

The AI-Dependent Learning Phenomenon: Exploring Students' Dependence on AI in Completing College Academic Task

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Abstract

This study investigates the emerging phenomenon of AI-dependent learning among university students, focusing on how reliance on generative artificial intelligence tools shapes their academic behaviors, learning motivation, and engagement with course tasks. The rapid advancement of AI applications, such as ChatGPT, has transformed students' study habits, yet concerns arise regarding excessive reliance that may weaken independent cognitive processes. Using a qualitative descriptive method, this research involved 30 accounting students from State University of Makassar. Participants were selected through purposive sampling to ensure they had substantial exposure to AI-assisted academic work. The findings indicate that AI dependence is commonly driven by academic workload, tight deadlines, a desire for efficiency, and the perception that AI provides faster and higher-quality output. However, overreliance leads to diminished critical thinking, reduced confidence in completing tasks independently, and concerns related to academic integrity. This study highlights the urgent need for universities to establish AI literacy guidelines, promote responsible use, and design learning activities that balance technological assistance with genuine cognitive engagement.

Keywords: *AI-Dependent Learning, Students' Dependence, Academic Task.*



INTRODUCTION

The rapid advancement of generative artificial intelligence (AI) has reshaped the landscape of higher education, particularly in how students' complete academic tasks. Tools such as ChatGPT, writing assistants are increasingly integrated into students' learning routines, raising new questions regarding academic behavior, learning motivation, and engagement with course tasks in the digital era.

According to Zhai (2023), the widespread adoption of AI in academic activities marks a significant shift in learning patterns, where students no longer rely solely on traditional cognitive processes but instead integrate machine-generated assistance into their workflow.

AI technology has been described as a transformative tool that enhances efficiency, supports comprehension, and assists students in overcoming academic challenges (Kasneci et al., 2023). However, these benefits also introduce a new phenomenon known as AI-dependent learning, characterized by excessive reliance on AI tools for tasks such as summarizing readings, drafting essays, solving problems, and generating ideas. Santos & Miller (2024) noted that AI dependence is emerging as a behavioral adaptation among students experiencing academic pressure, limited time, and difficulty understanding course materials.

This phenomenon becomes increasingly critical to examine because it not only affects students' performance but also shapes their motivation, critical thinking, and self-efficacy. According to Lodge & Corrin (2022), learning autonomy and cognitive effort are essential components of deep learning, and reliance on automated systems may reduce students' internal drive to engage meaningfully with academic content. Similarly, Kim & Lee (2024) highlighted that the improper or excessive use of AI may threaten academic integrity, as students may unknowingly blur the boundaries between assistance and misconduct.

In Indonesia, the challenges are even more prominent as digital literacy and AI literacy levels among university students vary widely (Pratama & Firmansyah, 2023). For students enrolled in research methodology courses, AI tools may influence how they search for literature, construct arguments, and produce academic writing. Preliminary evidence suggests that overreliance on AI tools can hinder students' development of essential research skills such as conceptual understanding, idea synthesis, and analytical reasoning (Aristovnik et al., 2022).

Given the emerging nature of this issue, empirical studies on AI-dependent learning, particularly in Indonesian higher education contexts remain limited. Most existing research focuses on AI ethics, AI literacy, or opportunities of AI in education, while investigations into student dependence, psychological factors, or behavioral dynamics are still scarce (Mutlu-



Bayraktar & Yildiz, 2023). Therefore, understanding the experiences and perceptions of students who frequently use AI for completing college assignments is essential for developing ethical guidelines, instructional strategies, and policies that ensure responsible and balanced AI integration.

Based on this background, this study explores the phenomenon of AI-dependent learning among accounting students enrolled in the Research Methodology course at State University of Makassar. By examining their behaviors, motivations, and challenges, this study aims to provide a grounded understanding of how AI dependence arises, how students perceive its benefits and drawbacks, and what implications it holds for learning quality and academic integrity in higher education.

