

FRIEND OR FRAUD? EXPLORING FOREIGN LANGUAGE STUDENTS' AWARENESS OF AI-GENERATED CONTENT

Sitti Aminah¹, Akmal², Atmaranie Dewi Purnama³

^{1,2,3}Universitas Islam Ahmad Dahlan, Sinjai, Indonesia

Author's correspondence. E-mail: sittiaminah.uiad@gmail.com

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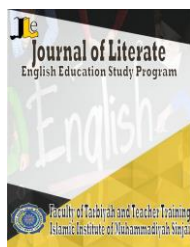
Abstract

This study aims to explore the awareness of students majoring in Arabic Language Education and English Language Education at Ahmad Dahlan Islamic University, Sinjai, regarding content generated by artificial intelligence (AI). In today's digital era, many students utilize AI tools to complete academic assignments, but not all are aware of the difference between human-generated and machine-generated content. This study employed a quantitative method with a survey approach, involving 42 students. Data were collected through online questionnaire with Likert scale and were analyzed using descriptive statistical techniques, including mean scores and percentage distributions. The result showed that students were quite familiar with the use of AI, especially for translation and grammar correction purposes. However, their level of awareness in critically evaluating AI-generated content, especially in distinguishing between human and machine-generated writing, was in the moderate category. From an ethical perspective, most respondents expressed a positive attitude towards the responsible use of AI in learning and rejected academic dishonesty practices involving the unethical use of AI content. These results suggest that while AI functions as a “friend” by assisting language learning, it also has the potential to become a “fraud” when students lack sufficient critical awareness and ethical guidance. Overall, this study concludes that the role of AI in foreign language education depends largely on students' critical awareness, ethical attitudes, and institutional guidance. Strengthening critical digital literacy and establishing clear academic policies are therefore essential to ensure responsible AI integration.

Keywords: artificial intelligence; AI content; student awareness; digital literacy; foreign language learning

Abstrak

Penelitian ini bertujuan untuk mengeksplorasi kesadaran mahasiswa jurusan Pendidikan Bahasa Arab dan Pendidikan Bahasa Inggris di Universitas Islam Ahmad Dahlan, Sinjai, mengenai konten yang dihasilkan oleh kecerdasan buatan (AI). Di era digital saat ini, banyak mahasiswa menggunakan alat AI untuk menyelesaikan tugas akademik, tetapi tidak semua menyadari perbedaan antara konten yang dihasilkan manusia dan yang dihasilkan mesin. Penelitian ini menggunakan metode kuantitatif dengan pendekatan survei, yang melibatkan 42 mahasiswa. Data dikumpulkan melalui kuesioner daring dengan skala Likert dan dianalisis menggunakan teknik statistik deskriptif, termasuk skor rata-rata dan distribusi persentase. Hasil menunjukkan bahwa mahasiswa cukup familiar dengan penggunaan AI, terutama untuk tujuan penerjemahan dan koreksi tata bahasa. Namun, tingkat kesadaran mereka dalam mengevaluasi secara kritis konten yang dihasilkan AI—terutama dalam membedakan antara tulisan yang dihasilkan manusia dan yang dihasilkan mesin—berada dalam kategori sedang. Dari perspektif etika, sebagian besar responden menyatakan sikap positif terhadap penggunaan AI yang bertanggung jawab dalam pembelajaran dan menolak praktik kecurangan akademik yang melibatkan penggunaan konten AI yang tidak etis. Hasil ini menunjukkan bahwa meskipun AI berfungsi sebagai “kawan” dengan membantu pembelajaran bahasa, AI juga



berpotensi menjadi “lawan” ketika mahasiswa kurang memiliki kesadaran kritis dan bimbingan etika yang memadai. Secara keseluruhan, studi ini menyimpulkan bahwa peran AI dalam pendidikan bahasa asing sangat bergantung pada kesadaran kritis siswa, sikap etis, dan bimbingan institusional. Oleh karena itu, penguatan literasi digital kritis dan penetapan kebijakan akademik yang jelas sangat penting untuk memastikan integrasi AI yang bertanggung jawab.

