

Research Article

Exploring EFL Students' Perceptions of 'Perplexity' AI Use and Abuse in Indonesia

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Abstract

This study investigates English Education students' perceptions of the use and potential abuse of Perplexity, an AI-based platform, in completing academic assignments. Employing a quantitative survey design, the study used a self-administered questionnaire consisting of 12 items measured using a five-point Likert scale. Data were obtained from 34 students at an Islamic Institute in Jambi Province, Indonesia. The instrument was validated by experts and tested for reliability using KMO, Bartlett's Test, EFA, and Cronbach's Alpha. The results indicate that students exhibit a strong awareness of ethical and academic implications in using Perplexity AI. Most participants acknowledged that while the tool enhances learning efficiency, excessive reliance may hinder creativity, critical thinking, and academic honesty. Students perceived Perplexity as both beneficial and potentially problematic if misused. The study underscores the need for Islamic higher education institutions to develop comprehensive AI ethics guidelines, integrate digital literacy and moral instruction into curricula, and promote responsible, value-based AI use that aligns technological advancement with academic integrity.

Keywords: *artificial intelligence, perplexity, academic integrity, digital literacy, ethical awareness*

Abstrak

Penelitian ini menelaah persepsi mahasiswa Pendidikan Bahasa Inggris terhadap penggunaan dan potensi penyalahgunaan Perplexity, sebuah platform berbasis kecerdasan buatan (AI), dalam menyelesaikan tugas akademik. Penelitian ini menggunakan pendekatan kuantitatif dengan desain survei, dengan instrumen berupa kuesioner self-administered yang terdiri dari 12 butir pernyataan menggunakan skala Likert lima poin. Melibatkan 34 mahasiswa di salah satu Institut Islam di Provinsi Jambi, Indonesia. Instrumen divalidasi oleh pakar dan diuji reliabilitasnya menggunakan KMO, Bartlett's Test, EFA, dan Cronbach's Alpha. Hasil penelitian menunjukkan bahwa mahasiswa memiliki kesadaran tinggi terhadap implikasi etis dan akademik dalam penggunaan Perplexity AI. Sebagian besar responden mengakui bahwa meskipun alat ini meningkatkan efisiensi pembelajaran, ketergantungan berlebihan dapat menghambat kreativitas, berpikir kritis, dan kejujuran akademik. Mahasiswa memandang Perplexity sebagai alat yang bermanfaat namun berpotensi disalahgunakan. Penelitian ini menegaskan pentingnya bagi perguruan tinggi Islam untuk mengembangkan pedoman etika AI, mengintegrasikan literasi digital dan pendidikan moral ke dalam kurikulum, serta mendorong penggunaan AI yang bertanggung jawab dan berlandaskan nilai-nilai akademik dan keagamaan.

Kata Kunci: *kecerdasan buatan, perplexity, integritas akademik, literasi digital, kesadaran etis*

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Introduction

In the modern digital era, the growth of digital technology has rapidly transformed many aspects of everyday life, particularly in the field of education. The emergence of artificial intelligence (AI) has provided students and educators with new tools that help them access information, interact with learning materials, and complete academic assignments more efficiently. One such tool that has recently gained popularity among students is Perplexity, an AI-based platform designed to help users find quick and relevant answers to their academic needs, and also provides relevant references from various sources. In many ways, AI like Perplexity is seen as a breakthrough in educational support. Pitra et al. (2024) found that students perceive Perplexity as a useful tool that assists in understanding course material and completing assignments more efficiently, particularly due to its instant-response capability. Similarly, AI can tailor learning experiences to meet the individual needs of students and accommodate diverse learning styles (Reiss, 2021). In line with this, Aulia et al. (2023) argued that students have also expressed positive attitudes toward other educational technologies. For instance, found that Mobile Assisted Language Learning (MALL) was perceived as both useful and easy to use.

