

P-ISSN 2621-3575
E-ISSN 2723-2921

Volume 6, Nomor 1, Juni 2023

TheGIST

Jurnal Sastra dan Bahasa

AI AND CRITICAL READING SKILL AMONG UNIVERSITY STUDENTS (The impact of artificial intelligence (AI) on Al-Ghifari University Students' critical reading skills)

Yeni Dewi Cahyani, Octavia Chandra Dewi, Adam Darmawan

English Literature Department, Faculty of Literature, Al-Ghifari University, Jl. Cisaranten
Kulon – Arcamanik No. 140, Bandung 40293, Indonesia

yenidcahyani69@gmail.com

Abstrak

Penelitian ini meneliti dampak kecerdasan buatan (AI) terhadap kemampuan membaca kritis mahasiswa Al-Ghifari. Seiring dengan semakin lazimnya penggunaan AI dalam dunia pendidikan, memahami dampaknya terhadap kemampuan analitis dan evaluatif mahasiswa sangatlah penting. Sebuah survei terhadap 200 siswa menilai penggunaan AI mereka untuk bantuan membaca, di samping tes pemahaman membaca untuk mengevaluasi keterampilan membaca kritis. Hasilnya menunjukkan bahwa 75% siswa secara teratur menggunakan alat bantu AI, terutama untuk meringkas teks. Namun, mereka yang sangat bergantung pada AI mendapatkan nilai yang lebih rendah dalam penilaian membaca kritis, yang mengindikasikan adanya korelasi negatif antara penggunaan AI dan kinerja. Temuan ini menunjukkan bahwa meskipun AI dapat meningkatkan pemahaman langsung, AI dapat menghambat keterlibatan analitis yang lebih dalam. Studi ini menyoroti perlunya pendekatan yang seimbang terhadap integrasi AI dalam pendidikan, dengan menekankan pada strategi yang mengembangkan kemampuan membaca kritis di kalangan siswa.

Kata kunci: Kecerdasan Buatan, keterampilan membaca kritis

Abstract

This research examines the impact of artificial intelligence (AI) on Al-Ghifari university students' critical reading skills. As AI tools become more common in education, understanding their effects on students' analytical and evaluative abilities is crucial. A survey of 200 students assessed their AI usage for reading assistance, in addition to a reading comprehension test to evaluate critical reading skills. Results showed that 75% of students regularly used AI tools, particularly for text summarization. However, those who relied heavily on AI scored lower in critical reading assessments, indicating a negative correlation between AI usage and performance. These findings suggest that while AI can enhance immediate comprehension, it may hinder deeper analytical engagement. The study highlights the need for a balanced approach to AI integration in education, emphasizing strategies that develop critical reading skills among students.

Keywords: Artificial Intelligence, critical Reading skills

INTRODUCTION

The integration of artificial intelligence (AI) into educational settings has fundamentally transformed students' approach to learning, especially in the realm of reading. With the increasing use of AI tools like text summarizers and reading aides, it is important to explore their influence on the critical reading skills of university students. Critical reading, which involves the analysis, evaluation,

and synthesis of information from texts, is not only crucial for academic achievement but also for fostering informed citizenship in an ever-changing digital world (McCormick, 2020). The integration of AI in education not only impacts reading but also extends to writing skills. AI-powered tools such as grammar checkers and writing assistants have revolutionized the way students approach composing essays and reports. These tools offer real-time

feedback on grammar, punctuation, and style, guiding students towards more coherent and polished writing. By leveraging AI in writing tasks, students can enhance their communication skills and produce higher-quality academic work.

Moreover, AI has the potential to personalize learning experiences for students. Adaptive learning platforms powered by AI algorithms can analyze individual learning patterns and provide customized content to address specific needs. This personalized approach can cater to diverse learning styles and abilities, ultimately improving student engagement and knowledge retention. As AI continues to evolve in educational settings, it is essential to explore its impact on various aspects of student learning and academic achievement.

While AI technologies offer personalized learning experiences and immediate feedback, there are growing concerns regarding their influence on deeper cognitive engagement. For instance, AI tools can improve comprehension by simplifying complex texts and providing summaries, which may lead students to rely on these technologies instead of engaging with the material on a deeper level. This reliance can result in superficial reading practices, where students focus on surface-level understanding rather than critical analysis and thoughtful evaluation of the content (Bowen & Watson, 2023). Such a shift in reading habits could be detrimental, as it may hinder the development of essential analytical skills that are vital for academic and professional success.

Previous research has indicated a concerning trend: students who heavily utilize AI technologies may experience a decline in their deep reading practices. This decline suggests that while AI can facilitate certain aspects of learning, it may simultaneously prevent the development

of critical thinking abilities (Kumar, 2022). As educational institutions increasingly adopt AI tools, it becomes imperative to explore the relationship between AI usage and the critical reading skills of university students. Understanding this relationship will provide valuable insights into how educators can effectively integrate AI in ways that improve learning while promoting the essential skills of analysis and critical evaluation.

