International Journal of Evaluation and Research in Education (IJERE)
Vol. 15, No. 1, February 2026, pp. 826~836
ISSN: 2252-8822, DOI: 10.11591/ijere.v15i1.35223

University students' perspectives on integrating generative AI into English language learning

Yong-Jik Lee[1], Masashi Otani[2]
[1]College of Sarim Honors, Changwon National University, Changwon, South Korea
[2]Language Education Center, Nagoya University, Nagoya, Japan

Article Info

Article history:

Received Mar 19, 2025
Revised Oct 9, 2025
Accepted Nov 16, 2025

Keywords:

Affective
AI
ChatGPT
Cognitive
ELLs

ABSTRACT

This study examines university students' perspectives on integrating artificial intelligence (AI) into their English language learning, with a focus on cognitive and affective factors. Using a mixed method, the research collected quantitative data from surveys and qualitative insights from individual interviews with English language learners (ELLs). Survey results showed that ELLs recognized the technical capabilities of generative AI, particularly its extensive and dynamic database and practical translation functions. ChatGPT demonstrated clear benefits in terms of its emotional impact, including enhancing task efficiency and motivating learners. ELLs appreciated its ability to save time and foster engagement, but its influence on building confidence in language learning was less pronounced. In the cognitive domain, ELLs highlighted both opportunities and risks. While recognizing the potential for improved efficiency, concerns emerged about overreliance on generative AI, reduced independent thinking, and the possibility of facilitating academic dishonesty. Future research should focus on developing guidelines and best practices to maximize the benefits of generative AI tools while addressing their limitations.

Corresponding Author:

Masashi Otani
Language Education Center, Nagoya University
Furo-cho, Chikusa-ku, Nagoya, Aichi 464-8601, Japan
Email: otani.masashi.t3@f.mail.nagoya-u.ac.jp

1. INTRODUCTION

Generative artificial intelligence (AI) has significantly influenced English language teaching (ELT) and learning by enabling personalized and adaptive instructional approaches. With ongoing technological advancements, AI provides enhanced support for English language acquisition through tools such as chatbots, automated writing assistants, and large language models like ChatGPT. These systems are transforming how English language learners (ELLs) interact with content, resulting in more interactive and efficient learning experiences [1]–[4]. The application of AI in English as a foreign language (EFL) context has attracted considerable scholarly attention in recent years. EFL learners, in particular, benefit from AI's ability to provide real-time, individualized feedback. Prior research has demonstrated that integrating AI tools into EFL instruction can improve language proficiency, boost learner confidence, and increase motivation. Given its capacity to address diverse linguistic needs and accommodate various learning preferences, generative AI offers promising solutions to the evolving demands of language education in increasingly globalized settings [5]–[8].

Many AI applications have been developed to support the four core language skills—listening, speaking, reading, and writing. Pronunciation and vocabulary training platforms enhance learners' auditory and oral skills, while tools such as ChatGPT, Grammarly, and Quillbot assist in writing development by

offering grammar correction, sentence structure suggestions, paraphrasing support, and idea generation. Recent studies have demonstrated that AI-powered platforms foster learner autonomy and engagement by providing individualized and adaptive learning support [9]–[12]. Comprehensive reviews have highlighted AI's significant contributions to adaptive learning in English language education [13], and empirical research has documented the usage patterns and learning impacts of AI-assisted tools among EFL learners [14]. Additionally, studies have linked AI writing tools with increased learner autonomy, although concerns regarding academic integrity and ethical usage have been raised [15]–[18].

Despite the growing familiarity among students and instructors regarding AI in educational settings, limited attention has been given to how university-level ELLs perceive generative AI tools within specific sociocultural contexts. Researchers have noted substantial gaps in understanding context-specific challenges and have advocated for more targeted studies to enhance AI integration across diverse educational environments [19], [20]. In particular, existing literature lacks detailed examinations of South Korean university contexts—an academically high-achieving population increasingly exposed to advanced educational technologies. South Korea represents an ideal research context due to its rapid adoption of educational innovations, nationwide emphasis on English proficiency, and substantial investment in AI-driven learning platforms. Investigating the experiences of South Korean university students can thus provide critical insights into how AI technologies interact with specific educational, cultural, and technological infrastructures. Moreover, South Korea's highly competitive academic culture and technological sophistication offer a unique lens for examining how generative AI may influence learner cognition, emotion, and engagement in language learning. Findings from this study have the potential to enrich existing global research and inform culturally responsive, pedagogically sound AI integration strategies applicable to other East Asian contexts with similar educational and technological characteristics.

Addressing this research gap is crucial for understanding the effective integration of AI in language education. Specifically, learner feedback and engagement play pivotal roles in realizing the pedagogical potential of AI-assisted tools. Therefore, this study explores South Korean university students' perceptions of generative AI in English language learning, with an emphasis on both cognitive and emotional dimensions. The study aims to inform future pedagogical strategies and guide the development of AI-integrated language programs by addressing the following research questions:

- Q1: how do university students perceive the usefulness of generative AI in English language learning?
- Q2: how do university students perceive the usefulness of generative AI concerning the emotional aspects of English language learning?
- Q3: how do university students perceive the usefulness of generative AI concerning the cognitive aspects of English language learning?

2. LITERATURE REVIEW

2.1. Generative AI and language learning

Integrating AI into language education has garnered considerable scholarly attention, particularly for its potential to personalize instruction, foster learner interaction, and promote autonomy. Prior studies have confirmed AI's effectiveness in supporting key language areas, including vocabulary acquisition, writing fluency, pronunciation accuracy, and learner motivation [21]–[25]. However, much of this literature remains primarily descriptive, emphasizing technological capabilities without sufficiently addressing learners' nuanced experiences, perceptions, and contextual challenges. This narrow technological focus limits understanding of how AI influences language learning processes from learners' cognitive and emotional perspectives, particularly within diverse sociocultural settings.

