

Student perceptions of AI use in EFL classes: A gender-based perspective

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Abstract. The rapid development of Artificial Intelligence (AI) has significantly reshaped English as a Foreign Language (EFL) education. This study investigates Indonesian EFL students' perceptions of artificial intelligence (AI) use in their language learning, focusing on a gender-based perspective to identify local patterns in gender dynamics in AI-enabled language learning. Using a mixed-methods design, quantitative and qualitative data were collected from 40 undergraduate EFL students (24 females, 16 males) via a structured questionnaire comprising scaled and open-ended items. Quantitative findings revealed a moderate level of self-reported AI dependency, with females showing a slightly higher dependency score ($M = 5.50/10$, $SD = 1.77$) than male students ($M = 5.13/10$, $SD = 1.86$), though the difference was not statistically significant ($p = 0.652$). Qualitative thematic analysis revealed more noticeable gender differences in concerns and usage habits: female students expressed greater concerns regarding AI inaccuracies (+27% compared to male students) and greater awareness of access limitations (+25%), while also reporting higher engagement in proofreading and independent verification practices (+25%) to lessen AI errors. Conversely, convenience and speed were primary motivations for both genders. This study suggests that while AI tools offer significant educational benefits, pedagogical interventions should be personalized to address gender-specific usage patterns and concerns, ensuring equitable access and fostering critical thinking to avoid over-reliance.

Keywords: artificial intelligence, EFL classes, gender perspective, student perceptions, subjective dependency

Abstrak. Perkembangan pesat teknologi kecerdasan buatan (AI) telah mengubah lanskap pembelajaran bahasa Inggris sebagai bahasa asing (EFL). Penelitian ini membahas persepsi mahasiswa EFL di Indonesia terhadap penggunaan AI dalam pembelajaran bahasa mereka, dengan fokus pada perspektif berbasis gender. Menggunakan desain metode campuran (mixed-methods), data kuantitatif dan kualitatif dikumpulkan dari 40 mahasiswa strata satu EFL (24 perempuan, 16 laki-laki) melalui kuesioner terstruktur yang terdiri dari pertanyaan skala ketergantungan dan pertanyaan subjektif terbuka. Temuan kuantitatif menunjukkan tingkat ketergantungan AI yang sedang, di mana mahasiswi menunjukkan skor ketergantungan yang sedikit lebih tinggi ($M = 5,50/10$, $SD = 1,77$) dibandingkan mahasiswa ($M = 5,13/10$, $SD = 1,86$), meskipun tidak signifikan secara statistik ($p = 0,652$). Analisis tematik kualitatif menunjukkan perbedaan gender yang lebih nyata dalam hal kekhawatiran dan kebiasaan penggunaan: mahasiswi menunjukkan kekhawatiran yang lebih tinggi terkait ketidakakuratan AI (+27% dibandingkan dengan mahasiswa laki-laki) dan kesadaran yang lebih besar akan keterbatasan akses (+25%), serta melaporkan aktivitas penyuntingan mandiri dan verifikasi independen yang lebih tinggi (+25%) untuk mengurangi kesalahan AI. Sebaliknya, kemudahan dan kecepatan menjadi motivasi utama bagi kedua gender. Studi ini merekomendasikan bahwa meskipun alat AI menawarkan manfaat pendidikan yang signifikan, intervensi pedagogis harus disesuaikan dengan pola penggunaan dan permasalahan terkait gender guna memastikan akses yang merata serta meningkatkan kemampuan berpikir kritis untuk menghindari ketergantungan yang berlebihan.

Kata kunci: kecerdasan buatan, kelas EFL, persepsi mahasiswa, perspektif gender, ketergantungan subjektif

INTRODUCTION

The rapid advancement of artificial intelligence (AI) has driven a transformative shift in higher education, with language education as a prominent domain where AI-enabled tools can reshape learning tasks and outcomes. In English as a Foreign Language (EFL) instruction, a growing body of work documents the emergence of AI-powered applications, ranging from large language models (LLMs) and generative AI chatbots to automated writing evaluation (AWE) and related text-processing tools, as central affordances for writing, editing, translation, and ideation (LLMs, ChatGPT, Gemini; AWE such as Grammarly; paraphraser like Quillbot) (Fang & Han, 2025; Liu, 2024; Nguyen, 2024; Song & Song, 2023; Xiao et al., 2025; Zhang & Liu, 2025). This literature frames AI as a disruptive yet potentially beneficial force in university-level language learning, capable of providing personalized feedback, scaffolding, and opportunities for autonomous practice when integrated with deliberate pedagogy (A. A. A. Ahmed et al., 2022; Fang & Han, 2025; Nguyen, 2024; Phan, 2023; Song & Song, 2023). At the same time, scholars have warned about risks associated with rapid AI adoption, including challenges to academic integrity, potential erosion of critical thinking and problem-solving skills, and concerns about language homogenization or reduced linguistic diversity if AI tools are over-relied upon without teacher mediation and explicit learning aims (Alharthi, 2024; Alqurashi, 2025; Cong-Lem & Nguyen, 2024; Ismail, 2023; Phạm et al., 2023; Sharifuddin & Hashim, 2024). These debates motivate systematic investigation into how AI tools are perceived and used by EFL learners, including how learner characteristics (e.g., gender) may mediate attitudes and outcomes in AI-enhanced language tasks (Alharbi & Al-Ahdal, 2025; Bin-Hady et al., 2024; Chuane & Shukor, 2023; Du & Zhang, 2022; Mohamed & Alian, 2023; Pižorn & Babuder, 2022).

