

Student Attitudes Toward AI-Assisted Thesis Writing and Critical Reading: A Case Study from Indonesian English Programs

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Abstract

This study explores the role of Artificial Intelligence (AI) in undergraduate thesis writing within English Language Education programs in Indonesia, particularly its influence on students' academic writing and critical reading. Using a qualitative case study approach, the research investigates how final-year students incorporate AI tools such as ChatGPT, Quillbot, and Claude AI throughout the thesis development process, including research, drafting, revision, and engagement with academic texts. Data were collected through semi-structured interviews involving twelve students who had experience using AI during their thesis work. Findings show that students perceive AI as a helpful tool for improving writing structure, grammar, and argumentation. Beyond writing support, AI was also seen as valuable for enhancing reading comprehension, especially in interpreting complex academic texts, clarifying unfamiliar concepts, and synthesizing multiple sources. However, they expressed concerns about the risk of over-reliance on AI, particularly when it replaces deep reading or independent thinking. These insights highlight both the benefits and limitations of Al in academic context. The study concludes that while Al tools can support academic literacy by enhancing both writing and reading practices, their effectiveness depends on how they are used. Thoughtful integration of AI in higher education should promote ethical awareness, reflective use, and the continued development of essential skills such as critical thinking, critical reading, and independent writing. Keywords: Artificial Intelligence, Thesis Writing, English Education, Critical Reading

1. Introduction

The integration of Artificial Intelligence (AI) into education has significantly reshaped learning, pedagogy, and academic processes across disciplines, particularly in higher education. Al supports personalized learning, real-time feedback, and collaborative engagement through tools like adaptive platforms, chatbots, and automated grading systems, which improve learning outcomes and reduce teachers' workloads.

Holmes et al. (2019) emphasize that one of AI's key advantages in education is its ability to personalize learning by adapting to individual student needs. AI-driven tools can tailor content to different learning styles and paces, increasing engagement and improving outcomes. In the context of thesis writing, AI tools like ChatGPT offer personalized support across stages, from idea generation to final editing, by providing real-time feedback on

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grammar, structure, and clarity (Wu, 2024; Zhang, 2024). This fosters self-regulated learning, which is essential for producing high-quality academic work (Ilma & Sampurna, 2024). Moreover, AI can help democratize thesis writing by offering accessible, skill-enhancing support for students across diverse backgrounds, bridging proficiency gaps and reducing barriers related to language and geography (Al-Raimi et al., 2024).

Academic writing at the undergraduate level requires not only the construction of coherent arguments but also engagement in critical reading—essential skills for evaluating sources, identifying assumptions, and synthesizing perspectives into a well-grounded scholarly narrative (Grabe & Stoller, 2019). As AI tools like ChatGPT, Claude AI, and Elicit become more integrated into academic work, their influence extends to how students interpret and engage with texts. While these tools can enhance comprehension through summarization and citation support, they may also encourage passive reading if students rely on AI outputs without critically analyzing original sources. This dual role raises concerns about AI's potential to either support or undermine the development of critical reading skills vital to academic literacy (Shiri, 2024).

In English Language Education programs in Indonesia, AI is increasingly recognized for its potential to support thesis writing by offering more equitable access to academic resources and addressing language proficiency gaps (AI-Raimi et al., 2024). AI-driven writing tools allow students from diverse backgrounds to enhance their academic writing, regardless of institutional disparities. Tools like ChatGPT and other generative assistants support the full writing process, from brainstorming to revision, fostering student-centered and self-regulated learning (Kong et al., 2024; Tran, 2024). These tools provide immediate feedback, helping students reflect on and improve their work, which is essential for developing learning autonomy and motivation.

Beyond technical assistance, AI also enhances both independent and collaborative learning by offering adaptive and interactive support, which helps students strengthen their academic writing skills (Simms, 2024). However, these benefits must be balanced with pedagogical strategies to promote creativity and critical thinking.

While (Holmes et al., 2019; Luckin & Holmes, 2016; Zawacki-Richter et al., 2019) highlights these benefits, (Selwyn, 2019; Williamson & Eynon, 2020) concerns remain about over-reliance on AI, which may undermine critical thinking, writing, and problem-solving skills. Ongoing debates also emphasize ethical issues such as data privacy, algorithmic bias, and the transparency of AI in educational contexts. Scholars have warned that excessive dependence on AI can decline foundational writing competencies, critical thinking, and originality (Farrokhnia et al., 2024; Mohamed et al., 2024). As AI-generated content becomes more sophisticated, distinguishing between original work and AI-assisted output becomes increasingly difficult, raising ethical concerns around authorship and academic integrity (Khan, 2023).

