

EFL Students' Awareness and Ethical Considerations in Using AI for Academic Writing

Salsa Diah Paramitha

diiahparamitha@gmail.com

English Tadris Study Program, Institut Agama Islam Negeri (IAIN) Curup, Indonesia

Natasya Kemala Hassanah

kmalanatasya@gmail.com

English Tadris Study Program, Institut Agama Islam Negeri (IAIN) Curup, Indonesia

Alfhinda Natasya

alfhindanatasya@gmail.com

English Tadris Study Program, Institut Agama Islam Negeri (IAIN) Curup, Indonesia

Abstract: This study examines EFL students' awareness and ethical considerations in using Artificial Intelligence (AI) for academic writing. The rapid adoption of AI tools has outpaced students' understanding of ethical principles such as originality, authorship, and academic integrity, creating an urgent need to explore how students perceive and navigate AI use in their writing practices. This study employed a phenomenological qualitative research design. Data were collected through interviews with twelve EFL students and analyzed using thematic analysis following Braun and Clarke (2021) and Miles, Huberman, and Saldaña (2014), involving open, axial, and selective coding to identify recurring themes. The findings reveal that students predominantly use AI for idea generation, grammar correction, paraphrasing, and essay organization. The majority of participants showed a moderate awareness of ethical issues like plagiarism and overdependence, but their comprehension of ethical boundaries remained limited and was applied inconsistently in practice. Many students attempted responsible use by editing and rewriting AI-generated content, though not universally. While AI was found to improve grammar accuracy and structural organization, it also raised concerns about reduced critical thinking and cognitive dependence. This study came to the conclusion that although AI has significant pedagogical benefits for academic writing in EFL, its effective implementation necessitates institutional support and adequate ethical awareness. Educators are encouraged to establish clear AI use policies, integrate AI literacy into writing instruction, and promote responsible practices that preserve students' intellectual autonomy and academic integrity.

Keywords: AI In Academic Writing, EFL Students, Ethical Awareness, Phenomenological Qualitative Research, Academic Integrity

Introduction

The use of artificial intelligence (AI) in education has grown significantly in recent years, particularly in academic writing (Crompton & Burke, 2023). EFL students increasingly use AI-based tools such as grammar checkers, paraphrasing applications, and generative writing assistants to support their writing activities (Yang et al., 2024). This issue is important because the use of AI in academic writing is closely related to students' awareness, responsibility, and academic integrity. It is essential to understand how students perceive AI use and recognize the ethical boundaries involved in academic work. This issue needs to be studied because the rapid adoption of AI among students often outpaces their understanding of ethical principles in academic writing, such as originality, authorship, transparency, and plagiarism (Gustilo et al., 2024). Students may unintentionally misuse AI without realizing it, which can lead to ethical quandaries and hinder their

ability to write independently. EFL Students refer to students who learn English as a Foreign Language, Awareness refers to students' level of understanding, perception, and consciousness regarding the use of AI in academic writing, Ethical Considerations refer to moral and academic concerns related to the use of AI including honesty, originality, and responsibility in writing, while AI for Academic Writing refers to the use of artificial intelligence tools to assist in writing academic works such as essays, reports, papers, and assignments.

Generative AI is now used for more than just speaking and presentation practice in EFL education; it is also used for more general academic tasks like writing. This shift indicates that AI is becoming an integrated tool in students' learning processes, not only for improving performance but also for supporting idea development and language accuracy. Students no longer rely solely on traditional learning methods but increasingly incorporate AI as part of their daily academic practices. Based on interview results, most students reported that AI is widely used as a support tool in their academic activities, particularly for generating ideas, checking grammar, paraphrasing, and organizing their work more effectively (Jaya & Susyla, 2024).

Many students perceive AI as helpful in making tasks easier and improving the quality of their output. However, students also emphasized that AI should only function as a guide, while the main ideas should come from their own thinking. This suggests that students are beginning to position AI as a supporting tool rather than a replacement for their thinking. Furthermore, students demonstrated a moderate level of awareness regarding ethical issues. Although many students attempt to use AI responsibly by editing and rewriting the output in their own words, these practices are not always consistent. This shows that students are starting to develop a sense of responsibility in using AI appropriately. Overall, this phenomenon shows that while Generative AI provides significant benefits in supporting students' academic work, it also introduces challenges related to ethical awareness and responsible use. The findings indicate that although students are aware of ethical concerns, their understanding and practices are still developing and inconsistent (Pasaribu et al., 2022). Therefore, clearer guidelines and teacher support are needed to help students use AI more ethically and effectively.

