

Developing Critical AI Literacy among Vietnamese EFL Students: Risk Awareness and Sustainable Generative AI Use

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ABSTRACT

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Generative artificial intelligence (GenAI) tools are increasingly integrated into English as a Foreign Language (EFL) learning, raising concerns about over-reliance, skill erosion, and ethical use. While previous research has examined student adoption of GenAI, limited attention has been paid to how learners' risk awareness moderates reliance and supports sustainable use, particularly in non-Western EFL contexts. This study reports on a mixed-methods study of 199 undergraduate and postgraduate students at two Vietnamese universities. Data were collected through an online survey and open-ended responses and analyzed using descriptive and inferential statistics alongside thematic analysis. The findings show that students who are aware of GenAI-related risks report significantly lower reliance on AI tools and greater confidence in independent task completion. Qualitative results further identify learner- and teacher-endorsed strategies for balancing benefits and risks. The study highlights critical AI literacy, grounded in risk awareness, as a key mechanism for sustainable and ethical GenAI integration in EFL education.

Introduction

Generative artificial intelligence (GenAI) tools such as ChatGPT, Google Gemini, Grok, and other large language models (LLMs) have rapidly become integrated into students' academic practices such as brainstorming, composing, refining, and checking grammar, among other tasks (Galaczi & Luckin, 2024; Kasneci et al., 2023). In language-learning contexts, these tools provide immediate support, adaptive feedback, and opportunities for lower-stakes practice (Le et al., 2025; Nguyen, 2024; Ta & Nghiem, 2024). These features are especially useful in large classes, where instructors often lack the capacity to provide personalized feedback.

Additionally, the increasing use of GenAI has raised concerns that students may become too dependent on it, preventing them from developing independent critical thought and limiting cognitive engagement with the material (Hsu & Silalahi, 2024; Pangrazio & Sefton-Green, 2022).

The advantages, disadvantages, and allowable limits of an AI-based system's use should not be overlooked when utilizing technology in many contexts; however, consideration needs to be given as to how these systems affect learners' development (Zhai et al., 2024, p. 2). By providing scaffolding to enable learners to succeed, AI technology (GenAI) has the potential to create new challenges and opportunities for learners during EFL instruction. Many learners may find the same productivity-related skills of speaking and writing to be difficult and will need the benefit of sustained, concerted effort in order to succeed in these areas (Vygotsky, 1978; Wood et al., 1976). Therefore, educators and language instructors should develop effective uses of AI technologies and use them as scaffolds within learners' "zone of proximal development" (Vygotsky, 1978) to help them maximize their potential. The competing dynamics between using AI technology in support of independent practice and supporting independent practice with traditional means indicate that educators and language instructors need to go beyond the purely instrumental use of technology to a more critical examination of how learners perceive the benefits, risks, and permissible limits regarding AI technology.

Vietnam provides an instructive sociocultural and institutional context for examining these dynamics. The national EFL landscape is shaped by the National Foreign Language Project (MOET, 2020) and long-standing instructional traditions that emphasize examination performance and teacher-centered pedagogy (Dang & Norris, 2024; Nguyen et al., 2021). These aspects of disposition play a role in how students select and modify new learning tools. Previous studies indicate that Vietnamese learners can quickly adopt digital tools for exam-focused learning and varying degrees of learner autonomy in long-term skills development (Nguyen & Le, 2012; Nguyen & Trinh, 2023). In this context, GenAI quickly becomes the standard model for comparison, and a related question is whether students are aware of the potential risks of high dependence and how they anticipate balancing technical support with autonomous language learning.

Against this backdrop, this study presents an exploratory case study of undergraduate EFL students' perceptions of GenAI-related risks and their reported patterns of use at two Vietnamese universities in Hanoi. Applying the survey results from 199 students, the study describes their awareness of AI-related risks (e.g., academic integrity, overreliance on it, data privacy, and epistemic reliability), their reported reliance on GenAI for learning tasks in English, and the strategies they propose to counter potential dependency. Rather than making causal or generalizing claims, the study takes a diagnostic, context-specific stance by treating risk awareness as a constitutive part of critical AI literacy. In this way, critical AI literacy is conceived of as a network of cognitive, ethical, and metacognitive skills that facilitate responsible and reflective interaction with AI technologies in an educational setting (Pangrazio & Sefton-Green, 2022).

Literature review

The emergence of GenAI in language education has been framed both as a major technological development and as a pedagogical challenge. Much of the existing literature highlights GenAI's immediate affordances, including accelerated drafting, expanded lexical options, and ubiquitous feedback. At the same time, a more critical reading of this work reveals important conceptual, methodological, and contextual blind spots that complicate confident claims about long-term educational value. This review synthesizes research on both the promised benefits and documented risks of GenAI, interrogates the empirical basis of prevailing claims, and identifies specific gaps that motivate the present study.

From CALL to GenAI: continuity and rupture

By reviewing how GenAI has developed over time, both the similarities to previous uses of language technology and some of the truly INNOVATIVE features of GenAI can be identified. Early Computer Assisted Language Learning (CALL) (i.e., first generation) used a behaviorist approach to language learning: repetition and automated feedback were the primary components contributing to these systems' success. However, although some students had excellent opportunities to interact with the technology, most were severely limited in the time available for continued use. Klimova & Pikhart (2023) note that later generations of web-based technology have increased the availability of various types of multimedia materials for all students and offered learners more sustained opportunities to engage with language.