Therefore, while the integration of AI offers powerful tools to enhance learning and writing in higher education, it must be guided by clear ethical standards and thoughtful instructional design. Educators must ensure that AI only complements rather than replaces traditional learning practices, enabling students to develop the independent, reflective, and analytical skills essential for academic success (Grubaugh et al., 2023). Striking this balance is critical to maintaining the integrity of the educational process and fostering long-term intellectual growth.

This study highlights how emerging technologies, particularly AI, are reshaping academic literacy and writing development in higher education. Thesis writing presents substantial challenges for students, including topic development, argument structure,

academic stylization, and citation management. Al tools such as language models, grammar checkers, and citation generators offer real-time support that helps students overcome these barriers by improving language accuracy, suggesting sources, and guiding idea development (Aoun, 2017). In English Language Education programs, Al also reinforces students' academic English skills, supporting both writing and reading comprehension. Importantly, this study also examines students' perceptions of how Al supports critical reading—an essential yet often overlooked aspect of thesis writing that involves understanding, evaluating, and synthesizing complex academic texts. While general research on Al in education is growing (Owoc et al., 2019), little attention has been given to its role in enhancing students' perception on the tools they use including the extent of Al integration and the effectiveness in supporting both writing and critical reading.

This research discusses: 1) The popular AI tools undergraduate students use in English Language Education for thesis writing; 2) The extent of AI involvement in students' thesis compilation process; and 3) Students' perception of the effectiveness of AI for critical reading in the process thesis writing

2. Method

This study employed a case study approach to explore the role of Artificial Intelligence (AI) in undergraduate thesis writing within the English Language Education program at a university in South Sulawesi Province, Indonesia. The qualitative approach is chosen to allow an in-depth exploration of students' interactions with AI tools and their perceptions of the tools' effectiveness in their thesis writing process. Twelve final-year students (8 female, 4 male, aged 20–22) from one university in Bone Regency, South Sulawesi, majoring English Language Education were purposively selected based on their experience using AI in thesis writing.

Data was collected through semi-structured interviews to gather information about the students' experiences, perceptions, and views on the use of AI in their thesis writing process. In addition to exploring how AI tools supported writing, the interviews also examined how students used AI in critical reading—such as understanding complex academic texts, evaluating the quality of journal articles, and synthesizing multiple sources. This allowed for a deeper understanding of AI's impact not only on writing proficiency but also on reading comprehension and source analysis.

The interview questions explore how students utilize AI programs throughout the thesis writing process. They ask which AI tools were most helpful and how these tools assisted them in organizing and structuring the thesis content. The questions also examine how AI contributed to students' understanding and learning, particularly in critical thinking, critical reading, and problem-solving. The collected data was analysed thematically starting by familiarizing the transcripts, to generating initial codes representing key patterns and themes related to AI use in writing and critical reading.

3.1. Findings

Based on the data provided, the research examines the role of Artificial Intelligence (AI) in the thesis writing process of undergraduate students in an English Language Education program. The data is categorized into three groups: the use of AI tools, their integration in the thesis writing process, and students' perceptions of their effectiveness.

3.1.1 The popular AI tools used by undergraduate students in English Language Education for thesis writing

Undergraduate students in English Language Education program frequently utilize various AI tools in their thesis writing process. These tools serve multiple purposes, ranging from gathering information, paraphrasing, structuring argument, and statistical analysis. Various AI applications contribute significantly to enhancing writing quality, efficiency, and critical thinking skills.

Extract 1: Which AI program is the most useful for helping you organize and structure the content of your thesis?

A: ChatGPT.

B: Quillbot.

C: An AI program known as ChatGPT, with the ability to answer various user questions and commands, which can help complete the thesis.

D: At the beginning of writing, I used CLAUDE AI, but in the middle of writing, I switched to ChatGPT.

E: Sci-Hub, SPSS, Quillbot.

F: ChatGPT.