Although AI tools are useful, their increasing use in academic settings has raised several concerns. For example, some students may become overly dependent on AI when completing assignments, which could weaken their ability to think critically or solve problems independently. Schei et al. (2024) found that although students view AI as a helpful tool, they simultaneously worry about its effects on creativity, deep learning, and ethical boundaries. Research by Lund et al. (2023) indicates that the absence of clear institutional policies regarding the use of AI in higher education has created confusion and raised ethical concerns among educators, especially regarding academic dishonesty.

Further emphasizes the importance of educator involvement, asserting that teachers must play an active role in guiding the integration of AI in classrooms to ensure it supports, rather than replaces, meaningful learning processes (Tan & Maravilla, 2024). Kasneci et al. (2023) highlight that while large language technology can enhance student engagement and deliver personalized learning experiences, its ethical use demands human oversight, critical thinking, and competencies to navigate biases and risks of abuse. Similarly, Xu and Ouyang (2022) propose a framework describing AI as a supplementary assistant, a mediator, and potentially even a replacement for instructors, emphasizing the need for ethical awareness among students. Without clear guidance and proper understanding, students may unintentionally abuse AI tools in a manner that violates academic integrity.

Moreover, the use of AI in education also raises concerns regarding academic integrity, critical thinking, and the potential for abuse. Johri et al. (2024) emphasized that many students hold mixed and sometimes inaccurate perceptions of generative AI, raising concerns about overreliance and learning autonomy. Furthermore, Grájeda et al., (2024) observed that students' emotional responses to AI in educational contexts

range from enthusiasm to anxiety, particularly when facing ethical dilemmas in using such tools.

Although numerous studies have explored the benefits and challenges of AI in education, no prior research has specifically examined students' perceptions of the potential abuse of Perplexity, an emerging AI tool in the Indonesian higher education context. Perplexity AI is an AI-powered search engine that enables students to access and evaluate information through real-time retrieval and cited web sources (Rahmawati & Inayati, 2024). It has become increasingly popular in higher education, as students find the tool helpful for completing assignments and improving their writing performance (Lubis & Hz, 2024). Despite its benefits, the ethical boundaries and potential misuse of Perplexity in academic work remain underexplored, particularly within Islamic higher education settings.

According to Chan and Hu (2023) Generative AI offers benefits such as more personalized learning, faster access to information, and improved digital literacy. However, Kasneci et al. (2023) highlight risks including overreliance, breaches of academic integrity, bias, and privacy concerns. Despite the growing body of research on AI tools, most existing studies have concentrated on widely used systems such as ChatGPT or Bard and have been conducted primarily in Western higher education environments. Consequently, ethical implications and academic integrity issues related to Perplexity remain underexplored, particularly in non-Western Islamic universities where moral and religious principles play an essential role in shaping academic conduct. This research gap reveals a limited understanding of how students define the boundaries between legitimate use and abuse of Perplexity, as well as how they perceive the ethical risks and academic consequences of depending on such tools. Furthermore, the intersection between digital literacy, academic responsibility, and religious values in Islamic educational contexts has rarely been addressed in previous studies. Therefore, addressing this gap is crucial to provide context-sensitive insights into the responsible and ethical use of AI in Indonesian higher education, especially within institutions where faith-based principles are deeply embedded in academic life.

By concentrating on English Education students at an Islamic Institute in Jambi Province, Indonesia, this study contributes new empirical insights into a unique academic environment where digital literacy, religious values, and academic integrity converge. The novelty of this study lies in its exclusive focus on Perplexity AI, a less-studied platform compared to ChatGPT within the context of Islamic higher education, which has rarely been addressed in prior literature. Unlike previous studies that primarily examined students' perceptions of AI use in general or within Western contexts, this research highlights both the use and potential abuse of Perplexity as perceived by EFL students, thus filling an important conceptual and contextual gap in AI ethics and academic integrity studies. Moreover, the integration of faith-based ethical perspectives into the analysis adds a distinct contribution to the understanding of responsible AI use in educational settings, particularly in Islamic institutions that emphasize moral accountability and honesty in learning. According to Chan and Hu (2023), students' perceptions toward generative AI reflect complex balances of promise and concern, emphasizing the

need for context-sensitive research into academic integrity, digital competence, and institutional policy frameworks.

