pangasinan State University, Philippines

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within academic settings (J. Abbas et al., 2019; Alenezi, 2020). By understanding these changes, students' learning experiences can be enhanced, better preparing them to meet the demands of an evolving world.

Several factors influencing the shift in student learning culture include technological developments, changes in educational paradigms, external pressures, and social and cultural shifts. Recently, the revolution in information and communication technology has transformed the way students access, process, and interact with information and knowledge. The use of technology in learning, such as online platforms, educational apps, and multimedia tools, has become an integral part of the student learning experience (Başar & ŞahiN, 2022).

Moreover, learning culture is a key factor in determining students' learning experiences. By understanding changes in learning culture, researchers can identify the factors influencing it, such as technological advancements, shifts in educational paradigms, and external pressures as previously mentioned. This understanding can assist educational institutions in developing more effective and relevant learning strategies that cater to students' needs.

In the context of educational globalization, this research becomes imperative. Changes in learning culture are influenced not only by students' internal factors but also by global influences such as technology, international educational trends, and the flow of information. By understanding these changes, researchers and the general public can identify the challenges and opportunities faced in navigating the current dynamics of global education. This is expected to contribute significantly to improving the quality of education at both national and regional levels.

Method

Overview

This research employed a qualitative approach through a literature study to examine changes in student learning culture in Indonesia following the emergence of AI technology. The steps include reviewing previous studies on the topic to link trends, findings, and relevant theories. Subsequently, questionnaires were used to collect quantitative data on students' preferences, habits, and perceptions regarding their learning culture before and after using AI. In-depth interviews were conducted with students to gain deeper insights into their learning experiences and the factors influencing changes in learning culture. Content analysis was employed to analyze documents such as educational policies and curricula to observe how learning culture changes are reflected in the context of educational institutions. The collected data were analyzed using statistical analysis to gain a deeper understanding of the changes in learning culture, and to assess the impact of AI on specific variables like confidence, academic efficiency, and self-study effectiveness.

Type of Research

This study adopted a mixed-methods approach, combining qualitative and quantitative methods to collect and analyze data, including surveys, interviews, and literature analysis. This comprehensive approach aims to provide a thorough understanding of the changes in student learning culture following the advent of AI and its implications in the context of modern higher education.

In the descriptive qualitative phase, researchers detailed the steps taken and reported the findings based on field observations. The data collected in this research is descriptive, meaning the researcher did not aim to provide explanations or test hypotheses. Based on this approach, the research aims to describe the new learning culture among students. After data are gathered and analyzed, the researchers described the results to capture the shifts in student learning culture following the emergence of AI.

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Data Sources and Data

The data sources for this study consisted of 230 students from several universities in Indonesia and from various majors and academic levels, selected randomly across 9 various faculties, including faculties of literature, language and arts, economics and business, law, science, education, and cultural studies to ensure diversity in perspectives to provides a representative snapshot of AI usage among university students in Indonesia. Primary data for this research were obtained through the use of validated questionnaires and interviews conducted with the students as respondents.

Data Collection Procedure

This research is an exploratory study aimed at gaining insights into how students learn, including their experiences and strategies in using AI tools as learning aids. Over three phases conducted throughout one semester, students shared their knowledge, experiences, usage, and strategies for enhancing their learning outcomes. Students completed a questionnaire regarding the impact of AI on their learning habits.

To ensure unbiased responses from participants, data were collected anonymously. Since this survey serves as an initial exploration of students' learning models, open-ended questions (qualitative data) were utilized. These responses provided insight into the influence of AI on their academic lives. Additionally, participants' assessments of various learning models were also explored.

Data Analysis

The qualitative descriptive analysis was employed in this research to analyze the data. The steps for analyzing the data in this study are as follows:

The researchers collect and check the completeness of the data. This includes verifying identities, the number of responses, and the content's completeness.

The researchers read the data obtained from the guideline sheets. Observations recorded in the observation sheets serve as a reference for the descriptive interpretation of learning model patterns.

Validation of Findings

The data and results of the analysis were reviewed to ensure their validity. To achieve this, the researchers conducted data validation using source triangulation to verify the credibility of the data obtained from multiple sources. The researcher ensured data validity by collaborating with research team members and foreign research partners as collaborators.

Results and Discussions

On Respondent Demographics

This study involved a total of 230 respondents, with a demographic composition based on gender: 48 male and 182 female participants. The majority of respondents were female, accounting for approximately 79% of the total, while males comprised about 21%.