In the context of EFL, tools such as ChatGPT, Grammarly, and QuillBot have become prominent due to their ability to provide real-time, personalized feedback, encourage learner-generated language output, and support independent language practice [26]–[30]. Yet, despite clear pedagogical affordances, several studies highlight critical issues associated with generative AI tools, such as learners' potential overreliance, reduced critical thinking, and ethical concerns related to academic integrity [31]–[34]. These critiques highlight the need for comprehensive examinations of how learners critically engage with AI technologies, navigating both the cognitive benefits and the ethical complexities.

Recent studies from Western educational contexts offer valuable theoretical insights that are relevant to this research gap. For example, studies examining social robots and AI-mediated adaptive interactions have demonstrated significant cognitive and emotional benefits, suggesting that AI has the potential to facilitate deeper learner engagement through effectively responsive interactions [16]. Additionally, research has identified perceived usefulness, digital self-efficacy, and ethical considerations as critical determinants of students' intentions to use AI for academic purposes. This reinforces the need for targeted instructional strategies that enhance learners' ethical awareness and critical digital literacy [17].

Furthermore, investigations into cloud-based AI simulations have shown promise in promoting self-directed learning and developing learners' strategic thinking skills [18]. Integration of augmented reality with cloud-based technologies has also demonstrated positive outcomes for learner engagement, suggesting potential pathways to optimize AI-enhanced learning environments [19]. These Western studies collectively illustrate the capabilities of AI-driven technologies and highlight the necessity of critically informed instructional designs that align AI tools with meaningful pedagogical goals and learner needs.

Despite such developments, a significant research gap persists concerning learners' perceptions and emotional responses to generative AI, particularly in Asian higher education contexts [20]. Given the diverse sociocultural factors influencing learners' acceptance, engagement, and ethical considerations related to AI tools, this limitation is critical. Addressing this gap is especially relevant in South Korea, a technologically advanced society where educational policies emphasize the rapid integration of innovative learning technologies and high standards of English proficiency. Understanding Korean university students' cognitive and affective experiences with generative AI can provide essential insights that expand existing literature, inform culturally responsive pedagogy, and guide effective AI integration strategies within and beyond East Asian educational contexts.

2.2. Affective benefits of AI in language learning

Previous research has highlighted the intricate relationship between affective constructs and language learning outcomes, underscoring the importance of pedagogical approaches that integrate cognitive and emotional dimensions. AI-powered educational tools, such as conversational agents and adaptive learning platforms, have demonstrated considerable potential in addressing affective barriers to language acquisition. These technologies provide psychologically safe environments that support linguistic experimentation by offering immediate, non-judgmental feedback in low-stakes contexts. Empirical studies conducted in various educational settings support these claims. One study reported that voice-interactive AI chatbots significantly improved speaking proficiency among Korean EFL learners, enhancing motivation and reducing anxiety compared to traditional classroom instruction [11]. Another investigation involving 60 Chinese EFL students demonstrated substantial gains in grammar, vocabulary, reading, and writing skills when taught through AI-mediated instruction. Participants also showed increased motivation and self-regulation, which were attributed to personalized feedback and collaborative learning features that promoted learner autonomy [17].

Qualitative data from the same study revealed that the user-friendly and low-anxiety environments created by AI tools facilitated greater learner engagement and intrinsic motivation. These findings confirm the transformative role of AI technologies in complementing traditional instruction and reshaping the emotional dynamics of the language classroom. AI-enhanced tools contribute meaningfully to communicative competence and long-term language development by lowering affective filters, fostering persistence, increasing self-efficacy, and encouraging risk-taking in communication [18]–[20]. Consequently, educators and curriculum designers are encouraged to integrate AI-driven strategies into instructional frameworks to enhance affective and cognitive learning outcomes.

2.3. AI and cognitive development in language learning

From a cognitive perspective, generative AI offers affordances that align closely with constructivist and connectivist learning theories. Constructivism emphasizes experiential learning through personal engagement, inquiry, and reflection. AI's adaptive functionalities—personalized feedback, dynamic scaffolding, and real-time content adjustment—support learner-centered environments that promote cognitive development in language acquisition. The cognitive benefits of AI integration are highly dependent on pedagogically sound instructional design. As noted in prior research, the educational value of AI tools is not inherent in their technological capabilities but in their deliberate integration into tasks that foster critical thinking, synthesis, and reflection [21].

Effective AI-enhanced learning environments must be carefully structured to support active knowledge construction, promote inquiry and problem-solving, and facilitate the integration of diverse information sources. Empirical evidence supports the cognitive advantages of AI in language learning contexts. For instance, AI-supported reading tools have been shown to enhance comprehension by offering personalized scaffolding and adaptive questioning [10]. In a comparative study, students using AI-based personalized reading platforms outperformed those in traditional classrooms, demonstrating the effectiveness of adaptive content delivery and individualized feedback in supporting cognitive growth [19].

Additional research highlights the role of AI-driven storytelling applications in early childhood education, where interactivity and personalization have improved vocabulary acquisition, narrative comprehension, and cognitive-emotional development, particularly in bilingual and multicultural settings. Generative AI has also shown promise in early literacy development by delivering personalized storytelling

and interactive learning experiences that actively engage learners in comprehension and critical thinking. These findings collectively illustrate that well-designed AI interventions can enhance cognitive development by aligning with established learning theories while addressing individual learner needs.