G: I didn't use AI to organize the content of my thesis, but the most useful AI in my opinion is ChatGPT.

H: ChatGPT and Grammarly.

I: In my opinion, ChatGPT is the most multifunctional tool for organizing and structuring a thesis. It offers features like generating ideas, creating outlines, developing arguments, correcting grammar, and paraphrasing. Its recent updates, including the ability to provide journal references, make it even more versatile. While tools like Claude AI are also helpful, I prefer ChatGPT for its broader capabilities. Still, it's important to check outputs carefully to avoid plagiarism.

J: Grammarly.

K: ChatGPT is the AI program that I think is most suitable for assisting me in the thesis writing process.

L: ChatGPT.

The extract highlights that students commonly used AI tools such as ChatGPT, Quillbot, and Claude AI to support various stages of thesis writing. ChatGPT was primarily employed for organizing information and understanding key concepts, particularly during the writing and revision phases. Quillbot played a significant role in paraphrasing and refining arguments, enhancing writing efficiency and clarity. Claude AI was utilized by some students to structure information from literature reviews and develop logical arguments, contributing to critical thinking. Overall, these tools support information gathering, organization, paraphrasing, and argument development, making the thesis writing process more structured and manageable.

3.1.2 Involving AI in thesis compilation process

Some students rely on Claude AI for structuring literature reviews and formulating logical arguments. This tool assists in critical thinking by helping students organize their ideas cohesively. It helps to structure argument and interpret data, thereby improving the analytical depth of the thesis.

Extract 2: How do the AI programs you use enhance your understanding and learning while writing your thesis?

A: ChatGPT provides clear writing direction when used with appropriate prompts, especially for English theses.

B: Al enhances thesis writing by supporting the development of writing skills.

C: It improves my understanding of the thesis, refines references, and clarifies research focus.

D: When I don't understand a point in my thesis, I ask AI to explain it, including content from journals or articles I haven't fully grasped.

E: Al suggests better word choices and also helps process data, such as with SPSS.

F: It guides students in using proper sentence structures.

G: I use ChatGPT to find relevant materials and clarify points I don't fully understand.

H: ChatGPT explains difficult concepts clearly, and Grammarly helps correct and explain grammar issues to improve my skills.

I: Al offers simplified explanations, new perspectives, and helps sharpen arguments; ChatGPT can even act like a discussion partner. Still, it should only support—not replace—learning.

J: It helps clarify the meaning of words and written sentences.

K: Al provides relevant information, aids data analysis, and saves time during thesis preparation.

L: Yes, it greatly improves and supports the thesis writing process.

Based on Extract 2, AI programs significantly enhance students' understanding by providing explanations of complex concepts, clarifying unfamiliar research content, and improving writing through feedback on structure, word choice, and grammar. Tools like ChatGPT serve as interactive learning aids and "discussion partners," helping students develop ideas and sharpen arguments, while Grammarly reinforces writing skills through correction explanations. This combination of guidance and immediate feedback helps students comprehend topic and engage better with their thesis writing process.

Extract 3: How do you integrate AI programs in the various stages of thesis writing, such as research, drafting, and revision?

A: Al tools are helpful across all stages of thesis writing, especially during the revision phase.

B: Al saves time in the research stage by filtering literature and helps prevent plagiarism during revision, using tools like Quillbot.

C: I use AI to guide the thesis process, from defining the focus to finding and interpreting references.

D: Al helps me locate concepts and information I need in my thesis.

E: I used SPSS for complex statistical tasks and visualizing data effectively.

F: I instructed AI to create good sentences, then I paraphrased them.

G: I used AI during drafting to gather material.

H: I used Google Scholar for research, Grammarly for consistent language and style, and Turnitin for plagiarism checks during revision.

I: I used AI for selecting topic, searching literature, outlining, drafting, and revising sentence structure and coherence.

J: I applied AI step-by-step throughout writing and revision to better understand and structure the thesis.

K: I compiled elements into a template, built the draft, and revised it using AI feedback. **L:** AI supports research through efficient literature search, content drafting, and grammar and structure improvement during revision.

