# From Vibe Coding to Guardrailed Vibe Writing for Non-English-Major EFL Students: A Conceptual Framework and Pedagogical Proposal

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https://doi.org/10.54855/ijaile.26332

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Received: 15/05/2026 Revision: 03/09/2026 Accepted: 20/09/2026 Online: 09/11/2026

**ABSTRACT**

Vibe coding is an iterative, natural-language approach to human-AI collaboration and offers new possibilities for writing pedagogy. This conceptual paper proposes a framework for applying vibe coding principles to the teaching of academic and professional writing for non-English-major students learning English as a foreign language (EFL), particularly in Vietnamese higher education. Based on a structured narrative synthesis of selected literature, and drawing on cognitive load theory, self-regulated learning, and contrastive rhetoric, the paper introduces the Guardrailed Vibe Writing (GVW) approach, which aims to reduce linguistic barriers while supporting higher-order rhetorical and critical thinking skills. The framework includes five key components: intentional prompting, AI-mediated scaffolding with human oversight, meta-languaging, documented revision, and metacognitive reflection. No learner data are reported; the proposed benefits require empirical testing. The paper also discusses potential risks associated with AI-assisted writing such as cognitive debt, voice homogenization, and academic integrity issues, and proposes pedagogical strategies to address them. The GVW framework provides practical guidance for integrating generative AI responsibly into non-English-major EFL writing instruction.

**Keywords**: vibe coding; writing instruction; non-English-major EFL students; pedagogical framework; AI-assisted writing

## Introduction

The rapid proliferation of large language models (LLMs) such as ChatGPT, Claude, and Gemini has raised new questions for writing pedagogy. These questions may be especially pressing in universities where students use English for academic communication alongside another disciplinary focus. Non-English-major EFL students are those enrolled in disciplines such as engineering, business, economics, and natural sciences, for whom English writing is an instrument rather than an object of study. They usually face a dual challenge: acquiring sufficient linguistic competence to produce discipline-appropriate texts while simultaneously

CITATION | Pham, T. V., Nguyen, V. T., & Phan, A. H. (2026). From Vibe Coding to Guardrailed Vibe Writing for Non-English-Major EFL Students: A Conceptual Framework and Pedagogical Proposal. *International Journal of AI in Language Education, 3*(3), 24-42. DOI: https://doi.org/10.54855/ijaile.26332

mastering complex subject matter. Exploratory L2 writing research identifies potential benefits of AI text generation alongside concerns about academic honesty and educational equity (Yan, 2023).

In this landscape, a concept from the software engineering world has begun to attract attention from language educators: vibe coding. Vibe coding describes a practice in which human operators direct AI systems using natural language descriptions and iteratively refine outputs, rather than constructing artifacts line by line (Sarkar & Drosos, 2025). Woo et al. (2025) explored its educational relevance through an application-building pilot with EFL students. This raises the question of whether writing instruction can adapt natural language direction, iterative refinement, and human oversight.

To explore this possibility, this paper proposes a principled conceptual framework for what we term Guardrailed Vibe Writing (GVW): an instructional approach in which non-English-major EFL students specify rhetorical intent and genre constraints in natural language, employ generative AI to produce candidate drafts, and engage in documented cycles of critical evaluation, selective revision, and metacognitive reflection. Crucially, GVW is not a prescription for outsourcing writing to machines. Instead, it reconceptualizes writing as a process of directing, negotiating, and refining AI-mediated language within a writing course.

The theoretical problem addressed here is how to coordinate these perspectives in instruction for learners who study English alongside another discipline. Cognitive load theory explains competing demands, self-regulated learning describes monitoring, and AI literacy addresses evaluation and ethical use (Ng et al., 2021; Sweller et al., 2019; Zimmerman, 2002). These accounts do not, by themselves, specify a writing workflow connecting rhetorical intent, critiques of AI drafts, and evidence of independent learning. GVW proposes this integration; its suitability for non-English-major EFL learners remains untested.

The paper makes three primary contributions. First, it provides a theoretically grounded definition of vibe coding adapted for writing pedagogy. Second, it synthesizes emerging empirical evidence on AI-assisted writing and maps risks identified in the software engineering literature onto educational contexts. Third, it proposes a concrete pedagogical framework with instructional strategies, assessment principles, and ethical guidelines for implementation in Vietnamese non-English-major EFL classrooms. While the framework draws heavily on the Vietnamese context, its principles may be adaptable to other higher-education settings where English functions as an academic or professional lingua franca.