This study specifically focuses on EFL students' awareness and ethical considerations in using AI for academic writing by exploring their perceptions, understanding, and experiences regarding the benefits, risks, and ethical boundaries of AI use in academic writing tasks. This topic needs to be researched because the use of AI in education is becoming increasingly common, while students' ethical awareness and personal interpretations of its appropriate use remain underexplored, particularly in the EFL context (Jeon, 2024).

Previous studies have examined the use of artificial intelligence (AI) in academic writing from various perspectives, particularly in EFL contexts. Several studies have explored students' experiences and perceptions of using AI tools such as ChatGPT, Grammarly, Quillbot, and Character AI to support writing activities, including idea generation, grammar correction, vocabulary improvement, and text organization. In addition, some studies have focused on both students' and lecturers' perceptions regarding the role of AI in writing classes, emphasizing its function as a supportive tool for academic writing and language development. Other research has also highlighted concerns related to overreliance on AI, reduced creativity, and issues of academic integrity in writing assignments.

The outcomes of an interview that was carried out a week ago serve as the foundation for these research questions.

1. How do EFL students use AI in academic writing?
2. What is their awareness of ethical issues in using AI?
3. How do they apply ethical practices when using AI?

This study aims to explore how EFL students perceive and understand the use of AI in academic writing and to investigate the ethical considerations that influence their decisions and practices in using such technology. This study is expected to contribute to the growing body of qualitative research on AI in education, particularly in the areas of academic writing and academic integrity. In

addition, the findings are expected to provide pedagogical implications for lecturers and educational institutions in developing ethical guidelines and classroom policies regarding students' use of AI.

Methods

Research Design

This study uses a phenomenological qualitative research design. The phenomenological approach was chosen because the main focus is to explore the lived experiences of EFL students in using AI for academic writing, including how they perceive its benefits, challenges, and ethical implications. This approach allows researchers to capture the depth and richness of subjective experiences and identify the meanings that students attach to their use of AI (Feng & Gao, 2026). In contrast to case studies, narratives, or grounded theory, this study aims to find the essence of shared experiences among the participants (Liao et al., 2021).

Participants

Data were collected from twelve (12) EFL students who used AI tools in their academic writing practices. The participants provided subjective reflections on the use of AI as a tool in their learning process.

Data Collection Techniques

The data in this study were collected through in-depth interviews. The interviews were conducted to explore students' perceptions, understandings, and experiences regarding the ethical limitations of using AI in academic writing assignments. The interview instrument is designed to address three key research questions: how AI is used, ethical awareness, and students' application of ethical practices.

Data Analysis Techniques

Data were analyzed qualitatively using thematic analysis following the frameworks of Braun and Clarke (2021) and Miles, Huberman, and Saldaña (2014). This analysis process involves three main stages of encoding:

1. Open Coding: Identify the meaningful units of participant responses.
2. Axial Coding: Groups similar codes into specific categories.
3. Selective Coding: Develop overarching themes based on research questions.

The results of the analysis are then presented as descriptive explanations and tables to facilitate interpretation, and conclusions are finally drawn based on the findings.

Results and Discussion

Results

How do EFL students use AI in academic writing?

According to the findings, EFL students make extensive use of AI as a support tool at various stages of academic writing. The interview data revealed three main themes: assistance with idea generation, language support, and drafting and editing. Most participants explained that AI helps them generate ideas and overcome difficulties in starting the writing process. Students commonly use AI to brainstorm topics, develop arguments, and generate initial drafts. Natasya explained that AI assists in "generating ideas," while Putri stated that AI is useful for "generating ideas and refining drafts." Similarly, Aisyah reported that AI supports brainstorming and helps organize ideas more systematically.

Additionally, the findings demonstrate that AI is a linguistic support tool. A lot of the participants used AI to correct grammar, expand their vocabulary, rephrase sentences, and arrange the structures of their essays. For example, Lavita mentioned that AI helps with "checking grammar and improving sentence structure," while Davina explained that AI improves "sentence

organization and writing clarity.” These responses indicate that students perceive AI as an accessible language assistant that helps reduce linguistic barriers in academic writing.