However, GenAI marks a greater departure from previous generations of CALL technologies by giving learners on-demand access to generate cohesive, often proficient language. With this capability comes a new complexity of both continuity and disruption; previous technologies were primarily tools that allowed for ongoing learner practice/scaffolding, while GenAI now provides the potential (for some) to replace a portion of their own productive language with generated language. These representations present new challenges for constructivist and cognitive tools arguments, which expect active knowledge construction and gradual withdrawal of teacher support (Jonassen et al., 1995; Wood et al., 1976; Vygotsky, 1978). Treating GenAI as simply another instructional resource therefore risks underestimating how it may recalibrate the balance between support, effort, and learner agency, with implications for how core learning processes are enacted in practice (Mackey & Gass, 2015; Reinders & Benson, 2017).

Promised affordances: persuasive but partial evidence

An expanding body of research has identified task-level advantages associated with the use of GenAI in language learning. Reported gains include increased writing fluency, greater lexical diversity, and reduced affective load during drafting processes (Galaczi & Luckin, 2024; Dao, 2026; Nguyen et al., 2026; Tang, 2025). In instructional settings where teacher feedback is constrained, GenAI has also been shown to function as a scalable source of individualized assistance (Dao, 2026; Tang, 2025). Taken together, these studies provide credible evidence for the short-term usefulness of GenAI in supporting specific learning activities.

At the same time, the empirical base is shaped largely by short-term interventions, tightly delimited tasks, and learners' self-reported experiences. Evidence for sustained growth in broader dimensions of communicative competence, such as spontaneous spoken interaction, or for transfer to situations without AI support remains relatively limited (Galaczi & Luckin, 2024; Zou et al., 2024). Consequently, while benefits for drafting and vocabulary-related work are reasonably well established, stronger claims about stronger or longer-term pedagogical effects should be cautiously made.

Documented risks: dependency, skill imbalance, and ethics

While many of the benefits of GenAI use are documented, there are also numerous risks in the literature related to unreflective or overuse of the technology. These risks include learner dependence, fewer opportunities for generative practice, and unequal development of writing versus oral skills (Floridi, 2021; Hsu & Silalahi, 2024; Lee et al., 2025). Empirical studies show that dependence on AI technology has reduced creativity and analytical skills, as well as variety and innovation in text-production learning (Farkaš, 2024; Lee et al., 2025). As Nguyen (2025) emphasizes, AI also raises ethical and structural issues related to academic integrity, data privacy, and algorithmic bias.

These issues of dependence on AI are not simply an academic concern; there are documented instances of improper use of AI and incorrect AI-generated content leading to epistemic distortion and pedagogical loss where there is a lack of critical oversight.

Methodological and conceptual limitations in the extant literature

Several limitations in the literature can be identified across this body of work. The limitations, first, are largely based on the use of cross-sectional and/or short-term designs and/or self-report data to create evidence for long-term learning trajectories or causal mechanisms (Creswell & Clark, 2018). Second, most research focuses on Western contexts with high levels of technological support, compared with localized studies in Southeast Asia and Vietnam (Dao, 2026; Nguyen & Le, 2012; Nguyen et al., 2026). Third, the literature often confuses documenting technology use with demonstrating learning outcomes; just because students use GenAI does not mean GenAI has been shown to enhance learning (Selwyn, 2016, 2019). Lastly, the current literature on AI literacy is mostly normative or programmatic; relatively few researchers study or empirically evaluate how learners enact and experience AI literacy in practice (Nguyen et al., 2026; Pangrazio & Sefton-Green, 2022). Therefore, context-sensitive, empirically grounded accounts of how learners perceive and regulate the use of AI technologies are needed.

The contextual importance of culture and assessment regimes

Institutional and cultural conditions influence the adoption and interpretation of GenAI in the classroom; in Vietnam, the assessment system has traditionally incentivized the instrumental use of technology, both generally and in the classroom, due to standardized testing (Dang & Norris, 2024; MOET, 2020). Recent studies in Vietnamese tertiary EFL contexts also indicate

growing student engagement with AI-supported English learning alongside concerns about responsible use and teacher guidance (Dao, 2026; Nguyen et al., 2026). Furthermore, collectivist and hierarchical cultures may influence students' propensity to seek teacher mediation versus using AI tools independently (Hofstede, 1984; Ngo et al., 2025; Nguyen et al., 2025). Given these contextual dynamics, pedagogical models developed elsewhere cannot be assumed to transfer readily to Vietnam, necessitating further empirical research focused on local contexts to understand how current assessment practices, pedagogical norms, and student agency interact with the potential and limitations of GenAI technologies.

Critical AI literacy: a necessary, underdeveloped bridge

Critical AI literacy emerged as a promising way to connect technical adoption with pedagogical responsibility; it expands on earlier models of digital literacy to include an epistemic understanding (awareness of limitations) of AI models; ethical reasoning regarding their use; and strategic, reflective application of AI systems (Belshaw, 2014; Nguyen, 2025; Nguyen et al., 2026; Pangrazio & Sefton-Green, 2022). However, the empirical operationalization of critical AI literacy remains relatively rare at this time. Very few studies systematically explore students' awareness of the risks associated with AI technology, how they express and describe that awareness, and how it relates to the ways they report using and interacting with AI systems in their daily lives. In short, while a growing body of knowledge acknowledges the importance of critical AI literacy, little empirical evidence shows how that critical AI literacy is demonstrated or taught across today's learning contexts.

Rationale for the present study

In light of these developments, this research focuses on the concept of risk awareness as an observable and key element of AI critical literacy. Instead of examining long-term learning outcomes, this study adopts a diagnostic view, examining the learners' understanding of AI-related risks, how they use AI, and how they will manage potential dependency in a particular Vietnamese EFL classroom context. Therefore, the outcomes of the study will clarify how critical AI literacy is understood and negotiated within a specific student context. In addition to existing studies, this study will also provide empirically based evidence about a less researched area of how AI is currently being integrated into language education and will therefore provide insights for curriculum and pedagogical support.