Table 1. Respondent Demographics

Nr	Gender	Total
1.	Male	48
2.	Female	182
	Total	230

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While this study did not identify differences in participation between male and female, it can be observed that the majority who participated in the survey were females. This shows that women tend to have higher response rates and are more willing to participate in surveys or research studies compared to men. One reason is that women are generally more likely to participate in research studies and surveys than men. This may be due to the fact that women are more social and more willing to share their opinions and experiences with others. This is supported by Royall, K. (2020) who claimed that women tend to be more likely to self-select to participate in online surveys.

On Comparison of Aspects of Transforming

All respondents provided their opinions on the comparison of academic experiences before and after using AI as a learning aid. Important aspects queried and analyzed include confidence levels in answering questions and completing academic tasks, the speed of task completion, and the effectiveness of self-study methods for understanding course material. Additionally, respondents reported on the time taken to search for academic information and how often they felt aided by digital tools before and after incorporating AI. This analysis aims to understand how AI technology influences students' learning processes and academic efficiency, as well as its potential impact on learning skills and habits. Below are the respondents' results:

Table 2. Comparison of Academic Experiences Before and After Using AI

Nr	Statements	Before					After				
		SD	**D**	**N**	**A**	**SA**	**SD**	**D**	**N**	**A**	**SA**
1	I am confident when answering academic questions or completing assignments before and after using AI.	2	60	126	36	6	1	24	100	95	10
2	I quickly complete academic tasks before and after using AI as a support tool.	9	81	121	22	4	0	2	93	93	35
3	My self-study method is effective in understanding my course material before and after using AI.	5	28	106	73	18	5	16	78	104	27
4	I spent much time searching for academic information before and less time after using AI.	5	108	91	24	2	0	7	81	92	50
5	I think the digital tools have helped/supported me before and after using AI in completing assignments.	4	30	104	82	10	0	7	45	132	46

SD= strongly disagree

D= disagree

N= neutral

A= agree

SA= strongly agree

It can be noted from the table that most of the students agreed that after using AI they quickly complete their academic tasks, their self-study method is effective in understanding their course materials, they spend less time searching for academic information, and the digital tools have helped/supported them in completing their assignments. This finding corroborates with Sayed et al. ((Başar & ŞahiN, 2022)) findings that many researchers agree that AI can be essential in education. Many researchers agree that AI significantly contributes to e-learning and education (Nawaz et al. 2020; Ahmed and Nashat, 2020) and their claim is practically proved by the recent COVID-19 pandemic (Torda, 2020; Cavus et al., 2021).

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On Confidence levels in answering academic tasks

Students' confidence levels in answering academic questions or tasks before and after using artificial intelligence (AI) is multifaceted and significantly influenced by academic self-efficacy. Research indicates that students with higher self-efficacy are more likely to engage in academic activities, persist in the face of challenges, and ultimately achieve better outcomes (Meng & Zhang, 2023; Babajani et al., 2022).

The integration of AI tools in educational settings has been shown to enhance students' self-efficacy and academic emotions. For instance, a study involving language learners demonstrated that the use of AI-powered writing assistants significantly improved self-efficacy, leading to increased effort and persistence in writing tasks (Nazari et al., 2021). This aligns with findings that suggest AI can facilitate deeper cognitive engagement, thereby fostering a more robust academic self-efficacy among students (Morales-García, 2024). Consequently, as students utilize AI tools, their confidence in tackling academic tasks tends to increase, reflecting a positive shift in their self-efficacy beliefs.

However, this current research revealed, that the impact of AI on self-efficacy is not solely positive; it can also lead to dependency issues, as shown in diagram 1:

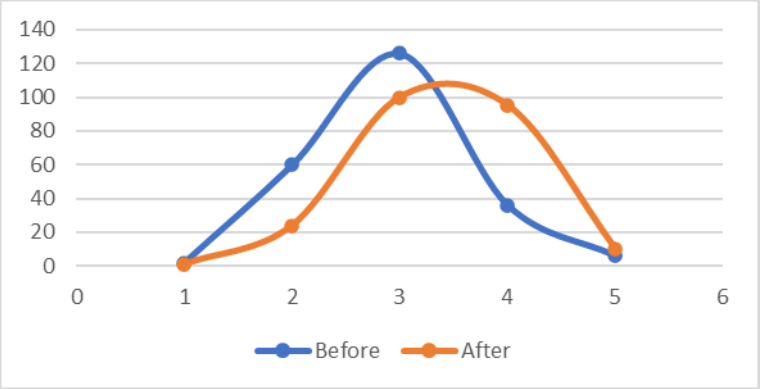

Diagram 1. Confidence levels

Several studies have shown that the impact of AI on students' self-confidence can be influenced by various factors, including students' prior knowledge, anxiety level, and perceptions of the relevance of AI. The impact of using artificial intelligence (AI) is complex and may not always show a significant increase in confidence.