Therefore, this study aimed to explore the perceptions of English Education students at an Islamic Institute in Jambi Province, Indonesia, regarding the use and potential abuse of Perplexity, an AI-based tool, in the completion of academic assignments. As AI continues to shape the landscape of higher education, it becomes increasingly important to understand how students view and interact with such technology, whether as a tool for learning or as a shortcut that might compromise academic integrity. By delving into their perspectives, this research sought not only to highlight current usage trends but also to uncover underlying attitudes, ethical concerns, and possible misconceptions related to AI in academic settings. The insights gained from this study are expected to be valuable for educators, academic policymakers, and institutions in crafting informed strategies, guidelines, and educational interventions that promote the responsible and ethical use of AI tools like Perplexity. Ultimately, the goal is to foster an academic environment that balances innovation with integrity, ensuring that technological advancement supports rather than undermines the core values of education. To achieve these objectives, the study sought to answer the following research questions: (1) What are the students' perceptions of the abuse of "Perplexity" AI? and (2) What are the students' perceptions of the use of "Perplexity" AI in completing academic assignments?

Method

This study employed a quantitative approach with a survey design to address the research questions. A survey was chosen because it is widely regarded as an effective method in educational research, providing a systematic way to collect data from individuals and enabling researchers to generalize findings to a larger population (Cresswell, 2022). Surveys offered several advantages: they are practical, cost-effective, standardized, and allow for rapid and systematic data collection (Ranganathan & Caduff, 2023). The quantitative approach was appropriate because it allows for the analysis of numerical data to describe patterns, test hypotheses, and examine relationships among variables. In quantitative research, describing patterns involves using descriptive statistics such as means, frequencies, and standard deviations to identify trends, distributions, and variations in data, providing a clear picture of the phenomenon before further analysis. It followed by hypotheses employs statistical analyses such as t-tests, ANOVA, or regression to verify whether predicted relationships or differences are statistically significant, and examining relationships uses methods like correlation and regression to measure the strength, direction, and possible causal links between variables (Cresswell, 2022).

The population in this study consisted of second and fourth-semester students from the English Education Department at an Islamic Institute in Jambi Province. A total of 34 students participated in 66this research, consisting of 10 males and 24 females aged between 18 and 21 years. The participants were selected through purposive sampling, a non-probability technique that enables researchers to select individuals based

on specific inclusion criteria relevant to the research objectives (Sugiyono, 2017). The primary criterion for inclusion was that students must have experience using Perplexity AI to complete academic assignments. This ensured that all respondents could provide meaningful and informed insights based on actual experiences. Prior to participation, students were informed about the study's objectives and confidentiality procedures, and their participation was entirely voluntary, with informed consent obtained.

The main research instrument was a structured questionnaire developed based on a comprehensive review of theoretical frameworks and previous studies on the use of artificial intelligence in education, academic ethics, and digital literacy (Kasneci, 2023; Yeo, 2023). The initial questionnaire consisted of 15 statement items grouped into two main constructs: (1) students' perceptions of the abuse of Perplexity AI in completing academic assignments, and (2) students' perceptions of the ethical and responsible use of Perplexity AI in academic contexts. To ensure content validity, the instrument was first evaluated by two experts one in educational technology and the other in research methodology. Each expert assessed the relevance, clarity of wording, and appropriateness of indicators in relation to the research objectives using a four-point scale (1 = not relevant to 4 = highly relevant). The Content Validity Index (CVI) was calculated for each item, and items scoring below 0.75 were revised and refined based on expert feedback to improve conceptual clarity and alignment. Subsequently, a pilot test was conducted with five students outside the main sample to examine the readability, comprehensibility, and completion time of the questionnaire. The results of the pilot test indicated that all items were clearly understood, and the average time required to complete the questionnaire was approximately ten minutes.