The study is thus guided by the following research questions:

1. RQ1: How do students conceptualize AI-related risks in relation to their reported reliance on GenAI tools in English learning?
2. RQ2: What strategies do students propose for reducing dependency while continuing to benefit from GenAI?

The research conducted in this study answers several important questions and offers an ethnographic understanding of the social and cultural contexts within which members of the Vietnamese EFL staff are negotiating their perception of risks associated with GenAI

technology. Results suggest that using GenAI tools should consider ethical judgments, responsible behaviors, and the development of sustainable learner autonomy when developing the pedagogical and curricular components of critical AI literacy in English language education.

Methods

Research Design

This research aimed to understand how Vietnamese university students conceptualize GenAI-related risks and how they now incorporate these tools into their English language learning practices. The design of the research includes an exploratory mixed-methods descriptive approach, and due to its diagnostic nature, it focuses on documenting trends in the students' awareness of risk factors, reliance on GenAI, and the management strategies the students developed to support their use of GenAI, not on determining if there is a cause-and-effect relationship.

In order to identify baseline behaviors concerning risk awareness and use of GenAI, a quantitative structured survey was used. A qualitative open-ended item format was included to provide students the opportunity to express their opinions regarding how they are able to develop and manage the use of GenAI. Combining the quantitative and qualitative portions of the research allows for greater detailed analysis of students' emergent behaviors and is beneficial when studying rapidly evolving areas within education such as AI (Creswell & Clark, 2018; Dörnyei, 2007).

Participants

The sample comprised 199 undergraduate and postgraduate students from two Vietnamese institutions: Hanoi University of Science and Technology (HUST) and Hanoi University (HANU). Participants were recruited via course learning platforms and online invitations during the second semester of the 2024-2025 academic year.

Students were enrolled in general English proficiency courses, English for Specific Purposes (ESP) courses, or TESOL-related programs. The age distribution was as follows:

- 18-19 years: 41.2% (n = 82)
- 20-21 years: 30.2% (n = 60)
- 22-24 years: 15.1% (n = 30)
- 25-30 years: 11.1% (n = 22)
- Over 30 years: 2.5% (n = 5)

Gender data were not collected. As with many voluntary online surveys, the sample reflects a convenience cohort and is not intended to be statistically representative of the broader Vietnamese university student population. Instead, the sample is treated as providing a situated snapshot of learner perceptions within two institutional contexts.

The study was conducted in the Vietnamese EFL higher education context, where students' access to digital technologies, prior experience with AI tools, English proficiency levels, and institutional learning environments may shape perceptions and patterns of GenAI use. The study acknowledged these contextual factors as part of the broader learning environment when interpreting the findings.

Data Collection Instrument

Data were collected using a structured online questionnaire administered via Microsoft Forms. The instrument was designed to examine students' self-reported use of generative AI (GenAI) in English learning and their awareness of potential risks associated with this use. The questionnaire included both closed-ended and open-ended items.

Two quantitative components were central: risk awareness and reported reliance on GenAI.

Risk awareness and reported reliance

Risk awareness was operationalized through four closed-ended items measuring students' awareness of potential risks associated with GenAI use in language learning. These items addressed: (1) awareness of general risks related to reliance on GenAI, (2) perceived long-term effects on English proficiency, (3) concerns about reduced receptive and productive language skills caused by overreliance, and (4) views on limiting GenAI use to encourage more independent practice. Item development was informed by prior research on AI ethics and critical digital literacy (Kasneci et al., 2023).

Risk awareness was coded ordinally on a three-point scale (3 = high awareness/yes, 2 = partial awareness or unsure, 1 = no awareness/no). Across the four items, the overall mean score was 2.37/3.00, indicating a relatively high level of awareness of the potential risks associated with GenAI use in English learning. Item means ranged from 2.16 to 2.58. Internal consistency of the four-item risk-awareness measure was assessed using Cronbach's alpha ($\alpha = 0.67$), indicating moderate internal consistency. Given that the items addressed related but distinct dimensions of perceived risk, the measure was retained as an overall descriptive indicator of students' risk awareness. Appendix C presents the full instrument.

Reported reliance on GenAI was examined through four behavioral indicators: frequency of GenAI use for English learning tasks, estimated proportion of tasks completed with GenAI support, whether students used GenAI primarily as learning support or task completion, and confidence in completing English learning tasks without AI assistance. Because these items represented distinct aspects of learner behavior and employed different response formats, they were analyzed descriptively rather than combined into a single scale. This approach is consistent with survey practices in technology-enhanced language learning research (Reinders & Benson, 2017).

Open-ended questions on strategies

Two open-ended items were included to elicit learner perspectives on managing GenAI use:

- Q27. In your opinion, what strategies can students use to reduce dependence on GenAI tools while still benefiting from them in learning English?
- Q28. What can teachers do to help students balance the use of GenAI tools with the need for active practice to improve their English skills?

The questionnaire was pilot-tested with 15 students to assess clarity, item interpretation, and response flow (Dörnyei & Taguchi, 2014). Minor revisions were made to improve wording and logical sequencing. Ethical approval was obtained from both institutions, and informed consent was embedded at the beginning of the survey.

Data Analysis

Microsoft Excel was used to export the quantitative data for this study, which was then supplemented with additional processing by means of Python for Descriptive Analysis. Frequencies, percentages, and means were calculated to establish baseline patterns of reported GenAI use and levels of risk awareness.