The paper is structured as follows. Section 2 reviews the theoretical foundations of vibe coding and its adaptation for writing instruction. Section 3 examines the linguistic and motivational considerations of non-English-major EFL learners in Vietnam. Section 4 presents the GVW framework and its five instructional components. Section 5 analyzes risks and mitigation strategies. Section 6 discusses assessment and ethical implications, Section 7 considers curriculum design, Section 8 discusses related frameworks and research limitations, and Section 9 concludes.

### *Conceptual Approach and Literature Synthesis*

This conceptual paper uses a structured narrative synthesis and conceptual integration rather than an empirical intervention or an exhaustive systematic review (Jaakkola, 2020). Sources were selected for their direct relevance to AI-assisted writing, rhetorical decision-making, critical evaluation, learning opportunities, or assessment feasibility. Foundational writing and learning theories were considered alongside empirical AI-writing research and pedagogical

proposals. Peer-reviewed research grounds claims about learners; practitioner commentary clarifies terminology, while preprints and software studies are identified with their evidence limits. During the October 2026 post-review revision, targeted searches of publisher websites and academic repositories, exact-title and DOI lookups, and citation tracing were used to update and verify the literature supporting the original submission.

The synthesis distinguished direct writing-classroom evidence, learner or teacher perceptions, theoretical arguments, and adjacent software evidence. For empirical studies, attention was given to population, design, reported findings, and limits of transfer. These sources were then connected to a pedagogical problem, a proposed learning mechanism, and an activity or artifact, as explained at the start of Section 4. Selection was purposive, with no claim of exhaustive screening or independent coding. No learner data were collected, and the synthesis provides a rationale for the framework rather than empirical validation. No pilot feedback is reported as a basis for the design; classroom piloting remains future work.

## Theoretical Foundations

### *Vibe Coding: Origins and Educational Significance*

Sarkar and Drosos (2025) describe vibe coding as programming through conversation with AI. This practice illustrates a shift in human-computer interaction: the declining necessity for humans to subordinate their thinking to machine syntax, and the corresponding rise of natural language as the primary interface for directing computational processes. In vibe coding, the programmer articulates goals, constraints, and aesthetic preferences as a "vibe" in plain language, and the AI translates this intent into executable code. The human's role migrates from syntactic precision to contextual direction, rapid evaluation, and iterative judgment (Sarkar & Drosos, 2025).

Two interpretations of vibe coding can be distinguished. Pure vibe coding involves near-total delegation to AI outputs, accepting code without deep inspection. This may suit rapid prototyping but can be problematic for production systems that require accountability and maintainability (Sarkar & Drosos, 2025). Responsible AI-assisted development, by contrast, involves directing AI while retaining full comprehension and critical ownership of all outputs. In practitioner commentary, Willison (2025) distinguishes reviewing, testing, and explaining AI-generated code from vibe coding without code inspection. For educational purposes, we adopt this second interpretation, a principle GVW operationalizes explicitly.

The educational significance of vibe coding extends beyond technical skill development. It represents a new form of literacy: the ability to communicate intent to AI systems with sufficient precision to direct useful outputs, and to evaluate those outputs with sufficient critical acuity to identify errors, biases, and gaps. This communicative capacity complements conventional writing literacy. AI literacy also includes understanding, evaluation, and ethical use, so prompt fluency alone is insufficient (Ng et al., 2021). Whether this approach improves equity remains an empirical question.

### *From Vibe Coding to Vibe Writing: A Conceptual Translation*

The adaptation of vibe coding principles to writing pedagogy, termed "vibe writing" here, rests on a structural analogy between programming and academic writing. Both activities translate abstract intentions into formal artifact structures; both require iterative evaluation and revision;

and both can, in principle, be mediated by AI systems that generate candidate outputs from natural language descriptions (Woo et al., 2025).

However, the translation is not straightforward. Academic writing requires attention to rhetorical purposes, audience relations, disciplinary conventions, and individual voice; a software workflow cannot specify these writing criteria. Successful compilation does not establish software quality; similarly, grammatical accuracy does not establish writing quality. A piece of writing succeeds or fails along multiple dimensions, including argument quality, evidence deployment, tonal appropriateness, structural coherence, and stylistic distinctiveness (Flower & Hayes, 1981). The analogy therefore concerns intention, evaluation, and revision; it does not make software performance evidence of writing development.