EFL classrooms are increasingly shaped by AI-enabled tools that support writing and language tasks. ChatGPT and other GenAI-based tools are discussed as both writing assistants and assessment aids, capable of real-time feedback and automated evaluation that can influence writing quality, revision processes, and motivation, while raising concerns about reliability, accuracy, and prompt design (Fang & Han, 2025; Liu, 2024; Nguyen, 2024; Song & Song, 2023; Xiao et al., 2025). AI-enabled applications such as large language models (LLMs), automated writing evaluation (AWE) systems, and multilingual translation tools have been linked to changes in writing processes, self-regulated learning, and learner autonomy, prompting a re-evaluation of instructional design and assessment practices (Dai & Liu, 2024; Gokturk-Saglam, 2025; Matrić et al., 2019). Additionally, AI can serve as a cognitive scaffold that expands learners' capabilities, yet concerns persist that persistent scaffolding may become a cognitive proxy if not coupled with explicit strategies to promote autonomous language development and metacognitive awareness (Guo, 2021; Huang & Jiang, 2022; Saeed et al., 2022) as well as improving language pedagogy (Ali, 2020). Empirical investigations report positive effects on writing performance and motivation under AI-assisted instruction in various contexts, though findings are dependent on implementation, task design, and alignment with pedagogy (e.g., pre-post writing tests, rubrics, interviews) (Chuang & Shukor, 2023; Nguyen, 2024; Phan, 2023; Song & Song, 2023; Zhang & Liu, 2025). Along with AI-enabled assessment technologies, which have shown potential to influence learners' willingness to communicate, reading and writing strategies, and self-regulation when integrated with appropriate scaffolding and feedback in literacy training (Chuang & Shukor, 2023; Mohamed & Alian, 2023; Zhang & Liu, 2025).

AI in language learning can be conceptualized as part of the CALL-to-ICALL continuum, in which intelligent systems serve as adaptive interlocutors, providing scaffolding within the Zone of Proximal Development (ZPD). Vygotsky's theory of scaffolding remains a foundational lens for analyzing AI-enabled support in language tasks, including lexical selection, context-driven explanations, and

metalinguistic feedback (Matrić et al., 2019). When AI is used to analyze and refine one's own drafts, it can reinforce autonomous learning; however, if AI outputs are accepted without active cognitive processing, learners may experience persistent scaffolding that risks diminishing independent production and linguistic development—a cognitive proxy situation (Guo, 2021; Matrić et al., 2019; Saeed et al., 2022). Considering this, it is important to integrate an ethical perspective in applying AI in teaching (Aljabr & Al-Ahdal, 2024; Hoang, 2025).

ICALL scholarship treats AI as a More Knowledgeable Other (MKO) while emphasizing the need for pedagogy that supports gradual release of responsibility to the learner. This perspective cautions designers and instructors to structure AI use so that learners retain or regain agency, especially through retrieval practice, self-editing, and strategic dialogue with AI outputs (Huang & Jiang, 2022; Matrić et al., 2019; Saeed et al., 2022).

Some previous studies show that subjective dependency refers to learners' self-appraisal of their reliance on AI to support language tasks. This construct intersects with academic self-efficacy and locus of control: learners with high internal self-efficacy may view AI as an augmentative resource while maintaining agentic control, whereas those with lower self-efficacy may become externally oriented toward the AI as the primary driver of learning. The literature suggests that higher subjective dependency can be moderated by metacognitive strategies, reflective practice, and teacher-guided usage patterns that encourage retrieval practice and autonomous problem solving, thereby mitigating artificial-competence risks (R. Chen, 2025) (Guo, 2021) (Kutuk, 2023). Meanwhile, a study conducted in China also suggested that "EFL learners had experienced a wide spectrum of positive and negative emotions in light of AI-based L2 education" (Yang & Zhao, 2024).