The dependence levels of different groups (reported awareness of specific risks) were assessed in response to RQ1 with the use of cross-tabulation and independent-samples t-test. Because this study is exploratory, the outcomes of these analyses will be interpreted descriptively to identify patterns and establish associations, rather than make strong statements about causality/inference (Mackey & Gass, 2015).

Once the qualitative response items (respondents' responses to open-ended questions) were obtained, Thematic Content Analysis (Braun & Clarke, 2006) was used to analyze the qualitative transcriptions of the open-ended items. The coding of the open-ended item responses was done using an inductive approach to develop recurring coding types of Strategies such as: 1) Self-regulation practice; 2) Active Language use; 3) Teacher/mediated Scaffolding; and 4) Collaborative Learning. The coding of open-ended item responses used a recursive review process to refine the categories and maintain internal coherence. The identified themes were then integrated with the quantitative patterns to produce exemplars/practice friendly interpretations (Miles et al., 2018).

Research Ethics

Participation was voluntary, anonymous, and aligned with institutional ethics protocols. No identifying personal data were collected. Student participants were informed that their responses would be used only for academic research and publication.

Results

Results integrate descriptive statistics, inferential analyses, and thematic analysis of open-ended responses.

Descriptive overview: risk awareness and reported reliance

Of the 199 participants, 60.3% ($n = 120$) reported being fully aware of potential risks associated with GenAI use (e.g., skill decline, dependency), 29.6% ($n = 59$) reported partial awareness, and 10.1% ($n = 20$) reported no awareness. Across the full sample, the mean self-reported reliance on GenAI for English learning tasks was $M = 43.2\%$ ($SD = 22.7$). Reported reliance varied widely: minimal use (0-15%) was reported by 18.6% ($n = 37$), moderate use (31-50%) was the modal band (37.2%, $n = 74$), and heavy use (76-100%) was reported by 7.0% ($n = 14$). Figure 1 illustrates the distribution of risk-awareness categories.

Taken together, these descriptive results suggest that most students recognize some degree of risk associated with GenAI use, while patterns of reported reliance remain highly heterogeneous across individuals.

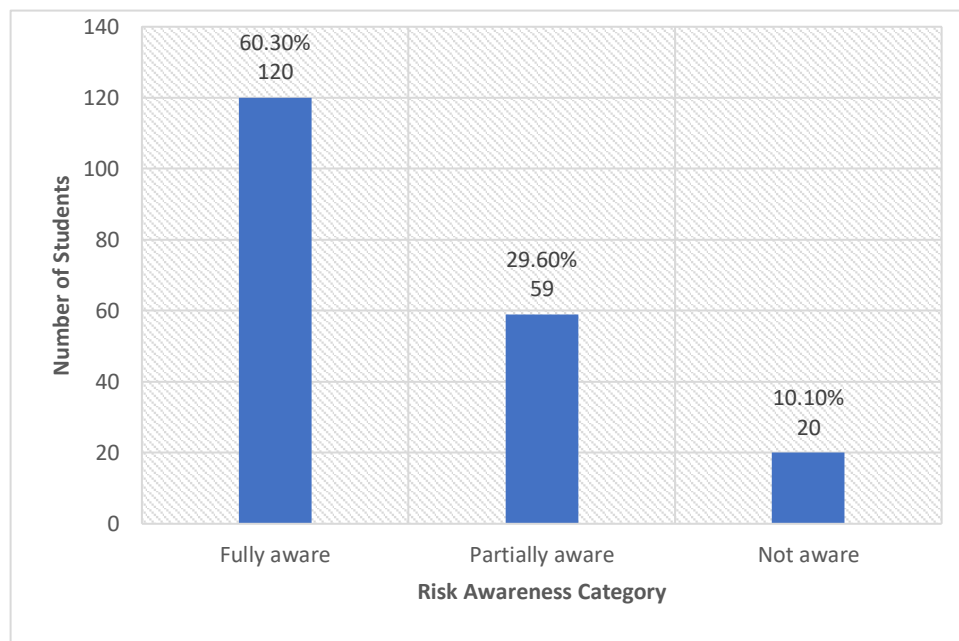


Figure 1: Distribution of risk-awareness categories

RQ1 - Patterns of reported reliance across awareness categories

Group comparison

To explore how reported reliance varied across awareness categories, respondents were grouped as risk-aware (combining “fully aware” and “partially aware”; $n = 179$) or non-risk-aware (“not aware”; $n = 20$). Mean reported reliance differed substantially between these groups:

- Risk-aware: $M = 42.3\%$, $SD = 21.8$ ($n = 179$)
- Non-risk-aware: $M = 80.1\%$, $SD = 16.2$ ($n = 20$)

Independent-samples comparisons indicated a statistically significant difference between groups, $t(197) = 5.27$, $p < .001$, with a large, standardized difference (Cohen’s $d = 1.41$). While these statistics indicate a pronounced association between reported awareness and reported

reliance within this sample, they are interpreted here descriptively and diagnostically rather than as evidence of causal influence, given the cross-sectional and self-report nature of the data.

An ancillary pattern was observed in students' self-reported confidence in completing English learning tasks without AI assistance. Among risk-aware participants, 45.3% reported being "somewhat" or "very confident" in working without AI, compared with 20.0% among non-risk-aware participants. This pattern is consistent with the interpretation that higher awareness is associated with greater perceived self-efficacy for independent task completion (Bandura, 1977, p. 202), though this relationship should be interpreted cautiously and contextually.

RQ2 - Student-proposed strategies for managing GenAI dependency

Thematic analysis of open-ended responses (Q27 and Q28) identified four primary strategy themes for balancing the benefits and risks of GenAI use. Table 1 summarizes the themes, sub-themes, frequencies, and representative translated quotations.