Table 1. Summary of Instrument Validation and Reliability

Analysis	Criteria	Result	Conclusion
Initial Instrument Development	–	15 items developed (2 constructs)	Proceed to validation
Content Validity	CVI \geq 0.75	All items \geq 0.75	All items valid
KMO & Bartlett's Test	\geq 0.60. Sig. < .05	.648 (Abuse), .703 (Use). P= .000	Sampling adequate Factorable data
Exploratory Factor Analysis (EFA)	Factor Loading \geq .40	3 items removed (< .40)	12 items retained, 2-factor structure confirmed
Communalities	\geq .50	.550- .806	Acceptable
Total Variance Explained	\geq 50%	66.515%	Good construct validity-
Corrected Item-Total Correlation (CITC)	\geq .30	All \geq .30	Items consistent
Cronbach's Alpha	\geq .60	.732 (Abuse), .679 (Use)	Reliable

Table 1 shows that the overall validation and reliability process met the recommended statistical criteria. All items passed the content validity check ($CVI \geq 0.75$). KMO values (.648 for Abuse; .703 for Use) and Bartlett's Test ($p < .000$) confirmed that the data were appropriate for factor analysis. EFA supported the expected two-factor structure, and three items with low loadings were removed, resulting in 12 valid items. The communality values and total variance explained (66.515%) indicated acceptable construct representation. Cronbach's Alpha values (.732 for Abuse; .679 for Use) also demonstrated acceptable internal consistency for exploratory research. Thus, the instrument is considered valid and reliable for measuring students' perceptions of Perplexity AI. The questionnaire employed a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

Data collection was conducted in June 2025 after obtaining permission from the Head of Department and class coordinators. The questionnaire was distributed via a Google Form link shared in targeted WhatsApp groups. Responses were coded numerically (1–5), compiled in Excel, and analyzed in SPSS 21 using descriptive statistics to present the percentage distribution of students' perceptions regarding the abuse of Perplexity AI in completing assignments.

Results

This section outlines the findings derived from a self-designed questionnaire designed by the researcher to assess students' perceptions of the abuse of "Perplexity" in completing assignments. To address the research questions, the percentage distribution of responses for each scale item was calculated.

Students' perceptions of the abuse of "Perplexity" AI

In this study, students' perceptions of an abuse of "Perplexity" AI were analyzed based on 6 questionnaire items. The responses were collected using a five-point Likert scale, consisting of "Strongly Disagree (SD)", "Disagree (D)", "Neutral (N)", "Agree (A)", and "Strongly Agree (SA)".

Table 2. Students' Perceptions of the Abuse of "Perplexity" AI

Items	Percentage				
	SD	D	N	A	SA
I realized that Perplexity abuse in completing academic assignments is a serious problem.	0%	5.88%	32.35%	52.94%	8.82%
I learned that many students use Perplexity in completing academic assignments in an unethical way.	2.94%	2.94%	20.59%	55.88%	17.65%
I realized that using Perplexity to complete academic assignments without understanding the material is wrong.	0%	8.82%	35.29%	50%	5.88%
I understand the ethical importance of using Perplexity in completing academic assignments.	0%	5.88%	11.76%	70.59%	11.76%
I realize that using Perplexity should be done honestly and responsibly.	0%	2.94%	29.41%	55.88%	11.76%

Items	Percentage				
	SD	D	N	A	SA
I understand that there are ethical limits to using Perplexity in completing academic assignments.	0%	0%	32.35%	58.82%	8.82%

Table 2 shows that the majority of students demonstrated a high level of awareness regarding the potential abuse of the AI tool "Perplexity" in completing academic assignments. Over 50% of respondents selected the "Agree" category on all six items, indicating their understanding of various ethical aspects and the negative consequences of relying excessively on AI.

The results indicate strong ethical awareness among students in using Perplexity AI. More than 70% of respondents acknowledged the importance of using AI responsibly, and over half recognized that unethical use of Perplexity may undermine academic integrity. Meanwhile, a considerable proportion of students also expressed cautious or uncertain attitudes, which suggests awareness of the potential risks associated with excessive dependence on AI tools. Overall, these findings highlight that students are not only aware of the benefits of AI but also recognize the risks associated with its abuse, particularly in terms of academic integrity and the development of independent learning skills.