2.4. Challenges and ethical considerations

Despite their affordances, AI language learning tools raise concerns about overreliance, critical literacy, and academic integrity. Without guided reflection, students may accept AI-generated suggestions passively, thereby undermining their ability to internalize language rules and make independent linguistic decisions [14]. This issue is particularly pronounced when learners use AI to produce complete assignments with minimal personal input. Ethical concerns have also emerged regarding authorship and attribution. Current generative AI systems, such as ChatGPT, do not fulfill the traditional criteria for academic authorship, and their use raises questions about the legitimacy of AI-generated content in scholarly work [11]. A lack of transparency in source attribution and content originality further compounds these risks, especially for ELLs who may lack the critical literacy skills to determine when and how to cite AI-generated material.

Global disparities in access to advanced AI technologies may also exacerbate existing digital and educational inequalities [11]. Researchers have identified risks such as plagiarism, reduced independent thinking, and diminished creativity resulting from uncritical reliance on AI tools [23], [24]. These studies advocate for the development of institutional policies, clear usage guidelines, and curricular interventions that address AI ethics, promote responsible citation practices, and foster digital literacy. Although AI technologies enhance students' technical proficiency and writing confidence, they also threaten originality and creativity. To mitigate these risks, comprehensive educational efforts must foster reflective engagement and ensure the ethical and practical use of AI in academic contexts.

3. METHOD

3.1. Study participants

This study examined Korean university students' perspectives on integrating AI into English language learning, particularly on cognitive and affective dimensions. The 79 participants were recruited through purposive sampling from a required general English communication course at a mid-sized national university. Practical considerations led to the decision to include 79 participants, as this number represented the complete enrollment of students across multiple sections of the course, allowing for comprehensive yet manageable data collection.

This sampling approach was specifically chosen to enhance representativeness. Since the selected course is mandatory for undergraduate students across various majors and academic year levels, it naturally provided a diverse demographic and academic profile reflective of the broader undergraduate EFL learner population in South Korean higher education contexts. Participants included students from various disciplines, with diverse English proficiency levels and academic years, thereby capturing the variability in learner experiences, attitudes, and interaction patterns with AI tools. Such diversity ensures that findings are generalizable and relevant to the typical EFL instructional settings encountered in Korean universities, providing meaningful insights into the broader implications of integrating generative AI in language learning.

Table 1 presents the demographic characteristics of the 79 participants enrolled in the study, including gender, academic year, major, and self-reported test of English for international communication (TOEIC) scores. The distribution highlights a predominance of first-year students from diverse academic backgrounds, offering a representative sample of Korean university-level EFL learners. Regarding gender, 62.0% of the participants were male (n=49) and 38.0% were female (n=30). The vast majority were freshmen (92.4%, n=73), followed by sophomores (5.1%, n=4), juniors (1.3%, n=1), and seniors (1.3%, n=1). This distribution mirrors typical enrollment patterns in foundational English courses, which first-year students predominantly take in South Korea. Participants also represented a wide range of academic fields: 51.9% (n=41) were majoring in science and engineering, 24.1% (n=19) in the arts, 12.7% (n=10) in humanities and social sciences, and 10.1% (n=8) in interdisciplinary or fusion majors. One participant (1.3%) was categorized as "other".

3.2. Survey instrument

This study employed a mixed-methods approach to examine university-level ELLs perceptions of integrating AI tools into English language learning. To quantitatively assess these perceptions, a survey instrument developed initially by previous researchers [25] was adapted specifically for this study's Korean educational context. The final adapted survey consisted of 14 items, targeting students' attitudes, motivations, perceived benefits, and concerns regarding AI-supported English instruction. A rigorous adaptation process was conducted to ensure the survey's suitability, validity, and reliability within the Korean academic environment. Initially, the original instrument was in English and underwent a structured

forward- and backward-translation process. The two bilingual researchers proficient in English and Korean, with extensive experience in English language education, independently translated the survey from English into Korean. Subsequently, two additional bilingual experts unfamiliar with the original version conducted a backward translation into English to ensure linguistic accuracy and conceptual equivalence. Discrepancies identified during this process were carefully discussed and resolved through consensus among all translators.

Table 1. Demographic information about study participants

Category		Frequency (n=79)	Percentage (%)
Gender	Male	49	62.0
	Female	30	38.0
Grade	Freshmen	73	92.4
	Sophomores	4	5.1
	Juniors	1	1.3
	Seniors	1	1.3
Major	Science and Engineering	41	51.9
	Humanities and Social Sciences	10	12.7
	Arts	19	24.1
	Fusion	8	10.1
	Other	1	1.3
TOEIC score	900 points or less	1	1.3
	800 points or less	5	6.3
	700 points or less	18	22.8
	600 points or less	1	1.3
	No score	54	68.4

Following translation, cultural adaptation was modified by revising specific survey items to reflect better local instructional practices, student learning environments, and typical classroom experiences in Korean general English courses. This step aimed to enhance participants' understanding and engagement with the survey items. To establish content validity and appropriateness, a panel of 5 English education experts, all holding doctoral degrees and possessing extensive tertiary-level EFL teaching experience in Korea, reviewed the adapted survey. The experts evaluated each item for clarity, relevance, and cultural alignment with the target student population. Their qualitative feedback was systematically analyzed, and minor revisions—primarily involving linguistic refinements and clarification of terminology—were implemented to improve the precision and comprehensibility of survey items. The structure of the questionnaire is detailed in Table 2. Reliability analysis using Cronbach's alpha revealed values ranging from .643 to .793 for individual constructs, with an overall Cronbach's alpha of .876, indicating strong internal consistency. These findings demonstrate that the instrument meets the established standards for reliability and validity, supporting its use in the study.