Kata kunci: kecerdasan buatan; konten AI; kesadaran siswa; literasi digital; pembelajaran bahasa asing

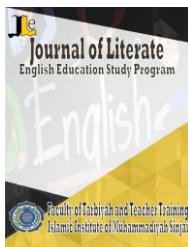
1. Introduction

The integration of technology into language learning has become increasingly prevalent in the 21st century, a time characterized by rapid digital advancement. Digital technologies have transformed how people conduct research, communicate, and engage in professional activities, with computers or smartphones now embedded in everyday life (Sabaruddin et al., 2024). These developments offer significant opportunities and benefits for improving access to information and enhancing learning efficiency across educational contexts globally (Suharti & Sutikno, 2019). Fauzi et al. in Sabaruddin et al. (2024) highlight that technological progress in recent decades has significantly influenced various aspects of human life including Education.

One of the most influential technological developments in contemporary education is the emergence of artificial intelligence (AI). As a branch of computer science aimed at addressing human cognitive challenges, AI has been extensively explored in educational research, particularly in language learning (Laili et al., 2025). Previous studies have generally reported that AI-based tools can support language learning by providing instant feedback, facilitating translation, assisting learner in writing tasks. It is in line with the statement of Qiao and Zhao that the development of artificial intelligence (AI) technology has had a significant impact on various aspects of human life, including education. The use of information technology in education has revolutionized the approach to learning, with portable computer devices now commonly used in educational institutions (Qiao & Zhao, 2023). According to the Technological Pedagogical Content Knowledge (TPACK) framework, the integration of new technologies in education requires not only technical knowledge but also pedagogical and content-related considerations. In this context, AI tools raise questions about instructional integrity and the shifting role of students and educators in meaning-making (Mishra & Koehler, 2006).

The rapid development of generative AI tools, such as ChatGPT, Google Gemini, or Bing Copilot has further intensified these challenges. These tools can produce coherent and sophisticated text that closely resemble human writing including academic essays and language learning materials. In the context of foreign language learning, particularly Arabic and English as foreign languages at the university level, the presence of this technology presents a unique dilemma: while these tools can function as a helpful learning assistant, they can also be potentially ruining the learning authenticity and academic integrity if used uncritically.

The dilemma is particularly relevant for students enrolled in the Arabic Language Education and English Language Education Study Programs at Ahmad Dahlan Islamic University. Like students in general, they are situated within the accelerating flow of technological development, where efficiency and convenience often compete with independent thinking and skill development (Ali et al., 2024; Premkumar et al., 2024; Torun & Özer Şanal, 2025). At the same time, lecturers and educational institutions frequently face limitation to distinguish between original student work and AI-generated work (Alexander et al., 2023). This situation raises an important question: to what extent are students truly aware of the academic, ethical, and functional limitations of using AI-generated content in their learning processes?



Recent studies have shown that students' awareness and perceptions of the use of artificial intelligence (AI) in foreign language education, particularly in academic writing such as studies by Alexander et al., (2023); Hossain et al. (2025); Krajka & Olszak (2024); Nelson et al. (2025), are gaining increasing attention. Research by Hossain et al. (2025) revealed that EFL students generally have a moderate level of understanding of AI technology, with the most common uses being translation and grammar checking. Although they recognize the potential of AI to improve writing quality, their technical understanding remains limited, suggesting the need for specific education on the use of AI in academic contexts. Furthermore, there are concerns that the use of AI may hinder the development of independent writing skills and encourage academic dishonesty (Nelson et al., 2025). ESL teachers also face challenges in detecting AI-generated text, as they tend to rely on error-based assessment without considering the unique characteristics of AI-generated text (Alexander et al., 2023)

To address this challenge, scholars have emphasized the importance of promoting AI literacy and ethical awareness among students. Rudnik et al. (2024) emphasize the importance of increasing AI literacy among students and educating them about the ethics of its use. Key recommendations from various studies, such as written by Alexander and Hossain, include developing AI literacy programs, reviewing academic assessment practices, and strengthening institutional policies to maintain academic integrity in an education era influenced by AI technology (Alexander et al., 2023; Hossain et al., 2025). These studies tend to focus on the technical or pedagogical aspects of AI use, rather than the critical, ethical, and reflective dimensions that explicitly explore students' awareness of AI-generated content, particularly in local contexts such as Islamic universities in regional areas.