LITERATURE REVIEW

Artificial Intelligence in Higher Education

The integration of Artificial Intelligence (AI) into higher education has significantly transformed learning activities, academic support systems, and student behaviors. Recent studies highlight that AI-based tools such as ChatGPT, have been widely adopted by university students for task completion, idea generation, and language assistance (Kasneci et al., 2023). Studies by Cotton et al. (2024) note that the integration of AI into learning environments has shifted the nature of cognitive tasks, enabling students to automate processes that previously required substantial effort and critical thought. Generative AI is described as both a learning support tool and a cognitive amplifier, allowing students to offload complex tasks and reduce academic burden. These tools provide instant feedback, reduce cognitive effort, and increase academic efficiency, making them highly attractive for students facing demanding coursework. Furthermore, AI has expanded teaching innovations, including adaptive learning systems and automated assessment platforms (Zawacki-Richter et al., 2019). However, despite its pedagogical potential, concerns continue to arise regarding academic integrity, dependency, and the reduction of meaningful learning engagement.

AI Usage Behavior Among Students

Student behavior toward AI use is shaped by perceived usefulness, ease of access, academic pressure, and technological familiarity. According to Dwivedi et al. (2023), students tend to rely on AI tools when facing time constraints or difficulties understanding complex materials. Additionally, Gen Z students demonstrate a higher preference for technology-mediated learning,



which contributes to increased AI adoption (Jeon & Lee, 2022). AI enhances productivity and task performance, research suggests that overuse may lead to surface-level learning, reduced motivation to read academic sources, and increased reliance on automated outputs (Lodge & Corrin, 2017). While studies on smartphone dependence, internet addiction, or e-learning overreliance exist, the emergence of AI-dependent learning represents a new phenomenon. Unlike previous forms of technological reliance, AI tools can perform cognitive tasks on behalf of the student, rather than merely facilitating access to information. As Fischer & Stuber (2023) argue, AI has the capacity to replace higher-order thinking processes, such as analysis, synthesis, and evaluation. This creates a unique behavioral shift where students may prefer AI-generated output rather than producing their own independent work. These behavioral shifts indicate the importance of understanding how dependence develops among students in various learning contexts.

AI Dependency and Academic Integrity Issues

The phenomenon of *AI dependency* is emerging as a critical issue in higher education. AI dependency refers to a condition in which students become overly reliant on AI-generated content to complete academic tasks that require original thinking, reflection, and conceptual understanding (Sun et al., 2023).

The rise of generative AI introduces new forms of academic misconduct. Studies by Dawson (2023) highlight that AI-produced content is often indistinguishable from human writing, making traditional plagiarism detection tools insufficient. Institutions have increasingly adopted AI detectors; however, recent research questions their accuracy, reliability, and fairness (Liang et al., 2024).

AI detectors, such as ZeroGPT, Writefull, and GPTZero, are often used to identify AI-generated text, with thresholds of 20–30% commonly applied by lecturers to maintain academic authenticity. However, high detection scores have become prevalent among students who excessively rely on AI for writing assignments. This creates tension between academic requirements and students' use of technological tools. Studies also show that universities have yet to establish standardized policies regarding acceptable AI use (Kasneci et al., 2023). As a result, students often rely on their own judgment when using AI, leading to inconsistent practices and increased risk of misconduct. Excessive use of AI can undermine foundational academic skills such as critical thinking, problem-solving, and writing fluency. Moreover, AI misuse may result in plagiarism-like behavior, particularly when students submit AI-generated text as their own (Cotton



et al., 2023). Universities worldwide have responded by implementing AI detection tools and policies to maintain academic integrity standards. However, AI detectors often produce inconsistent results, leading to student anxiety and confusion about acceptable AI use (Lee et al., 2024).

Challenges of AI Detection and Student Compliance

AI detectors such as Turnitin AI Writing Detection, GPTZero, and OriginalityAI are increasingly used to identify AI-generated academic writing. Studies show that AI detectors may produce false positives, with some human-written texts flagged as AI-generated (Thompson & Perrault, 2024). This inconsistency pressures students to revise and reduce their AI-generated proportion to meet institutional requirements. When students are asked to reduce AI detection scores (e.g., below 20%), they often struggle due to limited writing skills or reliance on AI in earlier drafts. The requirement to simultaneously meet similarity thresholds (such as Turnitin < 20%) adds further complexity. These challenges create a cycle in which students rely more on AI for revisions, increasing their dependency even further.