Table 2. Questionnaire structure and reliability

Category	Question	Number of questions	Cronbach's alpha
General usefulness	1. ChatGPT is a search engine similar to Google. 2. ChatGPT is a language model capable of generating texts based on basic keywords. 3. ChatGPT is created from a vast and continuously updated dataset. 4. ChatGPT can understand human requests and execute them accurately. 5. ChatGPT is a translation support tool. 6. ChatGPT is an online platform for learning foreign languages.	6	.790
Emotional aspects	1. I find ChatGPT to be a valuable tool in the classroom, motivating me to learn. 2. I think ChatGPT helps me save time in submitting assignments. 3. I feel more confident in my English learning when I have support from ChatGPT. 4. I find ChatGPT to be a powerful self-learning aid for my English learning.	4	.793
Cognitive aspects	1. I find ChatGPT to be unhelpful in the classroom and a time-waster. 2. I believe ChatGPT makes it easy for students to cheat on assignments and exams. 3. I am skeptical about the reliability of the Information provided by ChatGPT. 4. I think students may become lazier when using ChatGPT excessively.	4	.643
	All questions	14	.876

3.3. Data collection and analysis

This study employed a mixed-methods research design, combining quantitative and qualitative data collection and analysis to provide a comprehensive understanding of students' experiences with AI-supported

English language learning. The researchers selected a mixed-methods approach as particularly suitable for this investigation due to the participants' academic standing—most were first-year university students enrolled in general English courses, given their relatively limited exposure to university-level language instruction, employing surveys and interviews allowed for a more nuanced, in-depth exploration of their perceptions, challenges, and engagement with AI tools in their language learning journey.

Data collection occurred at the end of the Fall 2024 semester at Changwon National University. To gather quantitative data, a post-survey was administered during the final week of the semester following the distribution of informed consent forms. The 90 students were enrolled in general English courses offered through the university's liberal arts college, and 79 students completed the survey, yielding a high response rate. The survey assessed students' attitudes, perceived usefulness, and affective responses toward the integration of AI in their English learning. Subsequently, qualitative data were collected through individual interviews. The 4 students voluntarily participated and were grouped into three sessions, each lasting approximately 30 minutes. These interviews were conducted via Zoom to ensure accessibility and convenience. For quantitative data analysis, SPSS version 24 was utilized to produce descriptive statistics, enabling a general overview of learner perceptions across the sample.

The qualitative analysis followed the six-phase thematic analysis framework proposed by Braun and Clarke [35]. All interview sessions were recorded with participants' consent, and video files were reviewed repeatedly to ensure accurate transcription. Transcripts were stored securely on Google Drive and shared among the research team for collaborative coding. Initial codes and sub-codes were generated and then refined through iterative analysis cycles. Emerging themes were identified based on recurring patterns, participant similarities, and divergent viewpoints. The themes were abstracted and renamed to enhance clarity and facilitate data reduction during the final analysis stage. Ultimately, the qualitative findings were triangulated with the survey results, enabling a rich, multidimensional interpretation of students' experiences with AI in English language education. This integrative analysis contributed to a more holistic understanding of the pedagogical and emotional dimensions of AI-mediated learning in higher education.

4. RESULTS

4.1. Survey results

The descriptive statistics in Table 3 reveal insightful information about participants' perceptions of the usefulness of generative AI, specifically ChatGPT, in English language learning. The analysis is divided into three key aspects: its usefulness, emotional, and cognitive aspects. Regarding its general usefulness, participants recognized ChatGPT's potential in supporting language learning due to its advanced technical features. The highest-rated items in this category were statements highlighting that ChatGPT is built on an extensive and continually updated database and an effective tool for translation, with a mean score of 3.58, indicating strong agreement. These responses highlight that participants value the platform's ability to leverage vast amounts of data and provide practical support for tasks such as text translation. Another relatively high score (M=3.42, SD=.914) was observed for ChatGPT's ability to accurately process and respond to user queries, suggesting moderate confidence in its ability to understand and execute user inputs effectively. However, ChatGPT was less frequently seen as a general-purpose information retrieval tool, receiving a lower score (M=3.09, SD=1.157) when participants were asked about its similarity to conventional search engines like Google. This suggests that participants perceive ChatGPT as more specialized in its functionality.

Regarding the emotional aspects of ChatGPT's usefulness, participants generally expressed positive perceptions, particularly its efficiency and motivational potential. The highest-rated item in this section (M=3.78, SD=.996) indicated that ChatGPT helps participants save time when completing assignments, highlighting its role as a time-efficient tool for task completion. Similarly, participants found ChatGPT to be a resource that encourages engagement and motivation in learning contexts, as reflected by a relatively high score (M=3.44, SD=1.022). However, its impact on building confidence in language learning was slightly less pronounced, as indicated by a lower mean score (M=3.24, SD=.909). This suggests that while ChatGPT is valued for its practical benefits, participants may not see it as a significant factor in boosting their self-assurance in English learning.

In the cognitive aspect, the responses highlight potential benefits and concerns regarding the use of ChatGPT in language learning. The highest-rated statement in this category (M=3.35, SD=.975) reflected participants' concerns that excessive reliance on ChatGPT could lead to a decrease in independent thinking and mental effort among learners. A similar level of agreement was observed for the statement suggesting ChatGPT might facilitate academic dishonesty, such as cheating on assignments or exams (M=3.34, SD=.973). These findings underscore ethical and practical challenges associated with integrating ChatGPT into academic contexts. On the other hand, the statement suggesting that ChatGPT is unproductive and wastes time received the lowest score in this category (M=2.67, SD=.996), indicating that participants largely

disagreed with this notion and generally saw ChatGPT as a valuable educational tool. The results offer a balanced perspective on ChatGPT's role in learning English. Participants recognized its practical applications and motivational impact while acknowledging potential challenges, such as overreliance and ethical concerns.