This gap is the primary background of this research. It is not enough to simply know that students use AI; it is crucial to understand how they understand its role, their attitudes toward its use, and the extent to which they can distinguish between original and machine-generated content. AI literacy needs to be promoted to prevent misuse and ensure meaningful learning (Rudnik et al., 2024). This is more important given the potential for AI to create fraudulent learning behavior, that is, learning behavior that does not reflect genuine thought processes and knowledge construction.

This research not only measures the frequency or attitudes toward AI, but also explores students' awareness of the authenticity, ethics, and long-term impacts of using AI-generated content. Furthermore, this research was conducted in a unique context, namely, students in the Arabic Language Education and English Language Education Study Programs at Ahmad Dahlan Islamic University—an Islamic educational institution in a non-urban area, where technology and digital literacy studies are still relatively rare. Therefore, the results of this study are expected to provide theoretical and practical contributions to the development of critical digital literacy among foreign language students, as well as serve as a basis for consideration in developing academic policies that are more adaptive to technological developments.

2. Method

This study employed a descriptive quantitative approach to explore students' awareness of AI-generated content, in the context of foreign language learning, particularly Arabic and English. This approach was selected because it enables the systematic and objective description of students' experiences, awareness and ethical attitudes toward artificial intelligence using measurable indicators.

The population in this study consisted of all active students enrolled in the Arabic Language Education and English Language Education study programs in semesters II, IV, and VI at the Faculty of Tarbiyah and Teacher Training, Ahmad Dahlan Islamic University, Sinjai. The population included 52 Arabic Language Education students and 63 English Language Education students. The sampling technique used was voluntary response sampling, a form of non-probability sampling commonly applied in online survey research where participation depends on respondents' willingness (Etikan et al., 2016). By the end of the data collection period, 42 students had completed the questionnaire, representing approximately 36.52% of the total population. This sample size was considered adequate

to provide a preliminary descriptive overview of students' awareness of AI-generated content within a relatively homogeneous academic context. Although the sample size does not encompass the entire population, a voluntary participation-based total sampling technique remains acceptable in quantitative research with a descriptive design. This is due to the limitations of reaching respondents directly and the relatively homogeneous nature of the study population in terms of academic background, semester level, and field of study related to foreign languages.

Data were collected using an online questionnaire through Google Forms. The instrument employed a five-point Likert scale ranging from Strongly Disagree to Strongly Agree. The questionnaire was designed to measure students' awareness of AI-generated learning content across three main aspects: (1) experience with AI tools, (2) awareness of AI-generated content, and (3) ethical attitudes toward the use of AI in academic contexts. Content validity of the questionnaire was established through expert judgment, and the items were developed based on relevant literature on AI use and digital literacy in education.

The data obtained from the questionnaire were analyzed using descriptive quantitative techniques. Responses were tabulated and categorized according to the three measured aspects. Each Likert scale response was scored from 1 to 5, and mean scores were calculated to identify overall trends. Percentage distributions were also computed to describe the frequency of responses for each item. The results were interpreted using the following criteria: 81–100% (very high), 61–80% (high), 41–60% (moderate), 21–40% (low), 0–20% (very low). This descriptive analysis method was chosen because it is suitable for describing phenomena systematically, factually, and accurately regarding the facts in the field (Sugiyono, 2018).

3. Results and Discussion

3.1 Result

This section represents the finding of the study based on three main aspects: (1) students' experience in using AI tools, (2) awareness of AI-generated content, and (3) ethical attitudes toward the use of AI in academic contexts. Data were analyzed using descriptive statistics in the form of mean scores and categorical interpretations.

a. Experience of Using AI in Learning

The findings indicate that students generally demonstrate a moderate to high level of experience in using AI tools for academic purposes as presented in the following table:

Table 1 *Descriptive Analysis of Students' Experience with AI (Items 1–5)*

Item	Statement	Mean	Category
1	I often use AI tools (e.g., ChatGPT, Grammarly) in completing assignments.	3.76	High
2	I use AI tools specifically to help with Arabic/English learning.	3.67	High
3	I have sufficient knowledge to operate AI tools.	3.40	Moderate
4	I can distinguish different AI tools based on their function.	3.21	Moderate
5	I explore various AI tools independently.	3.10	Moderate
	Average	3.43	Moderate

The table above showed that the overall mean score for this aspect was 3.43, which falls into moderate category. Item related to the frequency of AI usage (item 1 and 2) obtained relatively high mean scores, indicating that of AI tools such as ChatGPT, Grammarly, or Google Translate have become an integral part of students' learning activities, particularly in completing assignments and supporting Arabic/English learning.

This trend is further supported by percentage distributions. The majority of respondents (90.5%) reported having used AI-based applications such as ChatGPT, Grammarly, or Google Translate (item 1), indicating that AI has become an integral part of their learning practices. Additionally, 70.2% of students stated that they use AI to assist with coursework (item 2), suggesting that AI functions as a primary academic support tool rather than occasional or experimental resource. Moreover, 50% of respondents indicated regular use of AI tools (often or very often) in their academic activities (item 4), reinforcing the integration of AI into daily learning routines.

However, despite the high frequency of use, students' technical understanding of AI remained limited. Only 42.9% of respondents reported having a sufficient understanding of how AI technologies operate (item 3). Furthermore, 54.8% of students indicated that they had not received adequate formal instruction on how to use AI ethically and effectively (item 5). This reveals a noticeable gap between students' frequent use of AI tools and their conceptual and critical understanding of the technology.

Overall, these findings suggest that students tend to use AI primarily in an instrumental manner—as a convenient tool for task completion—rather than engaging with it critically and reflectively. While AI has been successfully integrated into students' learning practices, this integration is not yet accompanied by sufficient AI literacy or ethical guidance, highlighting the need for more structured instructional support.

b. Awareness of AI Content

Students' awareness of AI-generated content was found to be moderate overall, with an average mean score of 3.43 as shown in Table 2. The results indicate that students have a general awareness about the presence and potential characteristics of AI-generated content, although deeper analytical skill still limited.

Table 2 Descriptive Analysis of Students' Awareness of AI-Generated Content (Items 6–10)

Item	Statement	Mean	Category
6	I am aware that some of my classmates use AI to complete their assignments.	4.05	High
7	I can recognize content that is fully generated by AI.	3.52	High
8	I can tell the difference between human-generated and AI-generated writing.	3.10	Moderate
9	I often question the originality of texts that look unnatural or too perfect.	3.57	High
10	I have read or learned about how to critically assess AI-generated content.	2.90	Moderate
Average		3.43	Moderate

The table above shows that most students are aware that AI-generated content is widely used in academic contexts and acknowledge that it can appear very polished and convincing or unnatural. Several respondents indicated that they often question the originality of such texts, suggesting an initial level of critical awareness.

Based on the percentage distribution, a substantial proportion of respondents (71.4%, item 6) reported being aware that some of their classmates use AI tools to complete academic assignments. This finding suggests that the use of AI-generated content is widely recognized within the academic environment and is not perceived as an isolated or hidden practice. Additionally, a high percentage of students (57.1%, item 9) indicated that they often question the originality of texts that appear overly perfect or unnatural, reflecting an initial level of critical awareness toward suspicious academic writing.

However, this awareness does not fully translate into analytical confidence. Only 33.3% of respondents (item 8) stated that they were able to clearly distinguish between human-generated and AI-generated writing. This indicates that while students may sense irregularities in texts, they struggle to linguistically or structurally identify AI-generated content with certainty. Furthermore, although more than half of the respondents (52.4%, item 7) believed they could recognize content fully generated by AI, this perception may reflect subjective judgment rather than systematic evaluative skills.

In terms of formal preparation, fewer than half of the students (42.9%, item 10) reported having read or learned specific strategies for critically assessing AI-generated content. This finding highlights a lack of structured guidance or instruction related to AI literacy within the academic curriculum.