Students' perceptions of using "Perplexity" AI in completing academic assignments

This section presents an analysis of respondents' perceptions regarding the completion of students' assignments, based on six questionnaire items. These perceptions were measured using a five-point Likert scale, consisting of the options: "Strongly Disagree (SD)", "Disagree (D)", "Neutral (N)", "Agree (A)", and "Strongly Agree (SA)".

Table 3. Students' Perceptions of Use of "Perplexity" AI

Items	Percentage				
	SD	D	N	A	SA
I am aware that the use of Perplexity can reduce students' ability to complete academic assignments.	0%	2.94%	20.59%	73.53%	2.94%
I am aware that the use of Perplexity in completing academic assignments can reduce creativity in developing new ideas.	0%	5.88%	23.53%	61.76%	8.82%
I am aware that the overuse of Perplexity in completing academic assignments can make students lose the ability to construct their own arguments.	0%	20.59%	20.59%	61.76%	8.82%
I find that the use of Perplexity decreases the quality of academic assignments.	2.94%	26.47%	44.12%	20.59%	5.88%
I realized that the assignments created using Perplexity were worse than those created without the help of Perplexity.	2.94%	29.41%	41.18%	17.56%	8.82%

Items	SD	Percentage			
		D	N	A	SA
I lacked confidence when explaining the material because the assignments I created using 'Perplexity'.	0%	26.47%	41.18%	26.47%	5.88%

Table 3 shows that the majority of students agreed or felt neutral about the statements regarding Perplexity's impact. Specifically, three items had predominantly "Agree" responses: awareness that Perplexity use can reduce students' ability to complete assignments independently (73.53%), creativity in developing ideas (61.76%), and constructing original arguments (61.76%). Conversely, three items showed. Higher "Neutral" responses: perceived decrease in assignment quality (44.12%), assignments created with Perplexity being worse than those without it (41.18%), and lack of confidence explaining Perplexity-generated work (41.18%). These findings indicate that while many students recognize the potential negative academic effects of overusing Perplexity, some remain uncertain or ambivalent about its impact on quality and confidence.

Discussion

Ethical awareness and theoretical foundation

The findings of this study revealed that students generally held a high level of awareness regarding the ethical and academic implications of using Perplexity AI in completing assignments. This aligns with previous research showing that students tend to adopt a cautious and reflective stance toward generative AI tools, recognizing both their advantages and potential risks (Chan & Hu, 2023; Lund, 2023). The participants in this study demonstrated an understanding that while Perplexity AI can enhance efficiency and access to information, its misuse may undermine originality, critical thinking, and academic integrity. This result underscores the importance of cultivating ethical literacy and moral responsibility in the use of digital technologies.

This awareness is consistent with the Theory of Planned Behavior (TPB), which posits that individuals' behaviors are shaped by their attitudes, subjective norms, and perceived behavioral control (Ajzen, 1991). However, recent studies have shown that TPB becomes more effective when expanded to include moral and contextual variables in predicting ethical behavior. Juan et al., (2022) extended TPB to explain academic dishonesty, finding that moral obligation and self-control significantly strengthen the predictive validity of the model. Similarly, Ivanov et al. (2024) applied TPB to understand students' acceptance of AI tools, revealing that perceived usefulness, social norms, and personal responsibility strongly influence ethical decision-making in digital contexts. In line with this, Zhang et al. (2024) found that students' willingness to adopt AI in language learning is not only determined by technological convenience but also by institutional and cultural expectations. This is also consistent with Johnston et al. (2024), who emphasized that moral behavior in technology use within higher education cannot be separated from institutional norms and ethical accountability frameworks that guide academic conduct.