Research Gap

Although prior studies have explored AI adoption, digital learning behaviors, and academic integrity, there is limited research on the lived experiences of students who are required to reduce AI detection scores in their academic assignments. Specifically, no studies have focused on university students who depend heavily on AI for writing research proposals and face institutional restrictions requiring AI detection results below specific thresholds. This research thus addresses a contemporary gap by examining how students experience AI-dependent learning within real academic constraints.

RESEARCH METHODS

A qualitative research method was employed in this study, an approach that, according to Creswell & Poth (2018), involves an in-depth process of data collection, analysis, and interpretation aimed at understanding participants' lived experiences. The purpose of this research is to explore the phenomenon of AI-dependent learning among accounting students at State University of Makassar, particularly how they rely on generative artificial intelligence when completing academic assignments. This study used primary data, obtained directly from students who actively use AI tools, such as ChatGPT, in completing college tasks. A purposive sampling technique was



applied to determine research informants, selecting participants based on the following criteria (Hwang & Chen, 2023):

- a. actively enrolled in the Research Methodology course,
- b. frequently use AI tools for academic purposes, and
- c. willing to participate in interviews.

Data were collected through semi-structured interviews, allowing researchers to explore students' motivations, experiences, and perceived impacts of AI usage on their learning processes. Interview sessions were conducted both offline and online, depending on participant availability. Secondary data were obtained from institutional documents, academic policies regarding AI use, and previous research related to AI in education (Kim & Lee, 2024). The data analysis followed the interactive model proposed by Miles, Huberman, & Saldaña (2014), which includes three main stages:

1. Data Reduction: selecting, simplifying, and organizing interview transcripts into meaningful categories;
2. Data Display: presenting the data through thematic charts and matrices to identify emerging patterns;
3. Conclusion Drawing and Verification: interpreting themes and validating findings through member checking and peer review.

To ensure the credibility of the research, the study employed member checking, prolonged engagement, and peer debriefing (Nowell et al., 2017). In addition, ethical considerations, such as confidentiality, informed consent, and voluntary participation, were strictly upheld throughout the research process.

RESULTS AND DISCUSSION

RESULTS

High Levels of AI Dependence in Completing Research Proposal

The findings of this study reveal that a significant number of accounting students enrolled in the Research Methodology course heavily relied on generative AI tools particularly ChatGPT to complete their research proposal assignments (Kasneci et al., 2023). Students stated that AI helped them save time, reduce confusion, and quickly complete assignments.

However, this convenience resulted in overreliance, where many students completed assignments without reading supporting literature or understanding the methodology



conceptually. During the AI detection process, most submissions initially scored above 50% AI-generated content, indicating substantial dependence on AI rather than students' original thought. This pattern reflects the growing trend of AI-assisted academic work in higher education, as documented by recent studies showing that students frequently turn to AI to simplify complex tasks, reduce cognitive effort, and meet deadlines (Cotton et al., 2024).

AI Detector Results and Academic Compliance Issues

The institution requires students to meet two quality thresholds: a maximum of 20% AI-generated content and a maximum of 20% Turnitin similarity. This policy aimed to ensure academic integrity and encourage students to produce more authentic and reflective academic writing. Many students reported feeling pressured and confused about how to reduce AI similarity since they initially relied heavily on AI tools. Similar concerns are highlighted by Dwivedi et al. (2023), who noted that students often struggle to differentiate between assistance and replacement when using AI for academic tasks. When student proposals were assessed, nearly all submissions exceeded the AI threshold, with AI-detection scores ranging from 45% to 82%. Students expressed frustration because they believed AI-generated content was grammatically correct and academically suitable, yet still flagged as high-AI content. This situation pushed students to attempt revisions manually, often without proper understanding of how to paraphrase or contextualize content independently. Several students struggled to balance the requirement for originality with the temptation to rely on AI for quick solutions.