Another significant finding concerns drafting and editing assistance. Students explained that AI helps them revise drafts, improve coherence, and structure essays more effectively. Dina mentioned that AI supports “structuring essays,” while Wilda stated that AI helps “organizing work more clearly.” These findings suggest that students rely on AI not only during idea development but also throughout the revision and editing stages. From a phenomenological perspective, students experience AI as a practical academic companion that simplifies the writing process and reduces cognitive pressure during academic tasks. Students perceive AI as an immediate support system that improves efficiency and boosts their confidence when completing writing assignments.

Table 1. Data Display for RQ1

Theme	Indicators	Representative Statements
Idea Generation	Brainstorming, developing ideas	“generate ideas”, “brainstorming ideas”
Language Support	Grammar correction, paraphrasing, vocabulary, and organization	“grammar correction”, “sentence structure”
Drafting & Editing	Revising drafts, organizing essays	“refining drafts”, “organizing essays”

The findings indicate that EFL students primarily use AI as a supportive academic writing tool. AI assists students in generating ideas, improving grammar, paraphrasing sentences, organizing essays, and refining drafts. Students perceive AI as an efficient and accessible resource that facilitates multiple stages of the writing process and reduces writing difficulties.

What is students' awareness of ethical issues in using AI?

The findings demonstrate that most EFL students possess moderate awareness of ethical issues related to AI use in academic writing. The interview data reveal three major themes: awareness of plagiarism and dependency, responsible use practices, and limited understanding of ethical boundaries.

Most participants acknowledged that AI use may create ethical concerns, particularly plagiarism, overdependence, and reduced originality. Lia explained that students are aware of “plagiarism and reduced critical thinking,” while Wilda stated that students understand ethical concerns but do not consistently apply ethical practices in actual writing activities.

Several participants admitted that they still lack a clear understanding of the limits of acceptable AI use. Davina mentioned that students are “unclear about ethical limits,” while Aisyah emphasized the need for “clearer guidelines from teachers.” These findings suggest that although students recognize the existence of ethical issues, they are often uncertain about how to apply ethical standards in practice.

The findings also reveal attempts at responsible AI use. Many students explained that they revise, personalize, and rewrite AI-generated content rather than copying it directly. Tasya stated that students “rewrite and verify sources,” while Nani explained that students try to use AI “carefully and responsibly.” However, not all participants consistently followed these responsible practices. Phenomenologically, students experience ethical AI use as a continuous negotiation between convenience and academic responsibility. They recognize the usefulness of AI but simultaneously struggle to determine appropriate ethical boundaries.

Table 2. Data Display for RQ2

Theme	Indicators	Representative Statements
-------	------------	---------------------------

Ethical Awareness	Awareness of plagiarism and dependency	"aware of plagiarism", "dependency issue"
Responsible Use	Editing and personalizing AI output	"editing & personalizing", "rewrite content"
Limited Understanding	Unclear ethical boundaries	"unclear limits", "need clearer guidelines"

The findings reveal that EFL students have general awareness regarding ethical issues associated with AI use, especially plagiarism and dependency. However, their understanding of ethical boundaries remains incomplete, and responsible practices are not consistently implemented.

When using AI, how do students apply ethical principles?

The findings indicate that students apply ethical AI practices mainly through editing, rewriting, verifying information, and balancing AI assistance with independent thinking.

Most participants explained that they revise AI-generated content before using it in academic assignments. Putri stated that students "edit and personalize output," while Vina explained that students modify AI responses to maintain originality. In a similar vein, Natasya stressed the importance of rewriting AI-generated content "using their own words." Another important finding concerns verification practices. Tasya explained that students sometimes verify the credibility and accuracy of AI-generated information by comparing it to academic references. This finding suggests that some students try to evaluate AI-generated responses critically rather than automatically accepting them. Several participants also emphasized the importance of balancing AI use with independent learning. Arrozaqiah explained that AI should only function as "a support tool," while Dina highlighted the need to "balance AI and thinking." These findings demonstrate students' awareness that AI should not replace their own cognitive effort.

However, the findings also reveal concerns about overreliance on AI. Lia, Aisyah, Wilda, and Nani admitted that excessive dependence on AI may reduce critical thinking, creativity, and independent idea development. Students acknowledged that relying too heavily on AI sometimes makes them less engaged in analytical thinking during writing tasks.