Table 1.

Student-Proposed Strategies to Reduce GenAI Dependency

Theme	Sub-theme	No	%	Representative Quote
Self-Regulation and Selective Use	Task-Specific Use	78	39.2	Only use AI to check grammar or suggest ideas, not to write the whole essay (Row 15)
	Limiting Usage Time	34	17.1	Limit the use of AI, only use it when truly necessary (Row 167)
Active Practice Alongside AI Support	Draft-First Approach	65	32.7	I write the essay first, then compare it with AI feedback for self-evaluation (Row 25)
	Learning from Feedback	33	16.6	Take notes of useful vocabulary and structures from AI to apply later (Row 28)
Teacher Scaffolding and Guidance	Prompt Engineering	40	20.1	Teachers should provide appropriate prompts for self-study (Row 3)
	Ethical Guidelines	45	22.6	AI use should be strictly banned in examinations (Row 14)
Collaborative and Peer-Based Strategies	Group Discussions	30	15.1	Discuss with classmates before checking with AI (Row 23)
	Peer Feedback	15	7.5	Work in groups to exchange ideas instead of relying on AI (Row 165)

Theme 1: Self-regulation and selective use (n = 112, 56.3%)

The most frequently endorsed strategies involved restricting GenAI to bounded, task-specific functions, such as grammar checking or idea generation, rather than full text production (78 instances, 39.2%). Many students also emphasized setting explicit limits on time or frequency of use (34 instances, 17.1%). These responses reflect an emerging norm of selective and

restrained use rather than unrestricted delegation of productive work.

Theme 2: Active practice alongside AI support (n = 98, 49.2%)

A second prominent theme involved maintaining independent production as a first step, followed by AI consultation. Students described draft-first workflows (65 instances, 32.7%) and deliberate learning from AI feedback (33 instances, 16.6%), including recording useful vocabulary or structures for later use. These practices suggest attempts to use GenAI as a supplementary resource rather than a primary output generator.

Theme 3: Teacher scaffolding and guidance (n = 85, 42.7%)

Many respondents highlighted the importance of explicit pedagogical mediation. Suggested strategies included instruction in effective prompting (40 instances, 20.1%) and the establishment of clear ethical policies for assessment contexts (45 instances, 22.6%). These responses suggest that institutions and instructors should actively shape norms for appropriate GenAI use.

Theme 4: Collaborative and peer-based strategies (n = 45, 22.6%)

A smaller subset of students emphasized social alternatives to individual AI use, including pre-AI group discussions (30 instances, 15.1%) and structured peer feedback (15 instances, 7.5%). These strategies align with collectivist learning orientations and with pedagogies that prioritize oral interaction and collaborative meaning-making.

Coding reliability and subgroup patterns

Themes were generated following Braun and Clarke's (2006) protocol. Intercoder agreement on a 25% random subset of responses reached 90%, with discrepancies resolved through discussion (see Appendix A). Descriptively, risk-aware students were overrepresented in self-regulation and teacher-guidance themes, suggesting that awareness is associated with more articulated and pedagogically oriented mitigation strategies. TESOL master's students more frequently emphasized learning from feedback, whereas first-year undergraduates more often reported heavier reliance. These subgroup patterns are reported illustratively rather than inferentially.

Summary of findings

Across quantitative and qualitative strands, the findings depict a consistent pattern: higher reported awareness of GenAI-related risks is associated with lower reported reliance and with the articulation of concrete strategies for managing dependency. Rather than establishing causal relationships, these results provide a context-sensitive profile of how students in two Vietnamese universities currently conceptualize risks and negotiate the boundaries of GenAI use in English learning.

Discussion

Students' risk awareness was associated with differences in their reported reliance on GenAI. The strategies proposed by students also provide insight into how learners perceive balanced and responsible GenAI use. This section discusses the broader pedagogical and policy implications of these findings in Vietnam's EFL context. It then outlines limitations and directions for future research, followed by the study's theoretical contributions.

Influence of Risk Awareness on GenAI Reliance

The first research question examined whether risk awareness is associated with differences in students' reliance on GenAI tools. The results indicated a substantial contrast between risk-aware students ($M = 42.3\%$, $SD = 21.8$) and non-risk-aware students ($M = 80.1\%$, $SD = 16.2$), suggesting that awareness of risks such as reduced originality, ethical concerns, and potential skill erosion was associated with differences in patterns of AI use.

This pattern complicates narratives in popular media and some early empirical accounts (Hsu & Silalahi, 2024; Lee et al., 2025) that portray GenAI as inherently addictive or as leading inevitably to dependency. Rather than supporting a deterministic interpretation, the findings suggest that reliance may be associated with how learners frame and evaluate potential risks. In this sense, risk awareness may reflect a protective orientation toward GenAI use, as students who recognized possible downsides were more likely to report selective, sustainable, and goal-directed forms of engagement.

According to Pangrazio & Sefton-Green (2022), understanding technological constraints helps develop an intentional way to use technology. Students with a risk-aware approach to GenAI primarily used it only for scaffolding purposes (e.g., grammar checking, brainstorming) but did not complete the entire task with GenAI; however, students who did not have a clearly articulated risk awareness relied on GenAI much more comprehensively due to their lack of critical examination of GenAI (Kasneci et al., 2023). Based on risk-aware students self-reporting higher levels of self-efficacy than students without risk-awareness (45% versus 20%), this is consistent with Bandura's (1977) theory of self-efficacy as a catalyst for sustained engagement with and persistence as learners, and with evidence from Zou et al. (2024) supporting that informed uses of AI may actually support (not hinder) language development. These findings suggest that concerns that GenAI may weaken learner autonomy (Floridi, 2021) should be interpreted with caution and that learner awareness may be associated with whether GenAI is used more as a scaffold or relied on more heavily for task completion.