Extract 3 reveals that AI integration into the thesis writing process varies across students depending on individual needs and development stages. Some relied on AI during early stages for idea generation, drafting, and organizing references, while others used it more intensively during revision to enhance coherence, structure, and clarity. AI was also applied in reviewing theories and developing arguments, supporting deeper reasoning. Statistical tools like SPSS were used in the findings stage, and Quillbot was commonly employed for paraphrasing. This variety in application demonstrates AI's flexibility in supporting different phases of thesis writing.

3.1.3 Students' Perception of the Effectiveness of AI for Thesis Writing and Critical Reading

Students perceive AI as a valuable tool in improving the quality of their thesis. AI tools help enhance the depth of content, improve clarity, and refine arguments, making the writing process more efficient. Many students acknowledge that AI plays a critical role in thesis organization and conceptual understanding. Additionally, students expressed how AI assisted in critical reading, especially in understanding complex academic texts, summarizing key points, and clarifying difficult journal article. The question below was asked to explore these perceptions:

Extract 4: Which stage of the thesis writing process is most helped by AI programs, and how does this affect your learning?

A: At the revision stage, thesis preparation and helping with proofreading. Al also helped me to clarify some parts of journal articles I didn't fully understand.

B: The draft preparation stage. When reading articles, AI helped me to summarize or explain them, so it's easier to understand and write.

C: The reference compilation stage, to find various references or previous research, was very helpful with AI, especially ChatGPT. I also used it to check if I understand the articles I read.

D: The stages of compiling the theoretical review, and also the methodology. I often ask AI to explain difficult parts of the sources I include.

E: In the Findings Stage, I was greatly helped by an AI program (SPSS) in managing research data. I also ask ChatGPT to help interpret academic references.

F: Background. Al helped me rephrase and also explained journal content when I was unsure about something.

G: Al was quite helpful for me in finding material related to the literature I included in my thesis. Sometimes I used ChatGPT to check my understanding of it.

H: The revision stage, AI programs greatly influence learning to increase efficiency, as well as deepen understanding, and develop important skills. For example, when I don't understand journal content, I ask ChatGPT to simplify it.

I: All stages have their own level of difficulty. However, in my opinion, the process that helps is at the initial writing stage because it can provide initial ideas when we experience a mental block or are looking for new ideas and expanding arguments. It improves the ability to re-analyze, encourages us to be more critical, makes time more efficient, and

improves the quality of writing. It also helps when I'm trying to interpret or evaluate different articles.

J: In writing and composing chapter by chapter when writing the content of the thesis. I sometimes use AI to help understand the academic language used in articles.

K: In the findings section, which involves compilation and errors found, then in the discussion section which indeed requires orderliness in sentence construction. Also, Al sometimes gives me explanations I can't find easily in the paper itself.

L: Al programs are most useful in literature search and thesis editing. In this regard, Al speeds up the process of finding relevant references and correcting writing errors, allowing focus on analysis and main ideas. ChatGPT also helps simplify journal content that is hard to understand.

Students valued AI support not only for structuring and editing writing but also for reading and interpreting complex academic texts. Several noted how ChatGPT simplify explanations, clarify theories, or summarize articles in the literature review process. This facilitated better understanding and deeper engagement with material sources. However, some respondents raised concerns about over-reliance, acknowledging that relying on AI summaries might reduce their motivation to critically engage with full texts. These mixed responses highlight both the supportive role AI plays in critical reading and the need for caution to avoid bypassing independent intellectual work.

Meanwhile, the students had varying opinions on how AI impacted their thesis writing experience as shown in the Extract 5 below:

Extract 5: What is the impact of using AI programs on the overall learning outcomes from your thesis writing experience?

A: Of course, it greatly influences the results of thesis preparation, namely in terms of increased access to information and improved quality of writing.

B: Efficiency and time management, quality of writing.

C: There are two impacts given: first, the positive impact is that AI helps in thesis preparation, especially regarding very important references. While the negative impact is that users tend to refer more to AI for all types of answers that will be quoted into the thesis, always wanting the easy way by using AI and more often copyrighting.

D: So far, good. But for long-term use, it might not be good.

E: The impact of using AI programs from my thesis writing experience is that it improves my learning outcomes in thesis writing by accelerating material understanding, enhancing analytical skills in my thesis.

F: Very beneficial.

G: Greatly supports the thesis writing process.

H: All can enhance our learning experience by providing tools and support that allow us to achieve the best results in thesis writing.