From a phenomenological perspective, students experience AI as both empowering and potentially limiting. While AI increases efficiency and reduces writing difficulties, it may also weaken students' independent cognitive engagement if used excessively.

Table 3. Data Display for RQ3

Theme	Indicators	Representative Statements
Editing & Rewriting	Revising AI-generated content	"Rewrite in your own words"
Verifying Information	Checking AI-generated information	"verify sources"
Balancing AI Use	AI as a support tool only	"support tool", "balance thinking"
Critical Thinking Concerns	Overdependence on AI	"reduced critical thinking"

The findings indicate that students attempt to apply ethical AI practices by editing, rewriting, verifying, and personalizing AI-generated content. Nevertheless, some students still struggle to maintain a balance between AI assistance and independent thinking, resulting in concerns about dependency and reduced critical evaluation.

Discussion

The findings in this study reveal that the use of Artificial Intelligence (AI) has become an integral part of EFL students' academic writing practices, serving as a sociocultural mediation tool that bridges the gap between their current language skills and the demands of academic tasks. (Yang et al., 2023) From a phenomenological perspective, students experience AI as an instant support system that not only improves work efficiency but also boosts confidence when facing linguistic barriers. (Noverica, 2024) Students emphasized the role of AI in idea generation and brainstorming, showing that this technology serves as a cognitive partner in the early stages of writing, which are often considered the most difficult by foreign language learners. (Cen & Shakibaei, 2026) The use of AI for language support, such as grammar correction and paraphrasing, as reported by participants, reflects the adoption of technologies perceived as highly usable, in line with the Technology Acceptance Model framework. (Escalante et al., 2023) However, this integration is not without complications, as reliance on these tools is often used to quickly overcome limitations in vocabulary and sentence structure rather than through an in-depth language-learning process.

The level of ethical awareness found was in the moderate category, indicating a basic introduction to concepts such as plagiarism and originality, but this understanding was often superficial. (Uygun, 2025, pp. 1-16) Although participants expressed awareness of the risk of cognitive dependence, there was a striking inconsistency between this theoretical knowledge and their daily practice. (Putri et al., 2026) This indicates a gap between ethics as a moral concept and ethics as a practical practice in academic writing. Many college students feel they are in a gray area due to the absence of clear institutional guidelines, which leads them to interpret the limits of acceptable AI use on their own. (Stone, 2025) This uncertainty is reinforced by the finding that although they tried to use AI responsibly through re-editing, the steps were not always carried out systematically or thoroughly by all participants. (Yang et al., 2024)

In implementing ethical practices, students' strategies differ, reflecting varying levels of critical engagement. Some students demonstrate a higher level of academic responsibility by verifying AI-generated information against external academic sources to ensure its credibility. (Choi et al., 2025, pp. 867-883) This act of verification shows that AI is not blindly accepted as a source of truth, but rather as a raw draft that requires human validation. On the other hand, participants also emphasized the importance of placing AI only as a supporting assistant so that independent thinking remains the main motor in writing. This perspective aligns with the theory of self-regulated learning, in which students must be able to control their use of technology to avoid eroding their intellectual autonomy. (Chiu, 2024) The negotiation between the ease offered by automation and the cognitive effort required to write originally is at the heart of the students' phenomenological experience in this study.

Nevertheless, the most prominent concern in this discussion is the potential decline in critical thinking skills and creativity due to over-reliance on AI. Other participants openly admit that their analytical thinking sometimes weakens when they rely too heavily on AI output to complete complex tasks. (Tahir et al., 2023) This phenomenon suggests a risk that students may miss out on the opportunity to develop arguments in depth because AI provides an instant solution that is structurally satisfying but may lack reflective depth. If AI is used as a substitute for thought processes rather than as a support, then higher education's primary goal of developing critical reasoning will be threatened. (Tian & Zhang, 2026) Therefore, it is important to position AI as an empowering instrument without allowing it to take over full cognitive control from students.