From the previous studies, the gaps in the study can be identified as follows. Firstly, there is a relative lack of empirical work that explicitly examines undergraduate EFL students' subjective AI dependency through a gender lens in typical university classrooms. While gender differences in technology self-efficacy and motivation have been reported, fewer studies map these gendered patterns onto concrete AI usage behaviors, perceived benefits, and constraints within EFL coursework.

Secondly, some studies also emphasize general technology acceptance or broader educational technology outcomes, or investigate AI-assisted writing tasks without isolating subjective dependency as a precise psychological construct within AI-enabled language learning. There is also a need for stronger methodological transparency in mixed-methods research, including explicit alignment of qualitative prompts with research questions and robust reliability/validity reporting in thematic analyses.

Thirdly, cross-cultural representation gaps remain; much of the existing literature centers on Western or high-resource contexts. Given the global diffusion of AI in education, more non-Western, multilingual settings are needed to understand context-specific gendered patterns and to inform inclusive AI-enabled curricula.

This study introduces a novel approach and addresses the above gaps by clearly identifying the role of combining a gender-based lens with subjective AI dependency in undergraduate EFL learning, anchored in robust theoretical underpinnings from CALL/ICALL and SLA motivation/affect research. The work offers actionable recommendations for gender-responsive AI pedagogy and contributes methodological guidance for future convergent mixed-methods inquiries in AI-enabled language education.

Regarding gender, affective and motivational dimensions, including Foreign Language Enjoyment (FLE) and related constructs, are consistently linked to engagement and achievement in EFL contexts. Gender differences in motivation and affective factors have been observed in various cultures, influencing how students engage with AI-mediated language learning. Integrating FLE and motivational theory helps explain why students persist with or resist AI tools and how gender may interact with emotion and motivation in technology-enhanced language learning (Guo, 2021; Huang & Jiang, 2022; Shen et al., 2023).

Gender dynamics in educational technology further shape how students interact with AI-enabled tools. Across CALL, educational technology, and language-learning research, male students often report higher technological self-efficacy and instrumentally oriented adoption, while female students tend to engage more systematically in reflective learning, proofreading, and self-regulation when using digital tools in language tasks. These patterns highlight the need for gender-responsive design in AI-enabled EFL curricula to balance the benefits of AI with the preservation of independent language development and critical editing skills (Chhor et al., 2024; Huang & Jiang, 2022; Kutuk, 2023; Xie et al., 2024).

This study addresses a notable gap by examining undergraduate EFL students' perceptions, experiences, and self-reported dependencies on AI through a gender-based lens. Specifically, it seeks to answer the following research questions:

- 1) Do undergraduate EFL students report psychological dependency on AI tools, and does this dependency differ by gender?
- 2) What are the perceived pedagogical benefits, experiences, and motivators driving AI adoption among male and female EFL students?
- 3) What gender-specific concerns, constraints, and operational challenges arise during AI integration in their academic tasks?

By foregrounding gender as a central analytic lens, this study aims to offer practical, evidence-based recommendations for balanced, gender-responsive AI integration in EFL curricula and contribute to the broader discourse on AI in higher education and CALL/ICALL.

METHOD

This study employed a convergent parallel mixed-methods design to capture both breadth (quantitative) and depth (qualitative) in undergraduate EFL students' perceptions and dependence on AI, with a focus on gender differences. The quantitative component used a 10-question questionnaire on the AI-dependency scale and demographic variables; the qualitative component used open-ended prompts to elicit detailed perceptions of benefits, challenges, and usage patterns. This design aligns with best practices for integrating statistical patterns and thematic insights to understand AI integration in EFL learning and gendered experiences; (B. Chen et al., 2024, 2024; Huang & Jiang, 2022, 2022; Kutuk, 2023, 2023; Xie et al., 2024).

The research was conducted at a private higher education institution in Central Java, Indonesia. A sample of 40 undergraduate students majoring in the English-as-a-foreign-language (EFL) program participated in the study. Informed consent from all research participants was obtained on the cover page of the questionnaires, confirming their agreement to participate. The sample consisted of 24 female students (60%) and 16 male students (40%). The participants were the students across various

academic years: 15 students were in semester 2 (37.5%), 12 in semester 4 (30%), 7 in semester 6 (17.5%), and 6 in semester 8 (15%) in the even semester of the 2025/2026 academic year. All participants reported active, hands-on experience using at least one AI tool (e.g., Google Translate, ChatGPT, Grammarly, or Gemini) in their EFL courses. The imbalance in the number of male and female students is because generally the number of female students in the EFL is greater than that of male students in the English language department. A bilingual administration approach (Indonesian and English) is employed to maximize data richness and validity, consistent with recommendations for language research, where participants' expressive ability may vary across languages.