Some research suggests that students' confidence in using AI tools often depends on their knowledge and digital literacy in AI. For example, Dai et al. highlighted that the effect of AI literacy on students' confidence is monitored by their perception of AI relevance and their confidence in using AI knowledge (Dai et al., 2020). This suggests that students who do not have basic AI skills may not experience increased confidence when using AI tools, as their uncertainty about their abilities may overshadow the potential benefits of AI assistance.

The relationship between students' confidence levels in academic tasks before and after using AI is characterized by an initial enhancement of self- confidence through the effective use of AI tools. However, this relationship is complex, as it also necessitates caution against potential over-reliance on technology, which could adversely affect students' independent problem-solving skills and critical thinking abilities. Therefore, educational strategies should aim to integrate AI in a manner that supports and enhances self-confidence while promoting independent learning skills.

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On Completing Academic Tasks

The integration of artificial intelligence (AI) tools in academic settings has sparked considerable interest in understanding their impact on students' efficiency in completing academic tasks. This exploration is particularly relevant in the context of higher education, where AI applications are increasingly utilized to enhance learning outcomes and academic performance.

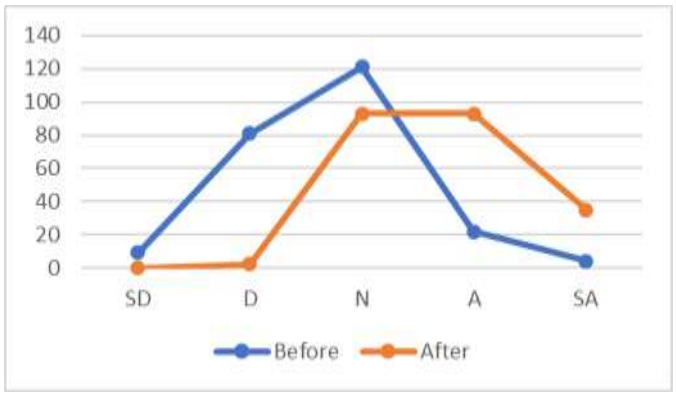

Diagram 2. Completing Academic Tasks

Research indicates that AI tools can significantly improve students' academic efficiency by providing personalized learning experiences and immediate feedback. For instance, studies have shown that AI-powered platforms can analyze students' learning patterns and adapt educational content accordingly, leading to enhanced engagement and knowledge retention (N. Abbas et al., 2023). Furthermore, a randomized controlled trial demonstrated that AI interventions positively influenced students' emotions and academic performance, suggesting that these tools can foster a more conducive learning environment (Nazari et al., 2021). This aligns with findings from Liu, who noted that AI tools, including ChatGPT, have the potential to assist in academic writing, thereby streamlining the writing process for students (Liu, 2023).

However, the use of AI tools is not without its challenges. The most challenging part of using AI is students' ability to write prompts (Kharis, 2024). Concerns regarding academic integrity have emerged, particularly with the rise of generative AI technologies. Studies have highlighted that while students may benefit from AI assistance, there is a risk of academic misconduct, as some students might misuse these tools to complete assessments dishonestly (Tindle, 2023). This concern is echoed in the work of Hua, which found that the dependence on AI tools among college students is prevalent, raising questions about the implications for academic integrity and ethical awareness (Hua, 2023).

The impact of AI on creativity and critical thinking has been a topic of debate. Some researchers argue that reliance on AI tools can hinder students' ability to think critically and creatively, as they may become overly dependent on these technologies for task completion (Liang, 2023). This perspective is crucial, as it emphasizes the need for educational institutions to balance the benefits of AI with the potential drawbacks, advocating for AI literacy programs that teach students how to effectively and ethically utilize these tools (Liang, 2023).

AI tools present significant opportunities for enhancing students' efficiency in completing academic tasks. They also pose challenges related to academic integrity and the development of critical thinking skills. As educational institutions continue to integrate these technologies, it is essential to foster an environment that encourages ethical use and promotes the development of essential cognitive skills alongside the adoption of AI.