Overall, these results suggest that students' awareness of AI-generated content remains largely surface-level. While they are conscious of the widespread use of AI and potential originality issues, their ability to critically evaluate authenticity, authorship, and textual ownership is still limited. This moderate level of awareness underscores the need for targeted instructional support to strengthen students' critical digital literacy in AI-assisted academic contexts.

c. Ethical Attitudes Toward the Use of AI

In contrast to the previous aspects, students demonstrated a high level of ethical awareness regarding the use of AI in academic activities, with an overall mean score of 3.70, as presented in Table 3. The findings show that most students have strong ethical position toward the responsible use of AI and clearly reject dishonest academic practices.

Table 3 Descriptive Analysis of Students' Ethical Attitudes Toward AI Use (Items 11–20)

Item	Statement	Mean	Category
11	I believe using AI to cheat on assignments is unethical.	4.24	Very High
12	I only use AI to get ideas, not to fully complete tasks.	3.48	High
13	I consider it important to disclose when I use AI in academic work.	3.48	High
14	I am aware of the risks of plagiarism when copying AI-generated text.	4.14	Very High
15	I feel guilty when I rely too much on AI.	3.17	Moderate
16	I believe AI should support, not replace, student thinking.	4.29	Very High
17	I understand that blindly copying AI output can harm my learning.	4.26	Very High
18	I have read or discussed academic rules regarding AI-generated content.	3.24	Moderate
19	I try to improve my writing rather than just depending on AI.	3.62	High
20	I support setting clear guidelines for the use of AI in academic settings.	4.12	Very High
	Average	3.70	High

The majority of students strongly agreed that using AI to cheat or to fully generate academic assignments is unethical. They emphasized that AI should function as a supportive tool rather than a replacement for students' own thinking and effort. High levels of agreement were also observed in relation to transparency, originality, and the importance of establishing clear institutional guidelines for AI use.

Based on percentage distribution, a majority of students (61.9%, item 11) agreed that using AI to cheat on assignments is unethical. This ethical stance is strengthened by the students' level of agreement (76,2%, item 16) stated that AI should support, rather than replace students' own thinking processes. Similarly, a large proportion of students (80.9, item 17) admit blindly copying output given by AI tools could harm their learning. It shows their awareness of a long academic consequences of using AI unethically.

Regarding responsible and transparent practices, more than half of the respondents (66.7%, item 12) reported that they use AI primarily to generate ideas rather than to fully complete academic tasks. In addition, 78.6% of students (item 20) agreed that the use of AI in academic work should be transparent and honestly disclosed to lecturers. High levels of concern were also expressed about plagiarism risks, with 73.8% of respondents (item 14) indicating students' awareness of the potential for plagiarism when copying AI-generated text.

Students also showed strong support for institutional regulation. Most of students (83.3%, item 20) expressed support for the establishment of clear academic guidelines governing the use of AI in higher education. However, despite these positive ethical attitudes, students' exposure to formal academic discussions or regulations related to AI use remained limited. Only 64.3% of respondents (item 18) reported having read or discussed official academic rules concerning AI-generated content.

Furthermore, students showed moderate confidence in institutional enforcement mechanisms. Only 35.7% of respondents (item 19) believed that lecturers are capable of detecting AI-generated content in student assignments. This finding suggests a perceived gap between ethical expectations and practical implementation within academic institutions.

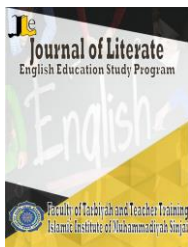
Overall, these results indicate that while students demonstrate strong individual ethical awareness regarding AI use, institutional communication, policy dissemination, and enforcement mechanisms related to AI-generated content remain insufficiently developed.

3.2 Discussion

The findings of this study reveal that most respondents have prior experience with AI tools, demonstrate moderate awareness of AI-generated content (41-60%), and hold generally positive ethical attitudes toward their use in foreign languages (Arabic/English) learning. These results align with the growing body of literature emphasizing the transformative potential of Artificial Intelligence (AI) in education, particularly in Arabic and English Language Teaching.