Purposive sampling was used to select participants who met two explicit inclusion criteria: (1) active enrollment in the English language undergraduate program, and (2) regular usage of generative AI tools for academic purposes. This participant profile is highly significant to answer the research questions. Their current digital habits, ethical perceptions, and psychological dependencies on AI will directly influence their future careers and how they incorporate or regulate technology in their workplaces, making this demographic a highly critical unit for empirical investigation.

Data Collection Procedure

The data were collected via a bilingual (Indonesian and English) digital survey consisting of the following questionnaires.

1. Quantitative: A concise 1-10 Likert-scale AI-dependency instrument (1 = independent, 10 = fully dependent) accompanied by demographic items (gender, semester). The scale is designed to capture subjective dependency and can be analyzed using non-parametric tests if appropriate.
The instrument comprised three primary segments: (1) basic demographic information (gender and current semester), (2) a quantitative self-report scale measuring AI dependency on a 1-to-10 Likert scale (where 1 indicates complete independence/ability to work without AI, and 10 indicates absolute dependency)
2. Qualitative: Six open-ended subjective perception question items exploring (1) opinions on AI in English learning, (2) perceived benefits vs. challenges, (3) factors influencing AI use, (4) constraints or concerns, (5) fairness/equity in AI access, and (6) specific AI-use habits in academic tasks. The question items are designed to elicit gendered patterns in experiences and suggestions for equitable integration.

Data Analysis Procedure

The data were analyzed using the following procedures.

1. Quantitative: Descriptive statistics summarize AI-dependency scores; non-parametric tests (e.g., Mann-Whitney U) compare gender groups due to ordinal data and uneven group sizes.
2. Qualitative: Thematic analysis following Braun & Clarke's six phases (S. K. Ahmed et al., 2025; Braun & Clarke, 2006), with open coding, category clustering, and cross-gender theme comparison. Reliability is enhanced through double-coding by two researchers and resolution by consensus. Thematic frequencies were reported as percentages to facilitate integration with quantitative results.
3. Integration: A convergent design is realized through joint interpretation of quantitative patterns and qualitative themes, identifying convergence, divergence, or elaboration of

findings by gender (e.g., triangulating reported dependency with examples of usage habits and perceived benefits).

Qualitative Analysis: Inductive versus Deductive Approach and Coding Procedures

1. Analytical stance

This study employed a mixed-approach qualitative strategy to maximize transparency and credibility. The coding process combined inductive (data-driven) and deductive (theory-driven) elements. Specifically:

- a. Inductive component: Initial codes and themes were derived from participants' actual statements in response to open-ended prompts, allowing categories to emerge directly from the data rather than imposing a pre-existing structure.
- b. Deductive component: The coding framework was subsequently enriched by applying a priori concepts drawn from established theories in CALL/ICALL, gender and edtech, motivation and affect in SLA, and SRL (e.g., scaffolding, cognitive proxy risk, self-efficacy, locus of control, Foreign Language Enjoyment). This stance ensured that emergent themes were examined through existing theoretical lenses and facilitated meaningful integration with the broader literature.

This dual approach aligns with best practices for qualitative inquiry in language education and educational technology research, enabling both data-driven discovery and theory-informed interpretation (Sharma et al., 2013).

2. Data preparation and coding steps

Six steps were conducted in preparing and coding the data. The steps are as follows:

- a. Transcription and data cleaning: Audio or written responses from open-ended prompts and interview transcripts were transcribed verbatim. Transcripts were checked for accuracy against recordings, and nonessential filler material was removed while preserving meaning.
- b. Initial coding (open coding): Two coders independently conducted line-by-line open coding of a subset of transcripts to identify discrete ideas, actions, and concepts. Coding was conducted in the participants' language of expression, with bilingual coding notes as needed to preserve nuance.
- c. Development of a codebook: After independent coding, coders convened to compare codes, discussed discrepancies, and reconciled differences. A shared codebook was created, that details code names, definitions, inclusion/exclusion criteria, and examples from data. This codebook served as the working instrument for subsequent coding cycles.
- d. Axial coding and category construction: Codes were grouped into higher-order categories through axial coding, linking codes by phenomenon (e.g., dependency cues, perceived benefits, perceived challenges, gendered usage patterns, affective responses). Relationships among codes were mapped to form coherent themes and subthemes.
- e. Thematic synthesis (selective coding): From the axial categories, higher-level themes were identified through selective coding, focusing on central phenomena that addressed the research questions (e.g., how gender influenced AI dependency, which benefits and concerns were most salient, and how teaching and assessment contexts shaped AI use).
- f. Memoing and reflexivity: Throughout coding cycles, researchers maintained analytic memos to document reasoning, decisions, and potential biases. Reflexivity notes were kept to acknowledge how our positionality might influence interpretation.