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Chatbot is one of the latest media that can be used for self-mobile learning (Kharis, et all, 2022). The integration of artificial intelligence (AI) into educational contexts has significantly transformed self-learning processes for students. Before the advent of AI tools, learners often relied on traditional methods of study, which were typically less personalized and adaptive. The introduction of AI has provided a shift towards more flexible learning experiences that cater to individual student needs and preferences. For example, AI platforms provide real-time feedback, personalized content, and opportunities for self-assessment, which enhances students' metacognitive and self-regulation skills (Wei, 2023). This personalized approach not only addresses learners' strengths and weaknesses but also fosters a greater sense of autonomy in their learning journeys, as shown the following diagram:

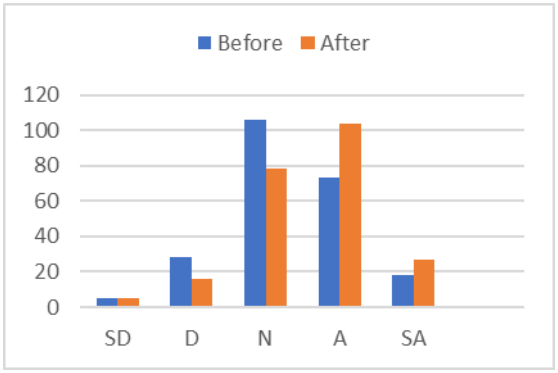

Diagram 3. Self-Learning Processes

Research indicates that AI applications effectively support self-regulated learning (SRL) strategies, allowing students to engage more actively with their educational materials (Jin et al., 2023). By facilitating goal setting, strategic planning, and self-reflection, AI tools empower learners to take control of their educational experiences. Similarly, in the German as a Foreign Language program at the University of Oran 2, AI has been integrated to support language acquisition and technological literacy, offering tools like automated speech recognition and chatbots to create an interactive and student-centered learning environment. This approach not only improves language proficiency but also encourages ethical and critical engagement with AI technologies, equipping students for the digital future (Aboura, 2024).

However, it is important to note that while AI can enhance motivation and self-regulation, some students may still perceive these tools as lacking in motivational support (Jin et al., 2023). This highlights the need for a balanced approach that combines AI capabilities with traditional educational practices to maximize student engagement and learning outcomes.

The experiential learning model has also been explored in the context of AI education, revealing that while students may not significantly change their emotional responses to AI, their understanding of AI principles can improve (D. Kim, 2020; S.-W. Kim, 2023). This suggests that educational strategies should not only focus on the technical aspects of AI but also on fostering a positive attitude towards its integration in learning environments. Furthermore, the role of educators remains crucial; despite the advancements in AI, teachers are essential in guiding students through complex concepts and ensuring that the educational experience is holistic and enriching.

Moreover, the flexibility of AI in education allows for the implementation of various pedagogical models that can enhance learning outcomes. For example, AI can facilitate project-based learning and role-playing scenarios, which are essential for developing critical thinking and problem-solving skills that AI alone cannot replicate. This indicates that while AI can provide substantial benefits, the active involvement of educators is necessary to cultivate a deep understanding of the content and to promote collaborative learning experiences.

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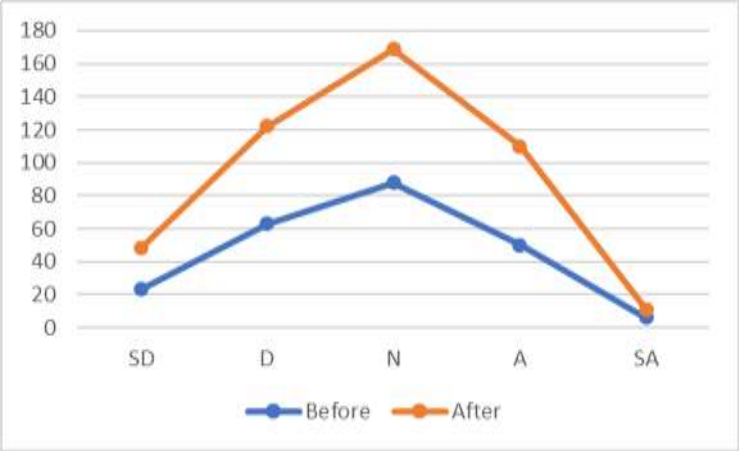
The transition from traditional computer-based self-directed learning methods to AI-enhanced learning environments has resulted in significant improvements in individualized education. AI tools support self-regulated learning by providing customized feedback and encouraging autonomy, while educators play an important role in guiding and enriching the learning experience. The ongoing evolution of AI in education requires a collaborative approach that integrates technology with effective teaching practices to prepare students for the complexity of the modern world.