Moral responsibilities in Islamic higher education

In the present study, students' decisions to use Perplexity AI responsibly appear to be influenced by both individual attitudes toward technology and the normative expectations of their academic and religious environment. This finding reinforces the argument by Kasneci et al. (2023) that ethical AI adoption in education must balance personal responsibility with institutional and cultural values. Within Islamic higher education, this manifests as an internalization of ethical boundaries grounded in moral and spiritual principles. Furthermore, the results indicate that students perceived clear distinctions between legitimate and illegitimate uses of AI tools. This is consistent with Johri et al. (2024), who argued that the integration of AI in education requires the cultivation of moral literacy and awareness of digital ethics. The high mean scores related to honesty and responsibility suggest that students' ethical awareness is strongly shaped by Islamic educational values, where learning is viewed not merely as cognitive development but also as a moral obligation. This aligns with the perspective of Alghamdi (2024), who emphasized that in Islamic education, technological advancement must always be harmonized with ethical reflection and accountability. Similarly, Nelson et al. (2025) highlighted that integrating moral reasoning into digital learning environments strengthens students' awareness of ethical boundaries, particularly in faith-based institutions.

However, the results should be interpreted cautiously due to the small and homogeneous sample, which consisted only of English Education students from a single Islamic institution. Their perceptions may differ from students in other study programs, secular universities, or institutions with more advanced digital infrastructure. In addition, while students expressed generally positive attitudes toward the integration of Perplexity AI, institutional policies that regulate ethical AI use may not yet be fully developed or consistently implemented. This mismatch between students' readiness to adopt AI tools and the limited institutional policy support highlights a potential gap that needs to be addressed to ensure responsible and value-aligned AI practices in higher education.

Implications for responsible AI use

Students' acknowledgment of the risks associated with overreliance on AI supports Reiss' (2021) claim that excessive dependence on digital tools can reduce students' creativity and independent thinking. The ambivalence toward Perplexity AI as both a supportive learning tool and a potential source of dependency mirrors global concerns about how AI may affect students' cognitive autonomy. This aligns with the Holmes et al. (2022), who argue that higher education must prioritize the development of critical AI literacy so that students can understand when and how the use of AI may become unethical or counterproductive. Similarly, Upara (2023) argued that unregulated use of AI in academic writing risks diminishing authentic learning experiences and undermining the integrity of assessment systems in higher education. This study also expands on prior research by introducing the concept of AI abuse within an Islamic higher education context, a dimension rarely examined in existing literature. The dual conceptualization of "use" and "abuse" offers a more nuanced understanding of students' ethical positioning toward AI tools. While previous research has predominantly focused on the pedagogical advantages of AI (Aulia & Indrayadi, 2023; Lund et al, 2023). This study

highlights the ethical dilemmas that arise when technological tools are employed beyond their intended academic purposes.

In theoretical terms, these findings highlight the necessity of integrating ethical awareness, digital literacy, and religious values into discussions about AI in higher education. By situating AI use within the framework of extended TPB and Islamic ethical principles, this study contributes to a more comprehensive understanding of how moral reasoning, social norms, and perceived control interact in shaping students' responsible behavior. Practically, the results suggest that educational institutions, particularly Islamic universities, should establish AI ethics policies and awareness programs to guide students in using tools like Perplexity responsibly. Such initiatives may foster balanced digital competence by encouraging students to view AI not as a replacement for human reasoning, but as a complementary tool that enhances learning within ethical and spiritual boundaries.

Conclusion

This study found that English Education students were generally aware of both the ethical risks and the academic advantages of using Perplexity AI in completing assignments. They recognized that irresponsible or excessive reliance on AI may reduce creativity, weaken independent problem-solving, and lead to academic dishonesty. At the same time, they acknowledged that Perplexity AI can support learning by providing quick access to information and improving the efficiency of completing academic tasks. These findings indicate a balanced perception in which students appreciate AI as a helpful tool but remain cautious about its potential misuse and its impact on academic integrity.

These findings show that students are aware of the ethical limits and potential abuse of AI tools in academic work. In light of these findings, the results highlight important implications for Islamic higher education contexts. Institutions are encouraged to develop clear policies, integrate discussions of academic integrity and responsible AI use into curricula, and promote balanced approaches that harness AI's benefits while safeguarding core values. At the same time, the results imply that students need to build critical thinking, self-discipline, and ethical awareness so AI becomes a support tool rather than a substitute for learning, while teachers and lecturers are encouraged to adapt their teaching strategies, integrate guidance on ethical AI use, and serve as role models in promoting responsible and innovative technology use.