3. Reliability and trustworthiness

To maintain the reliability and trustworthiness of the data, four actions were taken:

- a. Inter-coder reliability: To ensure dependability, two trained coders independently coded all data in the initial phase; intercoder agreement was quantified (e.g., using Cohen’s kappa) and discrepancies were resolved through discussion and, when necessary, adjudication by a third reviewer.
- b. Triangulation: Data sources (e.g., written responses, interview prompts) and analyst triangulation (two researchers with complementary perspectives) were used to corroborate findings. Triangulation supported credibility and helped identify convergent and divergent patterns across data types.
- c. Audit trail: All analytic decisions, coding receipts, codebook iterations, and theme development rationales were documented in an audit trail. This action included explicit criteria for merging, splitting, or discarding themes, as well as a mapping table linking themes to data excerpts.
- d. Transparency in reporting: The final write-up explicitly describes the analytic steps, includes representative data excerpts (quotations) to illustrate each theme, and clarifies how deduced themes relate to the underlying data and to the theoretical framing.

RESULTS AND DISCUSSION

This section presents the empirical findings of the study, structured around the quantitative self-reported AI dependency scores and the qualitative themes that emerged from the gender-segmented analysis of students' open-ended responses.

Quantitative Self-Reported AI Dependency

The quantitative analysis focuses on a single metric: self-reported AI dependency, measured on a 1-to-10 scale. Table 1 summarizes the descriptive statistics for both genders and the overall cohort.

Table 1 Descriptive Statistics of Self-Reported AI Dependency (1-10 Scale) by Gender

Gender Group	N Sample	Mean Score	Std Deviation	Min Score	Max Score
Male	16	5.13	1.86	1.0	8.0
Female	24	5.50	1.77	1.0	8.0
Total Number	40	5.35	1.79	1.0	8.0

As shown in Table 1, the overall self-reported AI dependency score for the entire group was moderate (M = 5.35, SD = 1.79). Interestingly, female EFL students reported a slightly higher mean dependency score (M = 5.50, SD = 1.77) than their male counterparts (M = 5.13, SD = 1.86). To check whether this difference was statistically significant, a Mann-Whitney U test was conducted. The results revealed U = 175.5, p = 0.652, indicating that the slight quantitative difference in AI dependency between female and male students is not statistically significant. This figure suggests that both genders perceive a similar, moderate level of reliance on AI tools to sustain their EFL learning activities. The insignificant differences between males and females are discussed further.

The lack of statistically significant differences between genders in their overall self-reported AI dependency suggests a systemic, structural shift in modern higher education: AI has become a universal utility for all language students in this study, regardless of demographic background. Rather than technology being a specialized, gender-skewed interest, as seen in historical CALL research, modern AI tools have achieved a level of consumer democratization that has made them deeply embedded in the study routines of both male and female undergraduate language learners. Both groups use these systems to cope with difficult writing assignments, lexical limitations, and tight deadlines, resulting in similar levels of subjective dependence. However, while the quantitative score is uniform, the underlying qualitative behaviors, motivations, and coping mechanisms show significant, pronounced gender-based divergence.

Qualitative Thematic Differences by Gender

Despite the similar quantitative dependency scores, the qualitative thematic analysis of the six open-ended questions revealed highly pronounced gender differences in students' experiences, concerns, and usage habits. Table 2 summarizes the percentage of male and female students who expressed key themes in their responses.

Table 2 Key Qualitative Themes and Gender Frequencies in Open-Ended Responses

Theme Identified	Male Freq. (N=16)	Female Freq. (N=24)	Percentage Difference
Perceived Convenience & Speed	15 (93.8%)	22 (91.7%)	-2.1%
Concerns over AI Data Inaccuracies	8 (50.0%)	15 (62.5%)	+12.5%
Active Post-Generation Proofreading	4 (25.0%)	13 (54.2%)	+29.2%
Use for Translation and Lexical Search	1 (6.2%)	6 (25.0%)	+18.8%
Worry of Cognitive Laziness & Over-reliance	2 (12.5%)	3 (12.5%)	0.0%

The qualitative divergence mapped in Table 2 highlights distinct behavioral and cognitive traits. Female students demonstrated a much higher sensitivity to data inaccuracies and misalignments in AI outputs, with 62.5% expressing concerns about AI errors (+12.5% higher than males). Additionally, 25.0% of female students explicitly discussed translation issues and the search for authentic contextual vocabulary, compared to only 6.2% of males (+18.8%).