On the Phenomenon of Procrastination

The phenomenon of procrastination among students has been extensively studied, particularly in the context of academic tasks. Procrastination is defined as the delay of intended actions, often leading to negative consequences for academic performance and mental health (Cjuno et al., 2022; Khairun, 2023; Ko & Chang, 2018). The tendency to postpone tasks until close to deadlines is prevalent among students, with studies indicating that a significant percentage of college students engage in procrastination, with estimates suggesting that around 80% of them exhibit this behavior (Ko & Chang, 2018; Visser et al., 2017). This tendency can be exacerbated by various factors, including anxiety, fear of failure, and a lack of self-regulation (Rabin et al., 2010; Rahardjo et al., 2013).



The impact of artificial intelligence (AI) on students' procrastination tendencies is an emerging area of interest. AI tools can potentially aid in time management and task organization, which may help mitigate procrastination. For instance, AI-driven applications can provide reminders, prioritize tasks, and offer personalized feedback, thereby enhancing students' self-regulation skills (Gafni & Geri, 2010; Park & Sperling, 2012)(Gafni & Geri, 2010; , Park & Sperling, 2012). The introduction of such tools may lead to a decrease in procrastination behaviors, as students become more aware of their deadlines and the importance of timely task completion (Sarirah & Sihombing, 2023). However, the effectiveness of these tools can vary based on individual differences in motivation and self-discipline (Düşmez & Barut, 2016; Wang et al., 2015).

Research indicates that students who utilize AI tools may experience a shift in their procrastination patterns. Prior to using AI, many students exhibit high levels of procrastination, often waiting until the last minute to complete assignments (He, 2017; Sarirah & Sihombing, 2023). After the implementation of AI tools, there is potential for a reduction in this behavior, as students may develop better time management skills and a more structured approach to their academic responsibilities (Klassen et al., 2010; Wisudawati & Kirana, 2022). Nevertheless, it is crucial to consider that while AI can assist in reducing procrastination, it is not a panacea; students must also cultivate intrinsic motivation and self-regulation to achieve lasting behavioral changes (Özberk & Türk, 2022; Visser et al., 2017).

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On Prioritization of Materials Provided by Lecturers

The integration of artificial intelligence (AI) into educational practices has significantly altered the landscape of self-study among students, particularly in how they prioritize materials provided by lecturers. Prior to the advent of AI tools, students often relied heavily on traditional instructional materials and direct guidance from educators. However, the introduction of AI has prompted a shift in this dynamic, leading to changes in how students approach their learning materials.

Research indicates that students' perceptions of AI in education are evolving. For instance, Mehta et al. highlight that medical students recognize the potential of AI to enhance their learning experience, particularly in understanding complex medical concepts (Mehta et al., 2021). This sentiment is echoed by Khanduri, who notes that AI tools can individualize instruction and automate routine tasks, thereby allowing students to focus more on critical thinking and application of knowledge (Khanduri, 2023). Consequently, students are beginning to prioritize AI-enhanced materials that offer personalized learning experiences over traditional lecture notes.

Moreover, the quality of learning materials has been shown to significantly impact student satisfaction and achievement. According to a study by Megavitry, high-quality instructional materials are crucial for effective learning outcomes, suggesting that students are more likely to engage with materials that are clear, relevant, and accessible (Megavitry, 2023). This aligns with the findings of Theresiawati et al., who emphasize that content quality directly influences students' perceptions of e-learning services (Theresiawati et al., 2020). As students increasingly utilize AI tools for self-study, they tend to prioritize materials that not only meet these quality standards but also leverage AI capabilities to enhance their understanding.

On Collaboration Among Students

In addition, the collaborative aspect of learning has also been transformed by AI. The CIRC learning model, as discussed by Adawiyah, emphasizes the importance of collaboration among students, which is facilitated by AI tools that promote interaction and discussion (Adawiyah, 2023). This collaborative learning environment encourages students to engage more deeply with the material, leading them to prioritize resources that foster peer interaction and support.

Furthermore, the shift towards AI-assisted learning has implications for students' cognitive processes. Research by Dumpang et al. suggests that instructional materials play a vital role in shaping students' learning experiences and outcomes (Dumpang et al., 2021). As students adapt to AI tools, they are likely to prioritize materials that not only present information but also encourage critical thinking and problem-solving skills, as highlighted by the findings of Khor on personalized learning (Khor, 2023).

Conclusion

AI tools offer notable benefits in enhancing students' efficiency but also bring challenges to academic integrity and critical thinking. The shift from traditional to AI-supported learning has led to personalized education, encouraging autonomy and self-regulation. Educators have to foster ethical AI use while supporting students' cognitive development, requiring a collaborative approach that integrates technology with effective teaching. Additionally, as AI influences students' learning priorities and procrastination behaviors, ongoing research and adapted teaching strategies are essential to maximize AI's positive impact on academic success.