I: In my opinion, it has a positive impact on learning outcomes, for example, time efficiency, speeding up the research process, we can train ourselves to think more critically, can access extensive topic information, and improve writing quality. However, it has negative impacts, so it is necessary to remember not to depend on AI; we need to digest it again when we get results from AI.

J: The impact is very positive, because with AI programs, thesis writing can be accelerated.

K: Sometimes I feel that I am too pampered by this program, I worry this will make me too dependent fully on AI programs. So I think that I must consciously limit myself in using this AI program.

L: Al can be a very useful tool if used wisely and in accordance with broader learning objectives.

The overall impact of AI on students' thesis writing and learning outcomes was positive. Most students reported that AI tools improved their writing quality, enhanced efficiency, and provided easier access to information. Many found that AI helped them organize ideas, manage their time, and accelerate their understanding of complex material. Several respondents also highlighted the benefits of AI in developing analytical and problem-solving skills. Moreover, some argue that the tool supports independent learning when used appropriately.

Notably, students widely acknowledged the role of AI in supporting critical reading and thinking. AI tools such as ChatGPT and Claude AI were used not only to assist with writing but also to help students interpret dense academic texts, clarify unfamiliar theories, and summarize journal articles during literature review. This support was particularly useful in deepening their understanding of theoretical frameworks and enhancing their ability to synthesize sources. Through AI, students reported gaining new perspectives, refining arguments, and structuring more coherent discussions in their theses.

Despite these benefits, students expressed concerns about the risk of over-reliance on AI. Some worried that consistently depending on AI for content explanations or summaries could reduce their motivation to engage with original sources. Others noted the potential impact on creativity, independent writing, and long-term skill development. These concerns underscore the need for a balanced approach to AI use—one that encourages students to think critically, verify AI-generated content, and use the tools to complement rather than replace essential academic practices.

In summary, AI served as a transformative tool across multiple stages of thesis development, particularly in enhancing writing and supporting critical reading. However, the findings point to the importance of integrating AI thoughtfully into academic processes, ensuring that it supports independent thought, critical engagement, and academic integrity.

3.2. Discussion

This study explored the role of Artificial Intelligence (AI) in the thesis writing process of undergraduate students in an English Language Education program in Indonesia, focusing on the tools students used, the extent of AI integration across thesis stages, and students' perceptions of AI effectiveness in both writing and critical reading. Findings from semi-structured interviews with twelve final-year students highlight AI's transformative influence on academic literacy, particularly in writing development, reading comprehension, and critical engagement with academic texts.

Popular AI Tools and Their Integration

The research identified several AI tools commonly used by students, most notably ChatGPT, Quillbot, Claude AI, Grammarly, and SPSS. ChatGPT was the most frequently mentioned tool due to its multifunctionality in helping students structure ideas, understand academic concepts, generate arguments, and improve coherence. Quillbot was often used for paraphrasing, while Claude AI helped with logical reasoning and organizing literature

reviews. These findings reflect the growing evidence that AI tools assist students in overcoming the technical and conceptual challenges of thesis writing (Ilma & Sampurna, 2024; Zhang, 2024).

The integration of AI occurred across multiple stages of thesis development—from drafting to revision. Some students relied heavily on AI during literature review and topic exploration, while others found it most helpful for proofreading and paraphrasing. The flexibility of AI integration reflects its adaptivity to individual learner needs, reinforcing prior studies on personalized AI learning support (Holmes et al., 2019). These results confirm that students view AI as an essential tool to streamline the thesis process, enhance productivity, and support academic confidence.

Students' Perceptions of AI Effectiveness: Benefits and Concerns

Students generally view AI tools as highly effective in improving the quality of their writing. AI applications are credited with helping students construct clear arguments, enhance grammatical accuracy, and structure academic discourse more efficiently. AI was especially appreciated for its role in reducing the time and effort involved in complex academic tasks. These perceived benefits align with the literature highlighting AI's ability to facilitate self-regulated learning and writing improvement (Kong et al., 2024; Mohamed et al., 2024).

However, alongside these advantages, students also raised concerns—most notably the risk of over-reliance. Some participants reported that constant access to AI made them feel dependent, reducing their confidence in independently deciding their writing. A few students also questioned the originality of AI-generated outputs, expressing concern about plagiarism and ethical usage. These reflections echo findings of Khan (2023) and Selwyn (2019), warning that excessive AI dependence may erode essential academic skills such as critical thinking, creativity, and independent writing. Thus, students recognized the need for boundaries and conscious use of AI tools to avoid compromising academic integrity and skill development.