Based on the explanation above, this study aims to explore the complex dynamics between AI technology and critical reading skills among AI-Ghifari university students. By examining both the benefits and potential drawbacks of AI tools, the research seeks to contribute to a more comprehensive understanding of how these technologies can be employed in educational settings. Ultimately, the goal is to identify strategies that not only leverage the advantages of AI but also ensure that students develop robust critical reading skills necessary for their academic and future professional endeavors.

The relationship between artificial intelligence (AI) and critical reading skills has gained increasing attention in educational research. Critical reading, defined as the ability to analyze, evaluate, and synthesize information from texts, is essential for academic success and informed decision-making (McCormick, 2020). As students navigate an information-rich environment, the development of these skills becomes paramount. However, the rise of AI tools poses both opportunities and challenges for fostering critical reading among university students.

AI technologies have been shown to improve certain aspects of student learning, such as automated summarizers and reading comprehension aids. These tools can provide personalized feedback, simplify complex texts, and facilitate a

more efficient learning process (Bowen & Watson, 2023). For example, students using AI-driven platforms may experience improved comprehension and retention of information. However, researchers caution that reliance on these technologies can lead to superficial engagement with texts. When students depend on AI for summarization, they may overlook the critical analysis required to fully understand and evaluate the material (Kumar, 2022). This shift raises concerns about the potential erosion of deep reading practices.

Several studies have highlighted the impact of AI on reading habits and cognitive engagement. A study by Smith and Johnson (2021) found that students who frequently utilized AI tools demonstrated a decline in their ability to engage critically with texts. The authors argued that while AI can assist with immediate comprehension, it may inadvertently encourage a passive approach to reading, where students prioritize convenience over critical evaluation. Similarly, a meta-analysis by Lee et al. (2022) concluded that students who heavily rely on AI tools tend to exhibit lower levels of analytical thinking and critical reflection in their reading practices. These findings underscore the need for a balanced approach to integrating AI in education.

Moreover, the pedagogical implications of AI usage in the classroom are significant. Educators face the challenge of leveraging the benefits of AI while ensuring that students develop and maintain their critical reading skills. As outlined by Chen (2023), effective instructional strategies should include explicit teaching of critical reading techniques alongside the use of AI tools. This dual approach can help students recognize when to utilize AI for support and when to engage deeply with the text themselves. Ultimately, fostering an

environment that encourages critical engagement, even in the presence of AI technologies, is crucial for developing well-rounded, thoughtful readers.

AI offers valuable resources for improving reading comprehension, its impact on critical reading skills raises important questions for educators and researchers alike. By understanding the dynamics between AI usage and critical reading, stakeholders in higher education can create strategies that promote both efficiency and depth in student learning. Future research should continue to explore this relationship, focusing on interventions that balance technology integration with the cultivation of critical thinking skills.

METHODOLOGY

This study employs a mixed-methods approach to comprehensively investigate the impact of artificial intelligence (AI) on the critical reading skills of AI-Ghifari university students. By integrating both quantitative and qualitative research methods, the study aims to provide a comprehensive understanding of how AI tools influence students' reading abilities. The methodology is designed to capture not only the measurable effects of AI on reading comprehension but also the deeper insights into students' perceptions and experiences with these technologies.

The mixed-methods approach utilized in this study provides a comprehensive framework for exploring the intersection of AI technology and critical reading skills among university students. By combining quantitative assessments with qualitative insights, the research aims to illuminate the multifaceted ways in which AI tools influence reading practices. The findings are expected to inform educational strategies that effectively integrate AI while promoting the development of critical thinking and analytical skills

essential for academic and professional success.

Participants

The research involved 200 Al-Ghifari university students representing a diverse range of disciplines, academic levels, and demographic backgrounds. Participants were selected through stratified random sampling to ensure a balanced representation across various fields of study, including humanities, sciences, and social sciences. This approach was critical in obtaining a holistic view of AI's impact on critical reading skills across the university student. Participants ranged from first-year students to those in their final year, facilitating an exploration of how AI usage and reading skills may evolve throughout their academic journey.

Data Collection

Data collection involved multiple methods to enrich the research findings. First, participants completed a structured survey designed to assess their usage of AI tools for reading assistance. The survey included questions about the frequency and types of AI applications utilized, as well as self-reported measures of their critical reading skills. This instrument was carefully developed based on existing literature and performed validation through a pilot study to ensure reliability and relevance.

In addition to the survey, participants undertook a reading comprehension test that aimed to evaluate their critical reading abilities. This test included a series of carefully selected passages that varied in complexity and theme, followed by questions requiring students to analyze, evaluate, and synthesize information. By incorporating a standardized assessment, the study aimed to objectively measure the relationship

between AI usage and critical reading performance.