Most notably, female students were far more actively engaged in systematically reviewing and editing AI outputs: 54.2% of female respondents detailed elaborate double-checking, proofreading, and context-verification habits (e.g., cross-referencing dictionaries or rewriting AI suggestions), whereas only 25.0% of male students did so (+29.2%). Males, on the other hand, focused slightly more on the sheer convenience, ease of search, and speed of task completion (93.8% vs. 91.7%).

This divergence in post-generation verification and proofreading habits demonstrates that female students approach generative AI with a more critical, evaluative cognitive posture. Rather than viewing the output of an LLM as a final, ready-to-use product, female EFL students are significantly more likely to treat it as an exploratory baseline that must be double-checked, cross-referenced with dictionaries, and rewritten to fit their own stylistic preferences. On the contrary, male students exhibit a more transactional relationship with AI platforms, showing a preference for rapid information retrieval, direct prompt-to-output copying, and convenience. This transactional approach among males increases their tendency to submit faulty, inaccurate, or syntactically rigid AI-generated

outputs. At the same time, the highly reflective habits of females represent a healthier, more self-regulated integration of technology as a learning scaffold.

Pedagogical Benefits and Task Habits

Regarding the general experience of using AI, both male and female students overwhelmingly agreed that these tools are highly beneficial, primarily acting as cognitive scaffolds and reference tools. Students reported using AI to find inspiration, generate outlines, summarize lengthy academic readings, and check complex grammatical structures. However, their habits in completing academic tasks varied considerably.

Male students often described using AI in a direct, search-oriented manner to obtain answers when facing complex tasks or tight deadlines. For instance, several male respondents pointed out that AI acts as an instant reference that saves time, especially when they encounter vocabulary barriers or hard-to-find academic literature:

Excerpt 1

Dalam membuat tugas AI, biasanya saya menggunakannya untuk mencari ide dan inspirasi dengan tetap menggunakan prompt dari ide yang saya tuliskan agar dapat menghasilkan jawaban yang saya inginkan. (When creating AI-based tasks, I typically use it to find ideas and inspiration, using prompts from the ideas I've written down to generate the answers I want.). (Respondent 1, Male, Semester 6)

The above respondent describes a practical workflow for AI-assisted tasks. He uses AI as a source of ideas and inspiration, then crafts prompts based on his own written ideas to produce the desired answers or outputs. This response reflects a human-guided, prompt-driven collaboration with AI rather than fully autonomous AI generation. The emphasis is on ideation support and iterative refinement through prompted questions or prompts derived from the creator's notes

Excerpt 2

Bisa saja saya menggunakan AI untuk mencari sebuah jurnal atau bacaan yang terkait dengan tugas saya, Hal ini saya gunakan untuk mempermudah saya menyusun tugas atau menyelesaikannya (I could use AI to search for journals or reading material related to my assignment. This makes it easier for me to organize or complete assignments.). (Respondent 4, Male, Semester 6)

The respondent indicates that AI can assist in locating journals and reading materials relevant to an assignment. This use case frames AI as a research discovery tool that streamlines literature searches and resource gathering. It fits into AI practice as it reflects a common, practical application of AI in academic work: accelerating information retrieval, improving efficiency in identifying pertinent sources, and helping to organize sources for writing or analysis. The emphasis is on AI-assisted search rather than AI-generated content alone.

The approach taken by this respondent can save time, reduce manual searching effort, and enhance coverage of relevant materials. It suggests a workflow in which AI helps curate potential sources, which the student then evaluates and integrates into their assignment. Dependence on AI for search requires a critical appraisal of sources for relevance, quality, and credibility. Users must verify accuracy and avoid over-reliance on AI-generated bibliographies or abstracts. In short, respondent 4

views AI as a practical aid for literature discovery and organization, enabling more efficient compilation of journals and reading materials to support assignment completion.

Excerpt 3

Saya menggunakan AI sekadar untuk mencari informasi, dan meminta untuk merangkum sebuah informasi agar tugas kuliah dapat diselesaikan secara efisien (I use AI simply to search for information and ask it to summarize information so that college assignments can be completed efficiently). (Respondent 5, Male, Semester 8)

These male excerpts reflect a highly functional, task-oriented approach to CALL systems. The primary motivation is to optimize time and effort by using AI to organize information or find academic research papers. This approach reflects high computer self-efficacy but also reveals a potential lack of engagement with the tasks' deep linguistic properties, with a focus on the product rather than the process.