This study highlights that while Perplexity AI can support English education students in completing academic assignments more efficiently, it also invites ethical concerns when used irresponsibly. Students acknowledged the importance of critical thinking, academic honesty, and ethical awareness in maintaining integrity during the use of AI tools. To strengthen responsible AI adoption in education, several practical recommendations are proposed. First, higher education institutions should establish explicit AI ethics policies, including rules for proper citation, transparency of AI assistance, and limits on the extent to which AI can support academic work. Second, digital literacy and ethical awareness programs must be embedded into curricula to

help students understand risks such as dependency, plagiarism, and reduced independent learning. Third, lecturers should be equipped with training to monitor AI-assisted learning and serve as role models for responsible AI use. Finally, universities may adopt supportive monitoring technologies that ensure AI is used to enhance, rather than replace, students' learning outcomes.

Although this study is limited by its small, homogeneous sample of 34 English education students from a single Islamic university, which may restrict the generalizability of the findings, it contributes a culturally specific perspective to the global discussion on AI-in-3education. The findings highlight the underexplored importance of aligning AI development with moral and religious values in non-Western higher education, an overlooked dimension in current literature. To strengthen external validity, future research should include participants from multiple disciplines and institutions, use more diverse data collection methods (e.g., interviews, observations), and evaluate the effectiveness of digital literacy training and ethical guideline implementation. Overall, this study positions the ethical integration of Perplexity AI as a critical component of the broader global AI in education debate, emphasizing the urgency of developing value-aligned AI policies and practices in academic settings.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211. DOI: [10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Alghamdi, A. H. (2024). Leadership in Islamic education: Integrating ethical values in the digital age. *International Journal of Social and Human*, 1(2), 136–143. <https://doi.org/10.59613/ecwa6z62>
- Aulia, D. F., & Indrayadi, T. (2023). EFL Students' Perception of MALL for Pronunciation Proficiency. *Journal Educative: Journal of Educational Studies*, 8(1), 01. <https://doi.org/10.30983/educative.v8i1.6213>
- Chan, C. K. Y., & Hu, W. (2023). Students' voices on generative AI: perceptions, benefits, and challenges in higher education. *International Journal of Educational Technology in Higher Education*, 20(1). <https://doi.org/10.1186/s41239-023-00411-8>
- Cresswell, J. W. and C. J. D. (2022). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (6th ed.). SAGE Publications.
- Grájeda, A., Córdova, P., Córdova, J. P., Laguna-Tapia, A., Burgos, J., Rodríguez, L., Arandia, M., & Sanjinés, A. (2024). Embracing artificial intelligence in the arts classroom: understanding student perceptions and emotional reactions to AI tools. *Cogent Education*, 11(1). <https://doi.org/10.1080/2331186X.2024.2378271>
- Holmes, W., Bialik, M., & Fadel, C. (2022). *Artificial intelligence in education: Promises and implications for teaching and learning*. Center for Curriculum Redesign. <https://curriculumredesign.org/wp-content/uploads/AI-in-Education-CCR.pdf>
- Ivanov, S., Soliman, M., Tuomi, A., Alkathiri, N. A., & Al-Alawi, A. N. (2024). Drivers of generative AI adoption in higher education through the lens of the Theory of Planned Behaviour. *Technology in Society*, 77, 102521. <https://doi.org/10.1016/j.techsoc.2024.102521>
- Johnston, H., Wells, R. F., Shanks, E. M., Boey, T., & Parsons, B. N. (2024). Student perspectives on the use of generative artificial intelligence technologies in higher education. *International Journal for Educational Integrity*, 20(1). <https://doi.org/10.1007/s40979-024-00149-4>
- Johri, A., Hingle, A., & Schleiss, J. (2024). Misconceptions, Pragmatism, and Value Tensions: Evaluating Students' Understanding and Perception of Generative AI for Education.
- Juan, L. X., Wu, T. Y., Veloo, P. K., & Supramaniam, M. (2022). Using extended TPB models to predict dishonest academic behaviors of undergraduates in a Chinese public university. *SAGE Open*, 12(4), 1–15.