Table 3. Descriptive statistics results of perceptions of integrating AI into English language learning

Category	Question	M	SD
General usefulness	1. ChatGPT is a search engine similar to Google.	3.09	1.157
	2. ChatGPT is a language model capable of generating texts based on basic keywords.	3.46	.984
	3. ChatGPT is created from a vast and continuously updated dataset.	3.58	1.020
	4. ChatGPT can understand human requests and execute them accurately.	3.42	.914
	5. ChatGPT is a translation support tool.	3.58	1.033
	6. ChatGPT is an online platform for learning foreign languages.	3.14	.971
Emotional aspects	1. I find ChatGPT to be a valuable tool in the classroom, motivating me to learn.	3.44	1.022
	2. I think ChatGPT helps me save time in submitting assignments.	3.78	.996
	3. I feel more confident in my English learning when I have support from ChatGPT.	3.24	.909
	4. I find ChatGPT to be a powerful self-learning aid for my English learning.	3.32	.870
Cognitive aspects	1. I find ChatGPT to be unhelpful in the classroom and a time-waster.	2.67	.996
	2. I believe ChatGPT makes it easy for students to cheat on assignments and exams.	3.34	.973
	3. I am skeptical about the reliability of the information provided by ChatGPT.	3.13	.992
	4. I think students may become lazier when using ChatGPT excessively.	3.35	.975

4.2. Findings from the interviews

The qualitative analysis revealed three overarching themes directly aligned with the research questions and the quantitative survey findings: i) increased emotional comfort and motivation; ii) cognitive scaffolding and linguistic development; and iii) critical awareness and cautious use of generative AI. First, participants described generative AI tools, particularly ChatGPT and voice-interactive platforms, as creating low-anxiety environments that enhanced their emotional comfort and motivation for language practice. This qualitative insight directly supported survey results where students rated ChatGPT highly for time efficiency (M=3.78) and maintaining motivation (M=3.44). Interviewees emphasized how AI interactions' non-judgmental, private nature reduced anxiety around making mistakes, facilitating frequent practice. For example, participants reported increased confidence when practicing pronunciation privately, aligning with the moderate but comparatively lower survey rating for confidence-building (M=3.24). Thus, qualitative findings underscore that while generative AI offers significant emotional support, it complements rather than replaces human encouragement.

Second, qualitative findings highlighted the role of AI in providing cognitive scaffolding, particularly in writing tasks. Participants explicitly described AI as beneficial for identifying grammatical errors, improving sentence structure, and clarifying meaning, thus promoting deeper cognitive engagement. This theme closely aligns with survey findings indicating positive perceptions of AI's technical ability to understand student input (M=3.42) and provide helpful feedback (M=3.58). Interviewees further articulated how AI's explanatory feedback fostered metacognitive awareness and facilitated the development of improved self-editing skills. One participant noted, "*AI shows me what's wrong with my sentence and explains why. I learn more that way than just getting the answer*." This qualitative insight complements and deepens the quantitative evidence by clarifying how AI tools actively contribute to learners' cognitive development rather than merely functioning as passive supports.

Third, despite recognizing AI's benefits, participants expressed a significant level of critical awareness and cautioned against overreliance. Qualitative responses underscored skepticism toward the accuracy of AI-generated outputs. They highlighted concerns about reduced critical thinking and potential academic dishonesty, corresponding directly with survey concerns regarding cheating (M=3.34) and passive thinking (M=3.35). Participants consistently recommended balancing AI with traditional instruction and human-mediated feedback to ensure rigorous, authentic learning. For instance, one student remarked, "*sometimes AI gives vague or inaccurate answers. That's why I only use it to get ideas, not for full answers*." This nuanced qualitative perspective enriches the survey findings, clarifying that participants viewed generative AI as a practical supplementary resource, rather than a comprehensive replacement for human instruction or critical thinking processes. Integrating qualitative insights with quantitative survey results provides a coherent narrative, illustrating a balanced view of the affordances and limitations of generative AI. These combined findings suggest that the effective implementation of AI tools in English language instruction requires intentional pedagogical strategies that emphasize emotional support, cognitive scaffolding, and critical digital literacy.

5. DISCUSSION

This study examined Korean university students' perceptions of integrating generative AI tools into English language learning, with a focus on the cognitive and emotional dimensions. Findings indicated an overall positive attitude toward AI-assisted learning, balanced by nuanced concerns regarding its limitations. Students perceived generative AI tools as beneficial for enhancing learning efficiency, motivation, and engagement, consistent with prior research emphasizing AI's role in fostering learner autonomy and intrinsic motivation in EFL contexts [16]–[20]. Specifically, AI platforms such as ChatGPT and Grammarly reduced writing anxiety and improved sentence construction skills, reinforcing previous evidence that AI-mediated interactions effectively lower affective barriers and provide supportive, low-stakes environments for language practice [21]–[25].

Qualitative insights enriched quantitative results by illustrating how AI interactions provided students with emotional reassurance and cognitive scaffolding, thereby enhancing their learning experience. Students highlighted that private, non-judgmental interactions with AI boosted their confidence, reduced anxiety, and encouraged greater participation in productive tasks, particularly in writing and speaking. This outcome aligns closely with Krashen's affective filter hypothesis [36], which theorizes that lowering learners' anxiety significantly facilitates language acquisition [31], [32]. Furthermore, the cognitive benefits reported by students reinforce sociocultural and sociocognitive frameworks, suggesting AI-driven interactions act as mediated learning experiences, enhancing learners' self-regulation, metacognition, and cognitive engagement [33], [34].