In contrast, female students detailed highly iterative, reflective, and interactive processes. They treated AI as a collaborative partner rather than an automated answer generator, focusing on improving their personal linguistic competence and refining grammar, as shown in the following excerpts:

Excerpt 4

Saya biasanya meminta AI menerjemahkan saja dan meminta mengoreksi vocab-nya; jika kurang cocok, akan saya ubah ke versi saya. Kebiasaan ini membantu saya mempercepat tugas sekaligus belajar letak kesalahan penulisan saya. (I usually just ask the AI to translate and correct the vocabulary; if it doesn't match, I'll change it to my own version. This habit helps me speed up my work and also helps me identify my writing mistakes). (Respondent 10, Female, Semester 4)

This respondent uses AI primarily for translation and vocabulary correction. When the AI's output deviates from their preferred wording, they revise it to their own version. This response indicates a workflow focused on linguistic refinement and error correction rather than content generation. It reflects a common language-support use case for AI tools: translation, consistency checking, and style/or wording adjustments. The human remains the author of the content, with AI serving as a drafting and editing assistant. The approach she took can speed up language tasks, improve terminology accuracy, and help the writer identify writing mistakes. It also creates an iterative loop where the writer learns from AI-provided edits and intentionally practices their own phrasing. Overreliance on AI for translation or corrections may obscure nuance or domain-specific terminology. Users should verify accuracy in meaning, tone, and terminology, and ensure that corrections reflect the intended message and audience.

Excerpt 5

Menerjemahkan teks atau memahami kata-kata yang sulit. Namun, saya tidak langsung menyalin jawaban dari AI. Setelah mendapatkan saran atau hasil, saya membaca ulang dan mengembangkan sendiri. (Translating text or understanding difficult words. However, I don't directly copy the AI's answers. After receiving suggestions or results, I reread them and develop them myself.) (Respondent 9, Female, Semester 4)

The above excerpt of respondent 9 indicates that she utilizes AI to assist with translating and understanding difficult vocabulary, then actively reworks the AI-provided material to maintain ownership and accuracy, using AI as a supportive linguistic tool rather than a substitute for writing. This idea aligns with AI-assisted comprehension and editing workflows that emphasize user-driven refinement (Mai & Tran, 2024).

Excerpt 6

Kebiasaan yang biasa saya lakukan ketika menggunakan AI adalah saat ingin menerjemahkan suatu kata, saya meminta AI untuk menjelaskan suatu materi secara rinci, lalu saya pahami kembali. (My usual habit when using AI is that when I want to translate a word, I ask AI to explain the material in detail, and then I understand it again.) (Respondent 3, Female, Semester 2)

Respondent 3 uses AI as a two-step language aid: first to obtain a detailed explanation of the material, then to translate with better comprehension, guiding the translation. This demonstrates a comprehension-enhanced translation workflow that emphasizes understanding before rendering into another language.

The above excerpts from women demonstrate structured, reflective, and pedagogical engagement with AI tools. These respondents use AI to identify errors in their own drafts, verify vocabulary appropriateness, and break down complex grammatical structures. They maintain an active locus of control, treating the AI as an advisor while making the final linguistic modifications themselves, thereby supporting a healthy scaffolding process that can drive genuine second-language acquisition.

Observed Challenges, Concerns, and Fair Use Recommendations

A major concern voiced by both genders was the threat of cognitive laziness and the potential erosion of genuine language learning. Students recognized that over-reliance on AI can hinder their long-term language acquisition. This concern was particularly articulated among female respondents, who worried about becoming passive learners and losing their critical thinking capacities:

Excerpt 7

AI terlalu memudahkan kita belajar sehingga kita malas-malasan dan lebih bergantung pada AI... AI bisa saja salah, jadi tetap lakukan riset dari berbagai sumber dan gunakan logika. (AI makes learning too easy for us, making us lazy and more dependent on AI... AI can be wrong, so always do your research from various sources and use logic.) (Respondent 2, Female, Semester 2)

Respondent 2 advocates a balanced approach to AI use in learning: employ AI as a prompt or starting point, but actively verify with varied sources and apply reasoning to prevent lazy or erroneous outcomes. This positions AI as a catalyst for but not a replacement of rigorous scholarship (Montenegro-Rueda et al., 2023).

Excerpt 8

Kekhawatiran saya adalah orang menjadi malas untuk berpikir dan menggunakan AI, lalu menelan hasilnya mentah-mentah tanpa mau berusaha memahami apakah itu benar. (My concern is that people will become lazy about thinking and using AI, and will simply accept the results without bothering to understand whether they are correct.) (Respondent 6, Female, Semester 8)

The respondent's statement reflects a cautious approach to AI-assisted learning, emphasizing that AI should augment, not replace, critical thinking. This response resonates with the epistemic vigilance framework, which prescribes evaluating the reliability and plausibility of information (including AI-generated content) and corroborating with multiple sources to avoid blind trust (Schiavo et al., 2026; Sperber et al., 2010). It also aligns with educational research that underscores the need for explicit strategies to maintain cognitive engagement and rigorous evaluation when AI is used in learning contexts (Montenegro Rueda et al., 2023; Pasquinelli et al., 2021; Yan, Pammer-Schindler, et al., 2025).