AI and Its Influence on Critical Reading in the Thesis Writing Process

In addition to supporting writing, the findings reveal that students also perceived AI tools as helpful for critical reading, especially in understanding and evaluating academic texts. ChatGPT, in particular, was frequently used to interpret complex journal articles, explain unfamiliar terminology, and summarize key ideas. Al use as a reading aid reflects the growing educational value of language models not just in writing but in improving students' interaction with complex literature (Shiri, 2024).

Students shared how AI helped them engage more confidently with challenging theories by simplifying complex arguments and helping them compare different perspectives. Several respondents described using ChatGPT as a "discussion partner" to sharpen their understanding, develop their interpretations, and connect different texts. This interaction model is consistent with Grabe and Stoller's (2019) view that critical reading involves questioning, evaluating, and synthesizing information from diverse sources to develop meaningful academic arguments.

Nonetheless, students acknowledged potential drawbacks. Some admitted to depending on AI summaries instead of reading full texts, raising concern that deep comprehension and critical engagement might be compromised. This aligns with critiques by Farrokhnia et al. (2024), that AI tools, if misused, may encourage shallow reading habits and reduce cognitive effort. To avoid this, the pedagogical use of AI must be

accompanied by instructional strategies that promote active reading, source evaluation, and reflective thinking.

Furthermore, educators must guide students in using AI responsibly for reading purposes, encouraging them to compare AI-generated content with original sources and ask critical questions about accuracy and relevance. If used appropriately, AI can scaffold students' analytical reading skills development, without replacing the essential process of intellectual engagement with academic texts.

4. Conclusion

The findings revealed that students frequently use a variety of AI tools in their thesis writing, and ChatGPT is the most dominant due to its broad functionality. Students also relied on Quillbot for paraphrasing, Grammarly for language refinement, and Claude AI for conceptual clarity. Rather than depending on a single application, students selectively combined tools based on their specific strengths, demonstrating a practical and adaptive approach to AI-assisted academic writing.

Al was integrated across the full thesis writing process, from topic selection and literature review to drafting, analysis, and final revision. Most students used Al during drafting and revision to improve coherence, restructure sentences, and paraphrase complex ideas. Others found it helpful in organizing arguments, generating outlines, or interpreting data. The extensive and consistency of Al use suggest that is is no longer peripheral but has been embedded within students' academic practices, playing a central role in shaping the structure and clarity of their work.

Students perceived AI tools helpful not only for writing but also for enhancing their understanding and engagement with academic texts. Tools such as ChatGPT and Claude AI were used to clarify unfamiliar concepts, explain complex theoretical material, and summarize journal articles. These functions help students to review literature and integrate multiple perspectives into their arguments. However, several students acknowledged the risk of over-reliance, recognizing that dependence on AI-generated summaries could reduce their independent critical engagement with primary sources.

This study offers a distinct contribution by highlighting AI's role in supporting students' critical reading—an area often neglected in AI and academic writing research. While existing studies have largely emphasized the benefits of AI for improving grammar, productivity, and efficiency, this research reveals that AI also plays a cognitive and interpretive role in how students understand, analyze, and synthesize academic material. The findings show that students are not only using AI to write faster but also to read better, to comprehend more deeply, and to engage with scholarly texts more confidently. This shift marks a novel pedagogical insight, demonstrating that AI tools can function as interactive reading companions that support intellectual engagement, not just mechanical output. In this sense, the study reframes AI not only as a productivity enhancer but also as a literacy tool that transforms how academic knowledge is accessed and processed.

Despite its contributions, the study is limited by its small sample size and singleinstitution scope, which may not reflect broader student experiences across different disciplines or educational contexts. The qualitative design, while rich in insight, also limits generalizability. Future research should explore these findings across more diverse academic programs, with larger and more varied samples. Longitudinal studies could examine how sustained AI use affects the development of independent academic skills over time, particularly in reading comprehension, synthesis, and critical analysis. Furthermore, there is a need to investigate how educational institutions can establish pedagogical and ethical frameworks that promote responsible, reflective, and skill-building AI use in higher education.

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