To complement the quantitative data, focus group discussions were conducted with a subset of 30 participants. These semi-structured discussions aimed to gather in-depth insights into students' perceptions of AI tools and their reading habits. By allowing participants to express their thoughts and experiences freely, the focus groups provided valuable qualitative data that enriched the understanding of how AI affects critical reading skills. Topics explored included the perceived benefits and drawbacks of AI tools, as well as how these technologies influence their reading strategies and engagement with texts.

Data Analysis

The analysis of data involved both quantitative and qualitative techniques. For the quantitative data, results from the surveys and reading comprehension tests were analyzed using statistical software. Descriptive statistics were calculated to summarize participants' demographics and AI usage patterns, while inferential statistical tests, such as correlation and regression analyses, were employed to explore the relationship between AI usage and critical reading performance. A significance level of $p < 0.05$ was established for all statistical tests to determine the validity of the findings.

Qualitative data from the focus group discussions were transcribed and subjected to thematic analysis. This process involved coding the transcripts to identify recurring themes and patterns related to students' experiences with AI and its impact on their reading skills. The thematic analysis allowed the researchers to capture the nuances behind the statistical findings, providing a richer context for understanding the implications of AI in reading practices.

Ethical Considerations

Ethical considerations were paramount throughout the study. Adhering to the guidelines established by the participating university's Institutional Review Board (IRB), informed consent was obtained from all participants prior to their involvement in the research. Participants were fully briefed on the study's purpose, their rights, and the measures taken to ensure confidentiality. Anonymizing all data collected ensured that individual responses remained private, thereby fostering a safe environment for participants to share their experiences candidly.

RESULTS AND DISCUSSION

Results

The study gathered data from 200 university students, revealing critical insights into the relationship between artificial intelligence (AI) use and critical reading skills. The survey results (Table 1) indicated that 75% of participants regularly utilized AI tools for reading assistance, with the most commonly used applications being text summarizers and language models. Notably, 60% of students reported relying on these tools primarily for summarizing academic texts, which suggests a trend towards seeking efficiency over depth in their reading practices.

Table 1: AI use and critical reading skills among university students:

Variable	Findings
Total Participants	200
Percentage of Participants Using AI Tools	75%
Commonly Used AI Applications	Text summarizers, Language models
Percentage Relying on AI for Summarization	60%

Preference for
Trend Observed efficiency over depth in
reading practices

Table 2 show that the reading comprehension tests administered to participants revealed a concerning trend: students who frequently relied on AI tools scored an average of 15% lower than their peers who engaged in traditional reading methods. Statistical analysis demonstrated a significant negative correlation ($r = -0.45$, $p < 0.01$) between the frequency of AI use and critical reading test scores, indicating that increased reliance on AI tools was associated with diminished critical reading performance.

Table 2: the reading comprehension tests and the statistical analysis related to AI use and critical reading scores

M easurement	Average Score Difference	Correlation Coefficient	Significance Level
Findings	15%	$R = -0.45$	$P < 0.01$

Qualitative data from the focus group discussions provided further context to these quantitative findings. Many students expressed that while AI tools helped them understand complex materials more easily, they often felt less inclined to engage deeply with the texts. Participants reported that the convenience of AI-generated summaries made it tempting to skip thorough reading and analysis, reinforcing the notion that reliance on these technologies might hinder the development of critical reading skills.

Discussion

The findings presented in this study highlight the intricate and multifaceted impact that artificial intelligence (AI) has on the development of critical reading skills in university students. On one side of the spectrum, AI tools bring forth a myriad of advantages that greatly benefit students in their academic pursuits. For instance,

these tools enhance the overall understanding of complex texts and streamline the process of information assimilation. Bowen and Watson (2023) emphasized that the utilization of AI fosters personalized learning environments and offers immediate assistance to students when navigating through challenging academic materials.

Moreover, the integration of AI in educational settings not only improves comprehension but also boosts efficiency in learning. By harnessing the power of AI, students can delve deeper into subjects, engage with interactive learning materials, and receive tailored feedback that caters to their individual needs. This personalized approach not only enhances the learning experience but also cultivates a deeper understanding of the subject matter at hand.

Furthermore, AI tools serve as a valuable resource for students who may struggle with deciphering complex academic texts. Through AI-guided interventions, students can receive targeted support that addresses their specific areas of difficulty, thereby enabling them to overcome obstacles and enhance their critical reading skills. The immediate feedback provided by AI tools can serve as a guiding light for students as they navigate through intricate concepts and intricate texts.