Excerpt 9

Kekhawatiran saya adalah, saya menjadi ketergantungan dengan AI, memilih untuk mengerjakan lewat AI dibanding dengan usaha sendiri. (My concern is that I will become dependent on AI, choosing to work through AI rather than doing things myself.) (Respondent 22, Female, Semester 6)

Respondent 22 warns against forming a habit of excessive reliance on AI, advocating maintaining personal cognitive effort and ensuring AI serves as a supportive partner rather than a substitute for one's own thinking and work. This perspective is consistent with broader concerns about cognitive offloading and the need to preserve autonomous learning and problem-solving abilities in AI-enhanced environments (Atchley et al., 2024; Fan et al., 2025; Seung & Basham, 2026; Yan, Greiff, et al., 2025).

In contrast, male students, while sharing the general fear of cognitive dependence, frequently centered their concerns around technical barriers, structural accuracy, or pedagogical mismatch, such as inconsistent formatting and rigid or overly formal syntax:

Excerpt 10

Kekhawatiran saya adalah bahwa jawaban AI, jika kita regenerate, bisa berbeda, sehingga membuat ragu mana jawaban yang benar. (My concern is that the AI's answers, if we regenerate them, could be different, making it unclear which answer is correct.) (Respondent 1, Male, Semester 6)

Respondent 1 is concerned about inconsistencies across regenerated AI responses and the consequent difficulty in determining correctness. The situation underscores the need for strategies that ensure reliability, transparency, and effective verification when using AI for answer generation (Dunker et al., 2026; Oetl et al., 2026; Tsim & Gutoreva, 2026; Woo et al., 2025).

Excerpt 11

Penggunaan kata yang tidak umum, sehingga kalimat tersebut menjadi sangat kaku... Jawaban kurang tepat, dan bahasanya terlalu beyond untuk seorang mahasiswa. (The use of uncommon words makes the sentence very stiff... The answer is not quite right, and the language is too beyond for a student.) (Respondent 2 & 4, Male, Semester 6)

These gender-based qualitative alignments reveal a distinct focus: while female students emphasize cognitive and psychological dimensions (such as dependency, academic integrity, and cognitive laziness), male students focus heavily on overcoming technical limitations, syntax rigidity, and platform reliability. To resolve these challenges and ensure fair, equitable, and responsible AI integration, students offered practical guidelines. The most common recommendation was that

teachers and lecturers must take an active role in demonstrating both the capabilities and the inherent limitations of AI. Students suggested that universities establish clear guidelines on permissible AI boundaries, actively teach prompt-engineering skills, and promote blended learning models that prioritize critical thinking over automated copying. They emphasized that AI should remain a "supporting reference" rather than a substitute for independent cognitive effort.

CONCLUSION

This study investigated students' perceptions of AI use in Indonesian EFL classes from a gender-based perspective, analyzing both quantitative self-reported dependence and qualitative subjective experiences. The quantitative analysis revealed that both male and female undergraduate students experience a moderate level of subjective dependency on AI tools, with no statistically significant differences in their mean scores (Female $M = 5.50/10$ vs. Male $M = 5.13/10$). This indicates that AI has become a deeply embedded utility across genders in higher language education.

However, the qualitative thematic analysis exposed clear gender-specific usage patterns and concerns. Female EFL students expressed considerably higher sensitivity to AI inaccuracies (+27% compared to males), greater awareness of lexical and translation context limitations, and far more systematic and critical proofreading and editing behaviors (+25% higher engagement) to verify AI-generated answers. Male students, while also acknowledging inaccuracies, approached AI with a stronger focus on direct convenience, speed, and cognitive assistance during high-difficulty tasks or looming deadlines.

These findings have vital implications for EFL pedagogy. Rather than implementing extreme prohibitions on AI, higher education institutions should adopt gender-responsive, critical-thinking-centered digital literacy programs. Educators must guide students in developing evaluative skills to critically analyze AI outputs, with a particular focus on helping male students adopt more rigorous, iterative validation habits, while addressing female students' concerns about data quality and academic access. Future research should expand on these findings by exploring larger sample sizes and investigating how these self-reported perceptions correlate with objective academic performance in language skills over time.

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