This research aims to enhance the understanding of AI's role in achieving SDG 4 by providing insights into how AI can be harnessed to improve educational quality in a developing context. The findings suggest that educational institutions could benefit from incorporating AI literacy into their core curricula, preparing students for technology-driven learning environments while upholding ethical academic practices. Future studies should explore targeted interventions to address identified challenges, such as implementing AI literacy programs that foster both technical skills and ethical awareness among students.

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References

Abbas, J., Aman, J., Nurunnabi, M., & Bano, S. (2019). The Impact of Social Media on Learning Behavior for Sustainable Education: Evidence of Students from Selected Universities in Pakistan. Sustainability, 11(6), Article 6. https://doi.org/10.3390/su11061683

Abbas, N., Imran, A. S., Manzoor, R., Hussain, T., & Hussain, M. (2023). Role of Artificial Intelligence Tools in Enhancing Students' Educational Performance at Higher Levels. Journal of Artificial Intelligence Machine Learning and Neural Network, 35, 36–49. https://doi.org/10.55529/jaimlnn.35.36.49

Aboura, B. (2024). Neue Perspektiven in der universitären Sprachbildung: Integration von Künstlicher Intelligenz ins DaF-Curriculum der Universität Oran 2. Langues & Cultures, 5(01), 230–249. https://doi.org/10.62339/jlc.v5i01.239

Adawiyah, A. A. (2023). CIRC Learning Model for Reading Comprehension of French Language. Journal of Languages and Language Teaching, 11(1), 104. https://doi.org/10.33394/jollt.v11i1.6903

Ahmed S, Nashat N (2020) Model for utilizing distance learning post COVID-19 using (PACT)™ a cross sectional qualitative study. Research Square, pp. 1–25. https://doi.org/10.21203/rs.3.rs-31027/v1

Akour, M., & Alenezi, M. (2022). Higher Education Future in the Era of Digital Transformation. Education Sciences, 12(11), Article 11. https://doi.org/10.3390/educsci12110784

Alenezi, A. (2020). The Role of e-Learning Materials in Enhancing Teaching and Learning Behaviors. International Journal of Information and Education Technology, 10(1), 48–56. https://doi.org/10.18178/ijiet.2020.10.1.1338

Başar, T., & ŞahiN, L. (2022). Technology integration in teaching English as a foreign language: A content analysis study. Journal of Educational Technology and Online Learning, 5(1), 204–222. https://doi.org/10.31681/jetol.972577

Cavus N, Mohammed YB, Yakubu MN (2021). Determinants of learning management systems during COVID-19 pandemic for sustainable education. Sustain Educ Approaches 13(9):5189. https://doi.org/10.3390/su13095189

Cjuno, J., Palomino-Ccasa, J., Silva-Fernandez, R. G., Soncco-Aquino, M., Lumba-Bautista, O., & Hernández, R. M. (2022). Academic Procrastination, Depressive Symptoms and Suicidal Ideation in University Students: A Look During the Pandemic. Iranian Journal of Psychiatry. https://doi.org/10.18502/ijps.v18i1.11408

Dai, Y., Chai, C. S., Lin, P.-Y., Jong, M. S., Guo, Y., & Jian-jun, Q. (2020). Promoting Students' Well-Being by Developing Their Readiness for the Artificial Intelligence Age. Sustainability, 12(16), 6597. https://doi.org/10.3390/su12166597

Dumpang, C. N., Sedanza, M. A. C., & Caluza, L. J. B. (2021). Needs Assessment of Grade 8 Instructional Materials in Teaching Filipino: A Phenomenology. International Journal of Research Publications, 71(1). https://doi.org/10.47119/ijrp100711220211758

Düşmez, İ., & Barut, Y. (2016). Rational Emotive Behavior Based on Academic Procrastination Prevention Training Programme of Effectiveness. Participatory Educational Research, 3(1), 1–13. https://doi.org/10.17275/per.15.36.3.1

Fenwick, T., & Tennant, M. (2004). Understanding Adult Learners. In Dimensions of Adult Learning. Routledge.

Fitzgerald, H. E., Karen, B., Sonka, S. T., Furco, A., & Swanson, L. (2019). The Centrality of Engagement in Higher Education. In Building the Field of Higher Education Engagement. Routledge.