Within Vietnam's exam-oriented EFL context (Dang & Norris, 2024), this distinction is particularly consequential. Although efficiency pressures may encourage shortcut-taking, the present data suggest that risk-aware learners may be more likely to balance efficiency with sustained, deliberate practice. Conceptualizing awareness in this way highlights its potential relevance to pedagogical resilience and contributes a context-sensitive perspective to ongoing debates in SLA and educational technology research.

Student-Proposed Strategies for Balanced GenAI Use

The student-proposed strategies highlight four practical approaches for balancing the use of GenAI in English learning: using AI as scaffolded support, combining AI with active learning, relying on teacher scaffolding and guidance, and collaborative peer-based strategies.

First, many participants emphasized using GenAI as scaffolded support for writing tasks such as grammar checking, brainstorming, and idea development rather than delegating the completion of the full assignment to AI. This finding aligns with Pangrazio and Sefton-Green's (2022) concept of critical AI literacy, which emphasizes understanding AI's affordances and limitations to support intentional use. Rather than positioning GenAI as a substitute for learning, participants described it as a complementary tool that supports specific stages of language production while preserving learner responsibility. This also supports recent work suggesting that informed AI use can strengthen language development when integrated purposefully (Zou et al., 2024).

Second, the combination of AI tools with active learning strategies (49.2%) reinforces the importance of maintaining manual and independent practice alongside technological support. While international studies have raised concerns regarding "cognitive outsourcing" (Farkaš, 2024, p. 5), participants in this study explicitly expressed a desire to continue developing language skills through direct practice even when AI was available. This finding suggests that GenAI integration does not necessarily correspond with reduced learner engagement and may coexist with active skill development depending on how learners structure their study practices.

Third, teacher scaffolding and guidance (42.7%) remained central to participants' proposed strategies. Students expected teachers to provide explicit instruction on prompt use, clarify ethical boundaries, and explain appropriate principles for integrating GenAI into learning activities. This supports arguments that teachers will need to develop new competencies to effectively facilitate AI-enhanced education (Kasneci et al., 2023; Nguyen, 2025). In the Vietnamese educational context, which has traditionally been characterized as teacher-centered, structured guidance from teachers appears particularly important for helping students apply AI tools consistently and appropriately.

Finally, collaborative strategies (22.6%) offered a culturally grounded approach to reducing over-reliance on AI technologies. Participants proposed discussing tasks with peers before consulting AI, reflecting collectivist cultural orientations (Hofstede, 1984) and aligning with social constructivist views of second language acquisition (Vygotsky, 1978). These peer-based approaches were viewed as especially relevant for oral communication, where participants perceived GenAI support to be more limited than for writing tasks. This contrast further highlights the importance of differentiated GenAI integration across language skills rather than uniform policy approaches.

Overall, these four strategies suggest that students do not view GenAI as a standalone solution, but as one component within broader learning practices that include independent effort, teacher guidance, and peer interaction.

Implications for Vietnam's EFL Context

The combined results have instructional and policy implications for teaching English as a Foreign Language (EFL) in Vietnam. First, a majority of EFL learners reported that they are aware of the possible risks associated with AI, which is 89.9%. This may represent an underutilized foundation that EFL instructors can build on to develop Critical AI Literacy as a learning outcome for EFL students based on their current awareness of this issue rather than simply characterizing the students as potential or actual abusers of GenAI (Pangrazio & Sefton-Green, 2022; Selwyn, 2019). Therefore, Educational institutions may want to build in opportunities for learners to reflect, evaluate, and justify how they use GenAI within their own learning for EFL learners, as well as for other learners.

For example, a teaching design that compares the student's own draft with an AI-generated version may develop the learner's metacognitive awareness, perception of authorship, and analytical judgment. These pedagogical designs align with the philosophical and theoretical foundations of both reflective practice and assessment for learning (Nicol & Macfarlane-Dick, 2006; Andrade & Brookhart, 2016), and directly respond to concerns that uncritical use of AI may cause a decline in productive cognitive engagement (Floridi, 2021; Farkaš, 2024).

To elaborate, the findings point to the importance of professional growth for teachers. The students sought advice regarding how to appropriately use AI in a variety of ways, including how to ethically use AI and how to effectively incorporate GenAI tools. This finding highlights the need for teacher training, resources, and support to foster sustainable GenAI adoption and shows that students cannot rely on their own abilities to adopt GenAI successfully. In Vietnam, instruction is primarily teacher-centered; hence, teachers are the primary gatekeepers and mediators of technology (Dang & Norris, 2024). Teachers who have not received focused training in the pedagogy of artificial intelligence, the creation of an assessment tool for artificial intelligence, and the interpretation of the institutional policy surrounding artificial intelligence are unlikely to create an effective teaching environment or to offer coherent pedagogical scaffolding to their students. Professional development for the use of GenAI for teachers should consist of training on both the technical aspects of using GenAI, as well as on the professional development of proper frameworks for differentiating between formative and summative assessments using GenAI, managing issues of disclosure and transparency, and designing assignments that allow students to struggle productively as they learn to use AI as a form of scaffolding (Kasneci et al., 2023; Selwyn, 2016; Nguyen, 2025). AI literacy is a prerequisite for teachers to support students in developing their own AI literacy.