Student Challenges in Reducing AI Detection and Plagiarism Rates

When asked to revise their proposals to reduce AI detection to under 20%, students reported various challenges. During the revision process, students expressed several challenges, including difficulty paraphrasing AI outputs, lack of confidence in their own writing skills, and limited understanding of methodological concepts. As a result, many attempted multiple revisions before achieving acceptable AI and Turnitin thresholds. This finding aligns with Schindler et al. (2024), who found that high AI dependence often results in weakened academic writing competence, reduced comprehension, and decreased self-efficacy. Others stated that they did not fully understand the content generated by AI, making revision even harder. Some students also mistakenly believed that simply paraphrasing through another AI tool would reduce the AI score, which often resulted in minimal improvement or even higher detection percentages. Furthermore, reducing Turnitin similarity while simultaneously lowering AI detection created additional stress,



as students needed to balance originality, coherence, and academic accuracy.

DISCUSSION

Motivations Behind AI Dependence

The study demonstrates that students' reliance on AI is largely driven by academic pressure, time constraints, and perceived efficiency. Many students admitted using AI when facing tight deadlines or difficulty formulating research ideas. These motivations echo the findings of Crompton & Burke (2024), who argued that AI tools are increasingly seen by students as "academic shortcuts" that reduce cognitive workload. However, overreliance risks undermining foundational skills needed for research, such as critical thinking and conceptual understanding.

Implications for Learning and Academic Integrity

Excessive reliance on AI resulted in diminished originality of student work. Students who used AI-generated text extensively tended to produce homogeneous writing, lacking personal insight and theoretical reasoning. This trend poses a threat to academic integrity, as AI-generated content cannot fully reflect the student's own comprehension. According to Popenici & Kerr (2024), unregulated AI use can lead to "intellectual outsourcing," weakening students' engagement in the learning process. The requirement to reduce AI similarity to 20% forced students to reconsider how they interact with AI tools. Instead of allowing AI to generate full paragraphs, students began to use AI more critically for idea generation, language checking, and clarification, aligning with ethical AI usage frameworks recommended by UNSECO (2023).

Shifts in Student Learning Behavior

The revision process triggered noticeable behavioral changes. Students became more aware of the risks of AI dependency and started to engage more deeply with course material. After several consultations and feedback sessions, many began incorporating their own reasoning, classroom notes, and empirical understanding into their proposals. This shift is consistent with findings by Lai et al. (2024), who reported that guided AI use combined with reflective learning can improve academic independence.

The Need for AI Literacy in Higher Education

The results highlight the importance of integrating AI literacy into the Research Methodology curriculum. Students must be taught not only how to use AI effectively, but also how



to maintain academic integrity while using it. AI literacy includes skills such as verifying accuracy, interpreting AI outputs critically, paraphrasing meaningfully, and ensuring originality. This aligns with current global recommendations emphasizing responsible AI integration in higher education (Holmes et al., 2023).

CONCLUSION

This study reveals that AI-dependent learning has become a growing phenomenon among university students, particularly those enrolled in research methodology courses. The findings indicate that while generative AI tools provide significant advantages—such as efficiency, reduced workload, and improved clarity in completing academic tasks—these benefits also lead to an unintended pattern of excessive dependence. Students increasingly rely on AI to draft, edit, and conceptualize their research proposals, resulting in reduced engagement with core academic skills such as critical thinking, independent analysis, and methodological understanding. The results also show that many students exceeded institutional limits on both AI detection scores (above 50%) and similarity checks (Turnitin above 20%), reflecting a concerning shift toward overreliance on automated tools rather than developing authentic scholarly competence. The requirement to reduce AI-generated content to a maximum of 20% prompted students to revisit and revise their work more thoughtfully; however, the initial high reliance highlights the need for stronger guidance, clearer academic policies, and AI literacy development.

This study contributes to the growing literature on ethical and pedagogical considerations surrounding AI in higher education. It emphasizes the importance of balancing AI as a supportive tool rather than a substitute for learning. Universities must ensure that students understand both the benefits and limitations of AI, particularly in academic writing and research development. Strengthening instructional support, redesigning assessments to encourage originality, and integrating AI-awareness training into curricula may help mitigate the risks of overdependence. Overall, AI-dependent learning represents a new academic challenge that requires adaptive strategies from educators, students, and institutions. By promoting responsible, critical, and ethical use of AI, higher education can harness technological advancements while safeguarding the integrity and authenticity of student learning.

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