Gafni, R., & Geri, N. (2010). Time Management: Procrastination Tendency in Individual and Collaborative Tasks. Interdisciplinary Journal of Information Knowledge and Management, 5, 115–125. https://doi.org/10.28945/1127

He, S. (2017). A Multivariate Investigation Into Academic Procrastination of University Students. Open Journal of Social Sciences, 05(10), 12–24. https://doi.org/10.4236/jss.2017.510002

Hua, J. (2023). Beyond Exams: Investigating AI Tool Impact on Student Attitudes, Ethical Awareness, and Academic Dishonesty in Online College Assessments. International Journal of Educational Management and Development Studies, 4(4), 160–185. https://doi.org/10.53378/353030

Jackson, N. C. (2019). Managing for competency with innovation change in higher education: Examining the pitfalls and pivots of digital transformation. Business Horizons, 62(6), 761–772. https://doi.org/10.1016/j.bushor.2019.08.002

Jin, S.-H., Im, K., Yoo, M., Roll, I., & Seo, K. (2023). Supporting Students' Self-Regulated Learning in Online Learning Using Artificial Intelligence Applications. International Journal of Educational Technology in Higher Education, 20(1). https://doi.org/10.1186/s41239-023-00406-5

Khairun, N. (2023). The Dangers of Procrastination for Learners. BICC_Proceedings, 1, 121–127. https://doi.org/10.30983/bicc.v1i1.42

Khanduri, V. (2023). Revolutionizing Learning: An Exploratory Study on the Impact of Technology-Enhanced Learning Using Digital Learning Platforms and AI Tools on the Study Habits of University Students Through Focus Group Discussions. International Journal of Research Publication and Reviews, 4(6), 663–672. https://doi.org/10.55248/gengpi.4.623.44407

Kharis, M., Schön, S., Hidayat, E., Ardiansyah, R., & Ebner, M. (2022). Mobile Gramabot: Development of a chatbot app for interactive German grammar learning. International Journal of Emerging Technologies in Learning (iJET), 17(14), 52-63.

Kharis, M. (2024). Pelatihan untuk Memaksimalkan Potensi Artificial Intelligence dalam Memotivasi Belajar Bahasa Jerman bagi Guru Bahasa Jerman di Malang. JMM (Jurnal Masyarakat Mandiri), 8(1), 1433-1443.

Khor, E. T. (2023). A Systematic Review of the Role of Learning Analytics in Supporting Personalized Learning. Education Sciences, 14(1), 51. https://doi.org/10.3390/educsci14010051

Kim, D. (2020). Learning Language, Learning Culture: Teaching Language to the Whole Student. ECNU Review of Education, 3(3), 519–541. https://doi.org/10.1177/2096531120936693

Kim, S.-W. (2023). Change in Attitude Toward Artificial Intelligence Through Experiential Learning in Artificial Intelligence Education. International Journal on Advanced Science Engineering and Information Technology, 13(5), 1953–1959. https://doi.org/10.18517/ijaseit.13.5.19039

Klassen, R. M., Ang, R. P., Chong, W. H., Krawchuk, L. L., Huan, V. S., Wong, I. Y. F., & Yeo, L. S. (2010). Academic Procrastination in Two Settings: Motivation Correlates, Behavioral Patterns, and Negative Impact of Procrastination in Canada and Singapore. Applied Psychology, 59(3), 361–379. https://doi.org/10.1111/j.1464-0597.2009.00394.x

Ko, C.-Y. A., & Chang, Y. (2018). Investigating the Relationships Among Resilience, Social Anxiety, and Procrastination in a Sample of College Students. Psychological Reports, 122(1), 231–245. https://doi.org/10.1177/0033294118755111

Liang, Y. (2023). Balancing: The Effects of AI Tools in Educational Context. Frontiers in Humanities and Social Sciences, 3(8), 7–10. https://doi.org/10.54691/fhss.v3i8.5531

Liu, H. (2023). An Overview of the Capabilities of ChatGPT for Medical Writing and Its Implications for Academic Integrity. Health Information & Libraries Journal, 40(4), 440–446. https://doi.org/10.1111/hir.12509

Megavitry, R. (2023). Analysis of Learning Material Quality and Teacher-Student Interaction on Learning Achievement and Student Satisfaction Level in Distance Education in Indonesia. The Eastasouth Journal of Learning and Educations, 1(03), 147–160. https://doi.org/10.58812/esle.v1i03.160

Mehta, N., Harish, V., Bilimoria, K., Morgado, F., Ginsburg, S., Law, M., & Das, S. (2021). Knowledge of and Attitudes on Artificial Intelligence in Healthcare: A Provincial Survey Study of Medical Students. https://doi.org/10.1101/2021.01.14.21249830