Third, the results indicate that there are pedagogical benefits to using collaborative or peer-based strategies, which some have found less popular as measured by usage. In the collective and examination-driven environment of Vietnam, peer interaction provides a means by which the individual dependence on AI can be countered through culturally relevant means, while simultaneously providing the opportunity to develop the related communicative competences, especially with respect to speaking and social interaction, for which there are more limited opportunities for AI assistance (Hofstede, 1984; Ngo et al., 2025). The use of structured peer

discussion, collaborative drafting, and peer feedback prior to, or in conjunction with, the use of AI provides additional support to help bring the process of learning back into the social sphere, consistent with sociocultural theory regarding language development (Vygotsky, 1978; Mackey & Gass, 2015). This further supports the idea that AI literacy should be understood not only at the level of the individual, but also at the collective/classroom level.

Finally, these implications diverge from the Western-oriented policy discussions that focus on academic integrity and concerns regarding plagiarism as the main focus (Gruenhagen et al., 2024, pp 1-3). In Vietnam's EFL context, the more pressing issue is finding a way to balance the efficiency of exam preparation with the sustainability of skill development (MOET, 2020; Dang & Norris, 2024). Thus, these findings indicate that promoting awareness of risks, as well as creating scaffolding for students and introducing collaborative methodologies, may provide students with a viable route toward balancing performance-related pressure and long-term development of their language skills. Accordingly, policy and curriculum reforms should prioritize developmental and pedagogical considerations rather than relying primarily on restrictive or punitive regulatory approaches (Selwyn, 2019; Pangrazio & Sefton-Green, 2022).

An additional consideration is the potential variation across participant subgroups. Although the overall findings indicate meaningful patterns in students' risk awareness and reliance on GenAI, these patterns may not be uniform across institutional contexts or academic levels. Students from the two participating universities may experience different learning environments, institutional expectations, and levels of access to digital resources. They could influence how GenAI is perceived and used. Similarly, students at different stages of their academic study may demonstrate different levels of familiarity with GenAI and varying degrees of confidence in integrating such tools into language learning. While the present study focused on overall trends across the sample, future research may examine inter-group differences across institutions and academic levels in greater detail to provide a more nuanced understanding of critical AI literacy development in Vietnamese EFL education.

Limitations and Future Research

This research has several limitations. First, the data were based on participants' self-reported responses, which may have been influenced by response bias or differences in individual interpretation. Employing observational, log-based, or performance-based measures in future studies would improve research validity and provide a more comprehensive understanding of students' actual GenAI use. Second, the sample consisted primarily of English majors and TESOL majors in the Vietnamese EFL higher education context. Participant-related factors such as English proficiency, familiarity with GenAI tools, digital literacy, and academic background may have influenced both perceptions of risk and reported reliance on GenAI. In addition, contextual factors related to the local educational environment, including institutional expectations and access to digital technologies, may also shape students' experiences with GenAI. These factors may limit the transferability of the findings to students in other academic disciplines, vocational settings, or educational contexts outside Vietnam. Third, because this study employed a cross-sectional design, no conclusions can be drawn regarding longitudinal

developmental changes in participants' skills or patterns of reliance over time.

Future research should employ longitudinal designs to monitor changes in students' skill development, risk awareness, and reliance on GenAI over time. Experimental studies involving structured interventions, such as writing tasks or AI-mediated learning activities, may also provide a stronger basis for examining potential causal relationships. In addition, cross-cultural studies comparing levels of risk awareness and their interaction with educational practices across contexts, as well as research focusing on teachers, may contribute to a broader understanding of responsible GenAI integration and the role of educators in fostering critical AI literacy.

Theoretical Contribution

In addition to its empirical data, the current work also contributes to theory at the crossroads of Critical A.I. Literacy and Second Language Acquisition.

Beyond its empirical findings, this study advances theory at the intersection of critical AI literacy and second language acquisition.

First, the results extend critical AI literacy (Pangrazio & Sefton-Green, 2022) into the SLA domain by showing that risk awareness is not merely an ethical or civic construct, but may also be pedagogically relevant. In this framework, awareness may operate as an important contextual factor associated with whether AI use is experienced as supportive or constraining in language learning.

Second, the study complicates deficit-oriented and technologically deterministic accounts of AI adoption (see also Floridi, 2021). Rather than functioning as passive recipients of automation, the Vietnamese students demonstrated agency through selective, task-specific engagement and through the articulation of strategies designed to limit dependency. This pattern suggests that learners can be understood as active participants and co-constructors of their AI-mediated learning environments.

Third, by locating the findings within Vietnam's exam-driven and collectivist EFL context, the analysis foregrounds the cultural and systemic mediation of AI use. Consistent with sociocultural perspectives in SLA (Mackey & Gass, 2015; Reinders & Benson, 2017; Vygotsky, 1978), the findings suggest that critical AI literacy is contextually situated. AI integration therefore should not be treated as uniform, but must be understood as shaped by institutional pressures, cultural values, and pedagogical traditions.

Taken together, these contributions suggest that emerging theories of AI literacy and SLA need to incorporate risk awareness, learner agency, and cultural context as central analytic variables. Doing so may support more nuanced theorization of how human and artificial intelligence intersect in language learning.

Conclusion

This study examined how risk awareness shapes Vietnamese university students' reliance on generative AI in English language learning and explored learner-proposed strategies for balancing its benefits with potential drawbacks. The findings indicate that risk perception significantly moderates students' use of GenAI-based language learning tools. Students who recognized risks related to originality, ethical concerns, and skill erosion reported lower levels of reliance on GenAI for task completion and greater confidence in completing academic work independently. At the same time, students identified practical ways to balance GenAI use with language learning, demonstrating that awareness of potential risks is closely connected to more intentional and strategic use of AI.