However, participants expressed significant concerns about potential overreliance on AI, risks to academic integrity, and the accuracy of AI-generated outputs. These concerns closely align with recent studies that highlight the ethical complexities and the critical importance of digital literacy and critical engagement in AI-integrated learning contexts [26]–[30]. For example, previous research has shown that excessive dependency on AI can limit learners' critical thinking, originality, and deeper cognitive engagement with learning tasks, echoing the cautious stance participants expressed in this study [27], [28].

Theoretically, this research expands existing literature on AI-mediated language learning by explicitly addressing how generative AI impacts learners' emotional and cognitive dimensions. It contributes to the evolving discourse on learner-centered and effectively informed frameworks, reinforcing the importance of integrating emotional comfort and metacognitive awareness into language pedagogy [16], [18], [32]. The alignment between the current findings and established theoretical constructs, such as affective filtering and mediated learning, underscores the necessity of embedding AI tools thoughtfully into pedagogical practices rather than treating them as standalone solutions.

Practically, this study underscores the critical need for strategically integrating AI into English language curricula. Educators are advised to explicitly address the practical and ethical use of generative AI tools, positioning them as complementary aids rather than replacements for human instruction and peer interaction. Structured guidance can help learners critically evaluate AI-generated suggestions, fostering responsible and reflective engagement with digital tools [29], [30]. Additionally, institutions should prioritize comprehensive AI literacy training to equip students with the skills necessary for responsible digital tool usage, enhancing academic integrity and digital citizenship.

6. CONCLUSION

The findings of this study offer valuable insights into the practical, emotional, and cognitive aspects of integrating generative AI tools into English language learning. While highlighting the substantial potential of AI technologies, the results also underscore critical limitations that must be addressed to ensure the effective implementation of education. To enhance learners' practical understanding and informed use of AI, instructors should explicitly introduce the distinct functionalities and limitations of platforms like ChatGPT, distinguishing them from comprehensive research engines. For example, structured comparative evaluation tasks could require students to analyze and critically differentiate between outputs from AI-generated content and traditional online resources, thereby fostering nuanced digital literacy and informed tool selection.

Considering affective factors, the findings recommend that educators adopt explicit human-centered, blended learning frameworks. Specifically, language courses should combine AI-based practice sessions with personalized instructor feedback and peer collaboration, thereby nurturing sustained learner confidence and resilience. Instructors could implement regular peer feedback sessions following AI interactions to reinforce emotional support, peer accountability, and communicative confidence in authentic, human-mediated contexts.

From a cognitive perspective, educators must actively mitigate the risk of overreliance on AI by integrating tasks that require critical reflection and active engagement. Concrete strategies include assigning reflective writing tasks in which students systematically critique AI-generated suggestions, justify revisions, and articulate their reasoning processes. Implementing "think-aloud" protocols and guided AI-debriefing classroom discussions can enhance learners' metacognitive awareness and independent language processing skills.

To embed critical AI engagement within curricula, ELT programs should incorporate collaborative, project-based assignments that are explicitly designed to position AI tools as partners rather than primary content generators. Clearly defined rubrics should assess students' critical interaction with AI-generated materials, evaluating their ability to analyze, validate, and appropriately integrate AI suggestions into their original work. Moreover, institutions should implement targeted professional development programs to train instructors in effectively recognizing and leveraging AI affordances, while adapting AI integration strategies according to students' proficiency levels, cognitive preferences, and digital literacy competencies. Such instructor-focused training ensures more intentional, pedagogically sound AI integration.

Finally, clearly articulated AI-use policies and comprehensive student guidelines must be developed at the institutional level to promote ethical, responsible practices. Actionable steps include implementing mandatory AI literacy training modules, integrating AI-aware plagiarism detection systems, and establishing student-led peer mentoring programs on AI ethics and responsible digital citizenship. By focusing on these explicit recommendations, educational stakeholders can strategically leverage generative AI to foster autonomous, critically engaged, and ethically responsible ELLs.

FUNDING INFORMATION

This research was supported by Changwon National University in 2025-2026.

AUTHOR CONTRIBUTIONS STATEMENT

This journal uses the Contributor Roles Taxonomy (CRediT) to recognize individual author contributions, reduce authorship disputes, and facilitate collaboration.

Name of Author	C	M	So	Va	Fo	I	R	D	O	E	Vi	Su	P	Fu
Yong-Jik Lee	✓	✓	✓	✓	✓	✓		✓	✓	✓			✓	
Masashi Otani		✓				✓		✓	✓	✓	✓	✓		

C : **C**onceptualization
M : **M**ethodology
So : **So**ftware
Va : **Va**lidation
Fo : **Fo**rmal analysis
I : **I**nvestigation
R : **R**esources
D : **D**ata Curation
O : Writing - **O**riginal Draft
E : Writing - Review & **E**diting
Vi : **Vi**sualization
Su : **Su**pervision
P : **P**roject administration
Fu : **Fu**nding acquisition

CONFLICT OF INTEREST STATEMENT

The authors declare that they have no competing financial interests or personal conflicts of interest.

ETHICAL APPROVAL

Every process involving human subjects in this study was conducted rigorously in accordance with the ethical guidelines outlined in the Declaration of Helsinki, which governs the ethical handling of human subjects in research. All participants were given a thorough informed consent form outlining the study's goal, voluntary participation, procedures, possible hazards and benefits, and the right to withdraw without penalty before data collection. Participants signed the consent form before completing the survey or participating in an interview. All gathered data were anonymized and stored securely in encrypted digital forms, accessible only to the research team, thereby further safeguarding participant confidentiality.