The pedagogical implications of these findings are fundamental: teachers and educational institutions are urged not to ignore the existence of AI but to respond to it with transparent policies. (Noviarini et al., 2026) The need for AI literacy that includes technical understanding and ethical awareness is becoming more urgent so that students can navigate the challenges of the future with academic integrity. (Gustilo et al., 2024) Academic writing curricula need to be adapted to teach how to interact with AI critically, including evaluating information bias and maintaining

the author's original voice amid machine-assisted text. (Wang & Wang, 2025) Overall, while AI offers significant pedagogical benefits in improving the language quality and writing structure of EFL students, its success depends heavily on individuals' ability to strike a balance between technological support and independent intellectual development. The ethical awareness of students must be continuously improved through consistent guidance so that they become not only proficient users of technology, but also responsible academic writers with integrity.

Conclusion

Using a phenomenological and qualitative method, this study looked at EFL students' awareness of and ethical considerations regarding the use of Artificial Intelligence (AI) in academic writing. The findings reveal that AI has become an important supportive tool in students' academic writing practices. The majority of participants reported using AI to generate ideas, correct grammar, paraphrase, organize essays, draft them, and edit them. These findings indicate that AI assists students in overcoming linguistic difficulties, improving writing efficiency, and facilitating the overall writing process.

Additionally, the study demonstrates that EFL students are somewhat aware of the ethical issues associated with the use of AI in academic writing. Participants generally recognized concerns related to plagiarism, academic integrity, originality, and overreliance on AI-generated content. However, the findings also reveal that students' understanding of ethical boundaries remains limited and inconsistently applied in practice. Although many participants attempted to maintain ethical responsibility by editing, personalizing, rewriting, and verifying AI-generated outputs, several students still demonstrated uncertainty regarding appropriate and acceptable uses of AI in academic contexts.

In terms of writing performance, the findings suggest that AI contributes positively to the improvement of grammar accuracy, coherence, organization, and clarity of students' writing. AI was perceived as a practical academic support tool that enhances students' confidence and facilitates the completion of writing tasks more effectively. Nevertheless, the study also identified significant concerns regarding students' overdependence on AI. Excessive reliance on AI was perceived as potentially reducing critical thinking, creativity, independent idea development, and students' cognitive engagement during the writing process.

From a phenomenological perspective, this study highlights the lived experiences of EFL students in negotiating the benefits and challenges of AI-assisted academic writing. Students perceive AI simultaneously as a valuable educational support system and as a source of ethical and cognitive challenges. Therefore, the integration of AI into academic writing practices requires balanced, responsible, and critical use to ensure that technological assistance does not undermine students' intellectual autonomy and academic integrity.

Overall, this study concludes that AI offers substantial pedagogical benefits for EFL academic writing; however, its effective implementation must be accompanied by adequate ethical awareness, AI literacy, and institutional guidance. Consequently, educators and educational institutions are encouraged to establish clear ethical policies, integrate AI literacy into academic writing instruction, and promote responsible AI practices that support students' independent thinking and academic development.

References

- Braun, V., & Clarke, V. (2021). One size fits all? What counts as quality practice in (reflexive) thematic analysis?. *Qualitative research in psychology*, 18(3), 328-352. <https://doi.org/10.1080/14780887.2020.1769238>
- Cen, X., & Shakibaei, G. (2026). Enhancing creative writing through AI-powered co-creation with cognitive and emotional outcomes. *Scientific Reports*. <https://doi.org/10.1038/s41598-025-34416-2>