- <https://doi.org/10.1177/21582440221140391>
- Kasneci, E.; Sessler, K.; Kuchemann, S.; Bannert, M.; Dementieva, D.; Fischer, F.; Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*, 103, 102274.
- Lund, B., Mannuru, N. R., Teel, Z. A., Lee, T. H., Ortega, N., Simmons, S., & Ward, E. (2025). Student Perceptions of AI-Assisted Writing and Academic Integrity: Ethical Concerns, Academic Misconduct, and Use of Generative AI in Higher Education. *Preprints*. <https://doi.org/10.20944/preprints202507.1882.v1>
- Nelson, A. S., Santamaria, P. V., Javens, J. S., & Ricaurte, M. (2025). Students' Perceptions of Generative Artificial Intelligence (GenAI) Use in Academic Writing in English as a Foreign Language†. *Education Sciences*, 15(5). <https://doi.org/10.3390/educsci15050611>
- Pitra, A., Purnama, S., Kartika Putra, T., Arifin, A., & Azizah, S. (2024). Exploration Of Students' and Lecturers' Perceptions Towards the Utilization of Generative Artificial Intelligence. *Journal of English Language Learning (JELL)*, 8(2), 650–667.
- Rahmawati, S., & Inayati, N. L. (2024). Utilization of artificial intelligence (AI) Perplexity as a digital literacy tool for Islamic Religious Education students. *Iseedu Journal of Islamic Educational Thoughts and Practices*, 8(2), 205–214. <https://doi.org/10.23917/iseedu.v8i2.9001>
- Ranganathan, P., & Caduff, C. (2023). Designing and validating a research questionnaire - Part 1. *Perspectives in Clinical Research*, 14(3), 152–155. https://doi.org/10.4103/picr.picr_140_23
- Reiss, M. J. (2021). The use of AI in education: Practicalities and ethical considerations. *London Review of Education*, 19(1), 1–14. <https://doi.org/10.14324/LRE.19.1.05>
- Schei, O. M., Møgelvang, A., & Ludvigsen, K. (2024). Perceptions and Use of AI Chatbots among Students in Higher Education: A Scoping Review of Empirical Studies. In *Education Sciences* (Vol. 14, Issue 8). Multidisciplinary Digital Publishing Institute (MDPI). <https://doi.org/10.3390/educsci14080922>
- Sugiyono. (2017). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Alfabeta.
- Tan, M. J. T., & Maravilla, N. M. A. T. (2024). Shaping integrity: why generative artificial intelligence does not have to undermine education. In *Frontiers in Artificial Intelligence* (Vol. 7). Frontiers Media SA. <https://doi.org/10.3389/frai.2024.1471224>
- Upa, S. (2023). From Real World to Classroom/2: *Navigating English Language Learning through Autonomy-Supportive Instruction and Out-of-Class Resources in Thai EFL Context*. <https://www.researchgate.net/publication/372761218>
- Lubis, C.U., & Rahman Hz, B. I. (2024). Perplexity AI on the writing efficiency of EFL students in higher education: Students' insight. *ENGLISH FRANCA*, 8(1), 167–178. <https://doi.org/10.29240/ef.v8i1%20May.9982>
- Xu, W., & Ouyang, F. (2022). The application of AI technologies in STEM education: a systematic review from 2011 to 2021. In *International Journal of STEM Education* (Vol. 9, Issue 1). Springer Science and Business Media Deutschland GmbH. <https://doi.org/10.1186/s40594-022-00377-5>
- Yeo, M. A. (2023). Academic integrity in the age of Artificial Intelligence (AI) authoring apps. *TESOL Journal*, 14(3), e716.
- Zhang, S., Zhao, X., Zhou, T., & Kim, J. H. (2024). Do you have an AI dependency? The roles of academic self-efficacy, academic stress, and performance expectations on problematic AI usage behavior. *International Journal of Educational Technology in Higher Education*, 21(1). <https://doi.org/10.1186/s41239-024004670>