DATA AVAILABILITY

The datasets used and/or analyzed during the current study are available from the corresponding author, [MO], upon reasonable request.

REFERENCES

[1] G.-J. Hwang, H. Xie, B. W. Wah, and D. Gašević, "Vision, challenges, roles and research issues of artificial intelligence in education," *Computers and Education: Artificial Intelligence*, vol. 1, p. 100001, 2020, doi: 10.1016/j.caeai.2020.100001.

[2] M. Montenegro-Rueda, J. Fernández-Cerero, J. M. Fernández-Batanero, and E. López-Meneses, "Impact of the implementation of ChatGPT in education: a systematic review," *Computers*, vol. 12, no. 8, p. 153, Jul. 2023, doi: 10.3390/computers12080153.

[3] R. Jiang, "How does artificial intelligence empower EFL teaching and learning nowadays? A review on artificial intelligence in the EFL context," *Frontiers in Psychology*, vol. 13, p. 1049401, Nov. 2022, doi: 10.3389/fpsyg.2022.1049401.

[4] A. N. Wulyani *et al.*, "Patterns of utilizing AI-assisted tools among EFL students: need surveys for assessment model development," *LLT Journal: A Journal on Language and Language Teaching*, vol. 27, no. 1, pp. 157–173, Apr. 2024, doi: 10.24071/llt.v27i1.7966.
[5] J. Li, J. Huang, W. Wu, and P. B. Whipple, "Evaluating the role of ChatGPT in enhancing EFL writing assessments in classroom settings: a preliminary investigation," *Humanities and Social Sciences Communications*, vol. 11, no. 1, p. 1268, Sep. 2024, doi: 10.1057/s41599-024-03755-2.
[6] B. Irwin, "Exploring generative AI tools for English language learning: student adoption and perceptions," *Sophia University Junior College Division Faculty Journal*, vol. 45, pp. 127–137, 2024.
[7] Y. Zhang and C. Dong, "Unveiling the dynamic mechanisms of generative AI in English language learning: a hybrid study based on fsQCA and system dynamics," *Behavioral Sciences*, vol. 14, no. 11, p. 1015, Oct. 2024, doi: 10.3390/bs14111015.
[8] A. N. Minh, "Leveraging ChatGPT for enhancing English writing skills and critical thinking in university freshmen," *Journal of Knowledge Learning and Science Technology*, vol. 3, no. 2, pp. 51–62, Jun. 2024, doi: 10.60087/jklst.vol3.n2.p62.
[9] V. Koc, "Generative AI and large language models in language preservation: opportunities and challenges," *arXiv*: 2501.11496. 2025.
[10] Y. J. Lee and R. O. Davis, "A case study of implementing generative AI in university's general English courses," *Contemporary Educational Technology*, vol. 16, no. 4, p. ep533, Oct. 2024, doi: 10.30935/cedtech/15218.
[11] D.-E. Han, "The effects of voice-based AI chatbots on Korean EFL middle school students' speaking competence and affective domains," *Asia-Pacific Journal of Convergent Research Interchange*, vol. 6, no. 7, pp. 71–80, Jul. 2020, doi: 10.47116/apjcri.2020.07.07.
[12] S. Grubaugh, G. Levitt, and D. Deever, "Harnessing AI to power constructivist learning: an evolution in educational methodologies," *EIKI Journal of Effective Teaching Methods*, vol. 1, no. 3, pp. 81–83, Sep. 2023, doi: 10.59652/jetm.v1i3.43.
[13] X. Chen, H. Xie, and G.-J. Hwang, "A multi-perspective study on artificial intelligence in education: grants, conferences, journals, software tools, institutions, and researchers," *Computers and Education: Artificial Intelligence*, vol. 1, p. 100005, 2020, doi: 10.1016/j.caeai.2020.100005.
[14] J. Roe, W. A. Renandya, and G. M. Jacobs, "A review of AI-powered writing tools and their implications for academic integrity in the language classroom," *Journal of English and Applied Linguistics*, vol. 2, no. 1, pp. 22–30, Jun. 2023, doi: 10.59588/2961-3094.1035.
[15] H. Yang, H. Kim, J. H. Lee, and D. Shin, "Implementation of an AI chatbot as an English conversation partner in EFL speaking classes," *ReCALL*, vol. 34, no. 3, pp. 327–343, Sep. 2022, doi: 10.1017/S0958344022000039.
[16] H. Qiao and A. Zhao, "Artificial intelligence-based language learning: illuminating the impact on speaking skills and self-regulation in Chinese EFL context," *Frontiers in Psychology*, vol. 14, p. 1255594, Nov. 2023, doi: 10.3389/fpsyg.2023.1255594.
[17] L. Wei, "Artificial intelligence in language instruction: impact on English learning achievement, L2 motivation, and self-regulated learning," *Frontiers in Psychology*, vol. 14, p. 1261955, Nov. 2023, doi: 10.3389/fpsyg.2023.1261955.
[18] N. Li, L. Zhang, K. L. Lau, and Y. Liang, "Predicting Chinese language learners' ChatGPT acceptance in oral language practices: the role of learning motivation and willingness to communicate," *Journal of Technology and Chinese Language Teaching*, vol. 15, no. 1, pp. 25–48, 2024.
[19] M. T. Hidayat, "Effectiveness of AI-based personalized reading platforms in enhancing reading comprehension," *Journal of Learning for Development*, vol. 11, no. 1, pp. 115–125, Mar. 2024, doi: 10.56059/jl4d.v11i1.955.
[20] B. Peña-Acuña and R. Corga Fernandes Durão, "Learning English as a second language with artificial intelligence for prospective teachers: a systematic review," *Frontiers in Education*, vol. 9, p. 1490067, Nov. 2024, doi: 10.3389/feduc.2024.1490067.