- Chiu, T. K. (2024). A classification tool to foster self-regulated learning with generative artificial intelligence by applying self-determination theory: A case of ChatGPT. *Educational technology research and development*, 72(4), 2401-2416. <https://doi.org/10.1007/s11423-024-10366-w>
- Choi, W., Bak, H., An, J., Zhang, Y., & Stvilia, B. (2025). College students' credibility assessments of GenAI-generated information for academic tasks: An interview study. *Journal of the Association for Information Science and Technology*, 76(6), 867-883. <https://doi.org/10.1002/asi.24978>
- Crompton, H., & Burke, D. (2023). Artificial intelligence in higher education: the state of the field. *International journal of educational technology in higher education*, 20(1), 1-22. <https://doi.org/10.1186/s41239-023-00392-8>
- Escalante, J., Pack, A., & Barrett, A. (2023). AI-generated feedback on writing: Insights into efficacy and ENL student preference. *International Journal of Educational Technology in Higher Education*, 20(1), 57. <https://doi.org/10.1186/s41239-023-00425-2>
- Feng, X., & Gao, F. The Algorithmic Scaffold: A Phenomenological Study of Artificial Intelligence's Impact on EFL Learners' Higher-Order Thinking Skills through the Lens of Motivational Self-Determination.
- Gustilo, L., Ong, E., & Lapinid, M. R. (2024). Algorithmically-driven writing and academic integrity: exploring educators' practices, perceptions, and policies in AI era. *International Journal for Educational Integrity*, 20(1), 3. <https://doi.org/10.1007/s40979-024-00153-8>
- Jaya, S., & Susyla, D. (2024). Assessing students' perceptions of AI grammar and writing assistance tools: Implications for academic writing instruction. *Teaching English and Language Learning English Journal*, 4(3), 182-190.
- Jeon, E. Y. (2025). Artificial intelligence in ESL/EFL education: Evidence from recent reviews (2024–2025). *International Journal of Learning, Teaching and Educational Research*, 24(10), 509-526. <https://doi.org/10.26803/ijlter.24.10.24>
- Liao, K. C., Peng, C. H., Snell, L., Wang, X., Huang, C. D., & Saroyan, A. (2021). Understanding the lived experiences of medical learners in a narrative medicine course: a phenomenological study. *BMC medical education*, 21(1), 321. <https://doi.org/10.1186/s12909-021-02741-5>
- Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative data analysis*. sage.
- Noviarini, T., Paderan, M. P. C., Fransiska, F. W., Hamdani, Z., & Musiman, M. (2026). Beyond Automated Feedback: An AI-Assisted Pedagogical Framework for Academic Writing in EFL Contexts. *Jurnal Pendidikan Bahasa Inggris Undiksha*, 14(1), 91-101. <https://doi.org/10.23887/jpbi.v14i1.111002>
- Noverica, S. (2026). EFL Students' Perceptions of ChatGPT-Assisted Writing: A Qualitative Study of Idea Generation, Language Support, Confidence, and Critical Use. *Jurnal Pendidikan: Media, Strategi, dan Metode*, 363-372.
- Pasaribu, A. N., Manik, S., Pasaribu, T. K., Sibagariang, R. O., & Saragih, Y. I. (2025). EFL STUDENTS' PERCEPTION OF ETHICAL CONCERNS ON USING CHATGPT IN ACADEMIC WRITING. *English Review: Journal of English Education*, 13(1), 39-46. <https://doi.org/10.25134/erjee.v13i1.11322>
- Putri, F. A., Suratman, S., & Annisah, A. (2026). EFL Students' Functional and Dependency on ChatGPT in EFL Academic Writing. *International Journal of Language Teaching and Education*, 10(1), 323-338. <https://doi.org/10.22437/ijolte.v10i1.56588>
- Stone, B. W. (2025). Generative AI in higher education: Uncertain students, ambiguous use cases, and mercenary perspectives. *Teaching of Psychology*, 52(3), 347-356. <https://doi.org/10.1177/00986283241305398>
- Tahir, M., Jahrir, A. S., Asrifan, A., & Ariatna, A. (2025). Examining the Role of AI-Powered Writing Assistants in Enhancing Critical Thinking in EFL Academic Writing. *JOLLT Journal of Languages and Language Teaching*, 13(4), 1817-1831. <https://doi.org/10.33394/jollt.v13i4.15077>

- Tian, J., & Zhang, R. (2026). Outsourcing thinking to AI? Focused immersion, AI dependency, and the double-edged impact on critical thinking. *Humanities and Social Sciences Communications*. <https://doi.org/10.1057/s41599-026-07153-8>
- Uygun, E. (2026). Clashing AIs: Artificial Intelligence Literacy and Academic Integrity in an EFL Context. *Journal of Academic Ethics*, 24(1), 7. <https://doi.org/10.1007/s10805-025-09676-2>
- Wang, C., & Wang, Z. (2025). Investigating L2 writers' critical AI literacy in AI-assisted writing: An APSE model. *Journal of Second Language Writing*, 67, 101187. <https://doi.org/10.1016/j.jslw.2025.101187>
- Yang, H., Gao, C., & Shen, H. Z. (2024). Learner interaction with, and response to, AI-programmed automated writing evaluation feedback in EFL writing: An exploratory study. *Education and Information Technologies*, 29(4), 3837-3858. <https://doi.org/10.1007/s10639-023-11991-3>

Empty Page