Consistent with the previous studies conducted by Akbarani (2024) and Awalın et al. (2023), the participant in this study reported frequent use of AI tools for translation, grammar correction, and writing support. Tools like ChatGPT, Grammarly, QuillBot, and other digital tools—offer learners personalized feedback, grammar correction, and real-time language practice, thereby enhancing the overall quality and efficiency of the learning process, particularly in writing-related tasks. This is consistent with findings from experimental studies of AI-based Duolingo done by Qiao & Zhao (2023), which have been shown to improve students' speaking skills and self-regulation abilities. In other words, AI supports not only the technical aspects of language (such as grammar or vocabulary) but also the affective and metacognitive dimensions, such as student autonomy and learning strategies.

Although the descriptive statistics indicate a moderate level of awareness (41–60%) across several questionnaire items, this level of awareness appears insufficient to fully support students' ability to critically distinguish AI-generated text from human-authored writing, as discussed below. However, the present findings also indicate a gap between AI usage and critical awareness. Although students are familiar with AI tools, their ability to critically evaluate AI-generated content and distinguish it from text written by human remains limited. This supports concerns raised by Hossain et al. (2025)), who found that EFL students commonly use AI for translation and grammar support, the



present study also indicates that AI is predominantly utilized for similar functions. However, while participants appreciated the benefits of AI tools, they also expressed concern about overreliance and the risk of fraudulent learning behaviour—where students might bypass authentic learning processes by copying or overly depending on AI-generated content. This insight mirrors the concern highlighted in the abstract, which notes that AI use can yield both positive and negative outcomes depending on how responsibly and appropriately the technology is integrated.

Encouragingly, students in this study demonstrated strong ethical awareness, rejecting dishonest academic practices and supporting transparent and responsible AI use. Nevertheless, the limited discussion of AI-related academic policies and students' low confidence in detection mechanisms suggest the need for clearer institutional guidelines and open dialogue between lecturers and students. Strengthening critical digital literacy and ethical AI education is therefore essential to ensure that AI functions as a pedagogical support rather than a substitute for genuine learning.

Overall, the findings of this study suggest that artificial intelligence (AI) functions simultaneously as a "friend" and a potential "fraud" in foreign language learning. On the one hand, AI acts as a supportive learning companion by assisting students with translation, grammar, and writing development. On the other hand, moderate levels of awareness regarding AI-generated content and limited ability to distinguish it from human writing suggest that AI could facilitate cheating learning behaviors if used uncritically. Thus, whether AI becomes a friend or a fraud depends not on the technology itself, but on students' critical awareness, ethical positioning, and the presence of clear institutional guidelines.

These findings have several important implications for foreign language education. Pedagogically, the results suggest that the integration of AI tools should be accompanied by explicit instruction in critical digital literacy, enabling students to understand the authenticity, originality, and limitations of AI-generated content. Institutionally, moderate awareness of formal regulations highlights the need for clearer academic guidelines and open discussions regarding the ethical use of AI. From a broader perspective, the study underscores the importance of integrating technology applications with ethical and reflective learning practices, particularly in non-urban and underrepresented educational contexts.

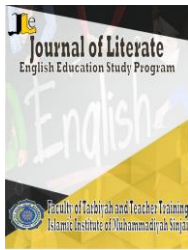
4. Conclusion

This study examines foreign languages (Arabic and English) students' awareness, experiences, and ethical attitudes toward the use of artificial intelligence (AI)-generated content in foreign languages (Arabic and English) learning. The results indicate that students generally utilize AI to support language tasks such as translation, grammar checking, and writing development, indicating that AI serves as a useful learning tool. However, students' awareness of AI-generated content and their ability to critically distinguish it from human writing remains at a moderate level.

Overall, these findings suggest that artificial intelligence plays a dual role in both Arabic and English as foreign languages learning. On the one hand, AI can function as a "friend" in the learning process by supporting language development when used critically, ethically, and responsibly. On the other hand, it also has the potential to become a "fraud" when used without adequate critical awareness and ethical understanding. It is potentially undermining authentic learning processes. Thus, the role of AI in language learning is not only determined by the technology itself, but also by students' critical awareness, ethical attitudes, and responsible engagement in utilizing AI-generated content in academic contexts.

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