[21] R. Luckin, W. Holmes, M. Griffiths, and L. B. Forcier, *Intelligence unleashed: an argument for AI in education*. London: Open Ideas at Pearson, 2016.
[22] G. Chen, "The impacts of AI-driven storytelling applications on language acquisition and literacy development in early childhood education: a systematic review," *Asian Journal of Advanced Research and Reports*, vol. 18, no. 11, pp. 1–12, Oct. 2024, doi: 10.9734/ajarr/2024/v18i11770.
[23] M. Perkins, "Academic integrity considerations of AI large language models in the post-pandemic era: ChatGPT and beyond," *Journal of University Teaching and Learning Practice*, vol. 20, no. 2, pp. 1–24, Jan. 2023, doi: 10.53761/1.20.02.07.
[24] C. Zhai, S. Wibowo, and L. D. Li, "The effects of over-reliance on AI dialogue systems on students' cognitive abilities: a systematic review," *Smart Learning Environments*, vol. 11, no. 1, p. 28, Jun. 2024, doi: 10.1186/s40561-024-00316-7.
[25] N. Aini, I. Kurniarahman, U. Widiati, B. Y. Cahyono, and Y. Basthomi, "Indonesian university students' perspectives on integrating AIEd into English language learning," *Issues in Educational Research*, vol. 34, no. 3, pp. 803–824, 2024.
[26] P. Polakova and P. Ivenz, "The impact of ChatGPT feedback on the development of EFL students' writing skills," *Cogent Education*, vol. 11, no. 1, p. 2410101, Dec. 2024, doi: 10.1080/2331186X.2024.2410101.
[27] S. Aravantinos, K. Lavidas, I. Voulgari, S. Papadakis, T. Karalis, and V. Komis, "Educational approaches with AI in primary school settings: a systematic review of the literature available in Scopus," *Education Sciences*, vol. 14, no. 7, p. 744, Jul. 2024, doi: 10.3390/educsci14070744.
[28] F. Xiao, S. Zhu, and W. Xin, "Exploring the landscape of generative AI (ChatGPT)-powered writing instruction in English as a foreign language education: a scoping review," *ECNU Review of Education*, pp. 1–19, Jan. 2025, doi: 10.1177/20965311241310881.
[29] Y. Wang, "A study on the efficacy of ChatGPT-4 in enhancing students' English communication skills," *Sage Open*, vol. 15, no. 1, pp. 1–15, Jan. 2025, doi: 10.1177/21582440241310644.
[30] A. J. Esteban *et al.*, "Undergraduate students' perceptions on the use of ChatGPT for English learning at a Korean university," *rEFLections*, vol. 32, no. 2, pp. 994–1016, Aug. 2025, doi: 10.61508/refl.v32i2.282889.
[31] G. Lampropoulos and S. Papadakis, "The educational value of artificial intelligence and social robots," in *Social Robots in Education: How to Effectively Introduce Social Robots into Classrooms*, G. Lampropoulos and S. Papadakis, Eds., Cham: Springer International Publishing, 2025, pp. 3–15, doi: 10.1007/978-3-031-82915-4_1.
[32] K. Lavidas *et al.*, "Determinants of humanities and social sciences students' intentions to use artificial intelligence applications for academic purposes," *Information*, vol. 15, no. 6, p. 314, May 2024, doi: 10.3390/info15060314.
[33] S. Papadakis *et al.*, "Revolutionizing education: using computer simulation and cloud-based smart technology to facilitate successful open learning," in *CEUR Workshop Proceedings*, 2023, pp. 1–18.
[34] S. Papadakis *et al.*, "Unlocking the power of synergy: the joint force of cloud technologies and augmented reality in education," in *CEUR Workshop Proceedings*, 2023, pp. 1–23.
[35] V. Braun and V. Clarke, "What can 'thematic analysis' offer health and wellbeing researchers?" *International Journal of Qualitative Studies on Health and Well-being*, vol. 9, no. 1, p. 26152, Jan. 2014, doi: 10.3402/qhw.v9.26152.
[36] K. Lichtman and B. VanPatten, "Was Krashen right? Forty years later," *Foreign Language Annals*, vol. 54, no. 2, pp. 283–305, Jul. 2021, doi: 10.1111/flan.12552.

BIOGRAPHIES OF AUTHORS

Yong-Jik Lee obtained a Bachelor's Degree in English from Chung-Ang University and a Master's Degree in teaching English as a second language (TESL) from Indiana State University, USA. He enhanced his academic career by earning a Ph.D. in Curriculum and Instruction from the University of Florida, USA. Lee's groundbreaking contributions to AI-enhanced English instruction have a profound influence on the academic trajectories of both local and international students, offering innovative solutions to educational challenges. He can be contacted at email: yongjiklee@changwon.ac.kr; fhlyongko@naver.com.

Masashi Otani is a lecturer at the Language Education Center at Nagoya University. He holds a Ph.D. in Curriculum and Instruction, with a specialization in ESOL/Bilingual education from the University of Florida. His research focuses on heritage language education, intercultural collaborative learning, and digital citizenship. As a multilingual education practitioner, he is a consultant for multiple NPOs promoting multiculturalism in Aichi Prefecture, Japan. He can be contacted at email: otani.masashi.t3@f.mail.nagoya-u.ac.jp.