Nawaz N, Gomes AM, Saldeen AM (2020) Artificial intelligence (AI) applications for library services and resources in COVID-19 pandemic. J Crit Rev 7(18):1951–1955

Nazari, N., Shabbir, M. S., & Setiawan, R. (2021). Application of Artificial Intelligence powered digital writing assistant in higher education: Randomized controlled trial. Heliyon, 7(5), e07014. https://doi.org/10.1016/j.heliyon.2021.e07014

Núñez-Canal, M., de Obesso, M. de las M., & Pérez-Rivero, C. A. (2022). New challenges in higher education: A study of the digital competence of educators in Covid times. Technological Forecasting and Social Change, 174, 121270. https://doi.org/10.1016/j.techfore.2021.121270

Özberk, E. H., & Türk, T. (2022). Profiles of Academic Procrastination in Higher Education: A Cross-Cultural Study Using Latent Profile Analysis. International Journal of Psychology and Educational Studies, 8(3), 150–160. https://doi.org/10.52380/ijpes.2021.8.3.465

Park, S. W., & Sperling, R. A. (2012). Academic Procrastinators and Their Self-Regulation. Psychology, 03(01), 12–23. https://doi.org/10.4236/psych.2012.31003

Rabin, L. A., Fogel, J., & Nutter-Upham, K. E. (2010). Academic Procrastination in College Students: The Role of Self-Reported Executive Function. Journal of Clinical and Experimental Neuropsychology, 33(3), 344–357. https://doi.org/10.1080/13803395.2010.518597

Rahardjo, W., Juneman, J., & Setiani, Y. (2013). Computer Anxiety, Academic Stress, and Academic Procrastination on College Students. Journal of Education and Learning (Edulearn), 7(3), 147–152. https://doi.org/10.11591/edulearn.v7i3.179

Royall, K. (2020). A woman's perspective – a look at gender and survey
participation. https://culturecounts.cc/blog/a-womans-perspective-a-look-at-gender-and-survey-participation

Sarirah, T., & Sihombing, D. D. S. (2023). Self-Control and Procrastination During the Covid-19 Pandemic. 3–7. https://doi.org/10.2991/978-2-494069-49-7_2

Sayed FA, Mohd KR, Muhammad SM, Muhammad MA, Syed IH (2021) Artificial intelligence and its role in education. Sustainability 13:1–11. https://doi.org/10.3390/su132212902

Torda A (2020) How COVID-19 has pushed us into a medical education revolution. Intern Med J 50:1150–1153. https://doi.org/10.1111/imj.14882

Theresiawati, - -., Seta, H. B., Hidayanto, A. N., & Abidin, Z. (2020). Variables Affecting E-Learning Services Quality in Indonesian Higher Education: Students' Perspectives. Journal of Information Technology Education Research, 19, 259–286. https://doi.org/10.28945/4489

Tindle, R. (2023). Academic Misconduct and Generative Artificial Intelligence: University Students' Intentions, Usage, and Perceptions [Preprint]. https://doi.org/10.31234/osf.io/hwkgu

Visser, L., Schoonenboom, J., & Korthagen, F. (2017). A Field Experimental Design of a Strengths-Based Training to Overcome Academic Procrastination: Short- And Long-Term Effect. Frontiers in Psychology, 8. https://doi.org/10.3389/fpsyg.2017.01949

Wang, J., Sperling, R. A., & Haspel, P. (2015). Patterns of Procrastination, Motivation, and Strategy Use Across Class Contexts and Students' Abilities. Journal of Psychology and Behavioral Science, 3(2). https://doi.org/10.15640/jpbs.v3n2a8

Wei, L. (2023). Artificial Intelligence in Language Instruction: Impact on English Learning Achievement, L2 Motivation, and Self-Regulated Learning. Frontiers in Psychology, 14. https://doi.org/10.3389/fpsyg.2023.1261955

Wisudawati, W. N., & Kirana, A. (2022). The Relationship of Achievement Motivation and Academic Procrastination of Highschool Students. Biopsikososial Jurnal Ilmiah Psikologi Fakultas Psikologi Universitas Mercubuana Jakarta, 6(1), 602. https://doi.org/10.22441/biopsikososial.v6i1.15893

Wit, H. de, & Altbach, P. G. (2021). Internationalization in Higher Education: Global Trends and Recommendations for Its Future. In Higher Education in the Next Decade (pp. 303–325). Brill. https://doi.org/10.1163/9789004462717_016.