In essence, the incorporation of AI in educational settings offers a wealth of benefits for students, ranging from improved comprehension to personalized learning experiences. By leveraging AI tools, students can unlock new pathways to academic success, bolster their critical reading skills, and embark on a journey of continuous growth and development. The symbiotic relationship between AI and critical reading skills underscores the transformative potential of technology in

shaping the educational landscape for the better.

However, the results also highlight a troubling trend: the over-reliance on AI tools can lead to a superficial engagement with reading materials. Students' scores on reading comprehension tests indicate that those who frequently use AI tools may neglect the deeper analytical processes necessary for critical reading. This finding aligns with previous research by Kumar (2022), which suggests that heavy reliance on AI may diminish students' ability to engage critically with texts, ultimately impacting their academic performance.

The qualitative insights from focus group discussions reveal a critical perspective among students regarding their reading practices. Many participants acknowledged that while AI tools made reading more accessible, they also recognized a decline in their analytical skills. This sentiment points to the need for educators to address the balance between utilizing AI technologies and cultivating essential reading and critical thinking skills. As Chen (2023) emphasizes, integrating explicit instruction on critical reading techniques alongside AI tool usage can help students harness the benefits of technology without sacrificing deeper engagement with texts.

In light of these findings, it is crucial for educational institutions to develop strategies that promote a balanced approach to AI integration in reading practices. This might include encouraging students to use AI tools as supplementary resources rather than primary sources of information. Educators can facilitate discussions about the importance of critical reading skills and provide guidance on how to effectively engage with texts, even when using AI assistance.

While AI has the potential to improve learning experiences, this study highlights the importance of maintaining a

critical lens on its use in educational contexts. By fostering an environment that values both technological efficiency and critical engagement, educators can help students develop the skills necessary for academic success and informed citizenship in an increasingly digital world.

CONCLUSION

This study aimed to investigate the relationship between artificial intelligence (AI) usage and critical reading skills among students at Al-Ghifari University. The findings reveal a significant trend: while a substantial proportion of students utilize AI tools for reading assistance, their reliance on these technologies is correlated with lower critical reading performance. Specifically, students who frequently used AI tools scored an average of 15% lower on reading comprehension tests compared to their peers who engaged in traditional reading practices.

The statistical analysis further highlights a significant negative correlation between AI usage and critical reading scores, indicating that increased reliance on these tools may hinder the development of essential analytical skills. Qualitative insights from focus group discussions suggest that students

recognize the convenience offered by AI, but they also acknowledge a decline in their ability to engage deeply with texts.

These findings underscore the importance of balancing AI integration in educational practices. While AI can enhance efficiency and facilitate comprehension, it is crucial for educators to promote strategies that foster critical reading skills. This study emphasizes the need for explicit instruction in critical reading techniques alongside the use of AI tools, ensuring that students can effectively navigate complex texts and develop the analytical abilities necessary for academic success.

In conclusion, while AI presents valuable resources for learning, its impact on critical reading skills requires careful consideration. By fostering an educational environment that prioritizes both technological support and critical engagement, Al-Ghifari University can better prepare its students for the challenges of the modern information landscape. Future research should continue to explore effective pedagogical strategies that integrate AI while enhancing critical reading and analytical skills among students.

REFERENCES

- Bowen, J. A., & Watson, C. E. (2023). *Teaching with AI*. Johns Hopkins University Press.
- Chen, L. (2023). Strategies for Integrating AI in Higher Education: Balancing Efficiency and Critical Thinking. *International Journal of Educational Technology*, 18(2), 22-35.
- Kumar, A. (2022). Exploring Opportunities and Challenges of Artificial Intelligence and Machine Learning in Higher Education Institutions. *Journal of Educational Technology*, 15(3), 45-60.
- Lee, M., Zhang, T., & Kim, J. (2022). The Effects of AI on Student Reading Engagement: A Meta-Analysis. *Educational Research Review*, 17, 78-92.
- McCormick, K. (2020). The Importance of Critical Reading in Higher Education. *Journal of College Reading and Learning*, 50(1), 1-15.

- Smith, R., & Johnson, P. (2021). AI Tools and Reading Practices: A Study of University Students. *Journal of Educational Psychology*, 113(4), 654-670.
- Ng, W., & Nicholas, H. (2021). AI Literacy in Higher Education: A Review of Current Research. *Journal of Educational Computing Research*, 59(3), 487-505.
- Kong, S. C., & Wong, K. W. (2021). Enhancing AI Literacy in Higher Education: A Framework for Curriculum Development. *Computers & Education*, 165, 104149.
- Laupichler, A., & Burgsteiner, H. (2022). The Role of AI in Shaping Critical Thinking Skills: Implications for Education. *Journal of Educational Technology Systems*, 50(2), 123-140.
- Hermann, T. (2022). Understanding AI Literacy: A Framework for Educators. *International Journal of Information and Education Technology*, 12(4), 345-352.