These findings contribute to current discussions on critical AI literacy by showing that awareness of AI-related risks is not only attitudinal but also reflected in learners' decisions about when and how to use GenAI in practice. In the Vietnamese EFL context, where learning is shaped by exam-oriented instruction and strong teacher guidance, the findings suggest that effective GenAI integration depends on both learner agency and institutional support. This highlights the importance of embedding critical AI literacy into EFL education through curriculum design, teacher development, and classroom practices that support responsible and purposeful use of AI technologies.

Future research should adopt longitudinal and intervention-based approaches to examine how risk awareness and strategic GenAI use influence long-term language development and learner autonomy. Structured pedagogical interventions such as draft-first writing, guided prompt design, and peer-mediated AI activities may provide further insight into the relationship between critical AI literacy and language learning outcomes. Although this study is situated in the Vietnamese EFL context, the findings contribute to broader international discussions on how learners and institutions can integrate AI in ways that support independent, ethical, and pedagogically appropriate language learning while sustaining long-term language development.

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Conflict of Interest

The author has no conflicts of interest to declare.

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Biodata

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APPENDICES

Appendix A. Coding Scheme

Open-ended responses were analyzed using a qualitative content analysis approach (Braun & Clarke, 2006). Codes were generated both deductively from the research questions (e.g., risk awareness, strategies to reduce dependency) and inductively from recurring patterns in student responses. Table A1 summarizes the final coding scheme with definitions and representative examples.

Table 2.

Coding Scheme for Open-Ended Responses

Code	Definition	Example Student Response
Perceived Benefits	References to advantages of using GenAI for English learning (e.g., efficiency, vocabulary support, confidence building).	AI helps me write essays faster and find better words. (Q30)
Skill-Specific Gains	Mentions of improvement in receptive (reading, listening) or productive (writing, speaking) skills.	I use AI to check grammar in writing, but it doesn't help my speaking much. (Q30)
Risk Awareness	Statements reflecting recognition of potential drawbacks (e.g., over-reliance, plagiarism, skill decline).	If I use AI too much, I become lazy and my own ideas get weaker. (Q31)
Over-Reliance / Dependency	Indications of frequent or habitual dependence on GenAI tools without independent practice.	I use ChatGPT for everything now, even simple tasks. (Q31)
Accuracy Concerns	References to misinformation, cultural bias, or incorrect outputs.	Sometimes AI gives wrong answers, but students still trust it. (Q31)
Motivation & Autonomy	Mentions of self-regulation, willingness to practice independently, or reduced motivation due to AI.	I feel less motivated to read when AI can summarize for me. (Q31)
Student Strategies	Suggestions for balancing AI use with independent learning.	First, I try to do the exercise myself, then use AI only to check. (Q27)
Teacher Strategies	Proposals for how instructors can guide AI integration in classrooms.	Teachers should design tasks that require both AI use and our own ideas. (Q28)

Appendix B. Coding

Procedure

Two coders (the first author and a trained research assistant) independently coded all responses ($n = 199$). Coding was conducted in two cycles:

1. Initial coding: Both coders applied the preliminary scheme to a random subset of 50 responses, discussed discrepancies, and refined code definitions.
2. Full coding: The revised scheme was applied to the entire dataset. Coders met biweekly to discuss emerging ambiguities and ensure consistency.

Intercoder Reliability

The coefficient of intercoder reliability (Cohen's kappa) for all coders was used to measure intercoder reliability. Initially, Kappa = .82, but through iterative discussion, came to agreement about the codes and clarified the code boundaries; this resulted in an improved kappa value of .90. This indicates "almost perfect" reliability, according to Landis and Koch (1977). Any discrepancies between coders were ultimately resolved through discussion until a consensus was reached.

Ethical Considerations

To maintain anonymity, this analysis utilized only paraphrased excerpts and/or de-identified quotations. Participants' responses were not connected to participant-level demographic data.

Appendix C. Survey Instrument

C1. Reliance on GenAI

1. How frequently do you use GenAI tools (e.g., ChatGPT, Grok, Gemini) for English learning tasks (e.g., writing, translation, grammar correction)?
 - ☐ Never
 - ☐ Rarely
 - ☐ Sometimes
 - ☐ Often
 - ☐ Always
2. When using GenAI for English learning tasks, approximately what percentage of the task do you rely on these tools to complete?
 - ☐ 0-15%
 - ☐ 16-30%
 - ☐ 31-50%
 - ☐ 51-75%
 - ☐ 76-100%

3. Do you use GenAI as learning support or to complete the work for you?
 - ☐ Support only
 - ☐ Complete the work for me
 - ☐ Both equally
 - ☐ Both, but support more
 - ☐ Both, but task completion more
4. How confident are you in completing English learning tasks without GenAI?
 - ☐ Very confident
 - ☐ Somewhat confident
 - ☐ Neutral
 - ☐ Somewhat unconfident
 - ☐ Not confident at all

C2. Risk Awareness

1. Are you aware of potential risks associated with relying on GenAI for language tasks (e.g., reduced language development, dependency)?
 - ☐ Yes, fully aware
 - ☐ Yes, partly aware
 - ☐ No
2. Do you believe that using GenAI may negatively affect your long-term English proficiency?
 - ☐ Yes
 - ☐ No
 - ☐ Not sure
3. Do you think overreliance on GenAI may lead to reduced receptive (listening, reading) and productive (speaking, writing) language skills in your generation?
 - ☐ Yes
 - ☐ No
 - ☐ Not sure
4. Do you think GenAI use in language learning should be limited to encourage more independent practice?
 - ☐ Yes
 - ☐ No
 - ☐ Not sure