The analogy has limits in verification, authorship, and instructional purpose. Executable tests can check some functional properties of software, whereas evaluating an argument requires reader judgment within a genre and discipline. Both code and text raise attribution and integrity questions; permission to reuse generated code cannot establish permission to submit generated prose in a writing assignment. In the writing courses addressed here, the goal includes developing the learner's own linguistic and rhetorical capacity. GVW therefore treats the writing process and independent performance, as well as the final text, as objects of instruction.

The concept of "meta-languaging" introduced by Woo et al. (2025) is particularly valuable here. In this writing adaptation, meta-languaging refers to the capacity to use language to describe language and articulate what one wants a text to do, what register it should adopt, and what argumentative moves it should make, with enough precision for an AI system to generate useful responses. This is not a trivial skill because it requires explicit awareness of genre conventions, rhetorical structures, and stylistic options that many students, particularly students who learn English as a foreign language and who have not received formal training in academic writing, often lack. Teaching vibe writing is therefore inseparable from teaching meta-linguistic awareness, which may support the genre knowledge emphasized in writing pedagogy (Hyland, 2004).

### *Cognitive Load Theory and the Case for AI Scaffolding*

Sweller's (1988) cognitive load theory provides a powerful explanatory framework for understanding both the appeal and the risks of AI-mediated writing for non-English-major EFL students. An instructional formulation of this theory distinguishes among intrinsic cognitive load (arising from the inherent complexity of the material), extraneous cognitive load (arising from poor instructional design), and germane cognitive load (arising from schema-building that constitutes genuine learning). Effective instruction minimizes extraneous load while directing cognitive resources toward germane load. Later developments treat germane resources as related to intrinsic load rather than as a separate additive source of load (Sweller et al., 2019).

For non-English-major EFL students, the intrinsic cognitive load of academic writing in English can be substantial. They must simultaneously manage grammatical accuracy, vocabulary selection, sentence structuring, paragraph organization, argumentation development, disciplinary conventions, and citation practices—often in real time. The result is that lower-level linguistic concerns consume working memory resources that might otherwise be available for higher-order reasoning—a dynamic consistent with cognitive load theory (Sweller, 1988). The promise of AI scaffolding is that it can absorb much of this lower-level load, freeing students to concentrate on higher-order goals such as the development and communication of complex ideas. This allocation depends on the learning objective: grammatical decision-making

is not extraneous when language form is itself being taught. A net reduction in cognitive load cannot be assumed.

However, cognitive load theory simultaneously warns against instructional designs that eliminate productive struggle. The principle of desirable difficulties—that some cognitive challenges can promote deeper learning—suggests that completely offloading writing to AI may prevent the schema formation that genuine competence requires (Bjork & Bjork, 2011). The GVW framework addresses this tension by using AI to scaffold mechanical and structural tasks while deliberately preserving the cognitive demands of rhetorical decision-making, critical evaluation, and iterative judgment.

### *Self-Regulated Learning and Metacognitive Control*

Zimmerman's (2002) cyclical model of self-regulated learning (SRL) provides the second major theoretical pillar for GVW. SRL theory posits that effective learners move through three phases: forethought (goal-setting, strategic planning), performance (monitoring and adapting while working), and self-reflection (evaluating outcomes and adjusting strategies) in recursive cycles. This structure maps naturally onto the iterative prompt-evaluate-revise workflow that characterizes both vibe coding and GVW.

SRL theory also highlights the importance of metacognition: the ability to think about one's own thinking, to monitor one's strategies, and to make deliberate choices about how to proceed. In GVW, metacognitive practice is operationalized through mandatory decision logs, in which students record and justify their choices to accept, reject, or modify AI-generated content. This practice is intended to support agency and make the learning process visible to the student, to the instructor, and potentially to institutional assessors concerned with academic integrity.

### *Contrastive Rhetoric and the Non-English-Major EFL Learner*

A third theoretical foundation is contrastive rhetoric. This is the study of how different linguistic and cultural traditions organize texts differently (Connor, 1996; Kaplan, 1966). These differences should be examined in relation to genre, purpose, and educational experience rather than attributed uniformly to nationality. Later intercultural rhetoric explicitly extends analysis beyond isolated textual patterns (Connor, 2004).

For non-English-major EFL students, recognizing unfamiliar genre conventions can involve more than a surface-level linguistic challenge. AI systems may assist comparison by modeling alternative argumentative structures, but only if students are taught to engage with AI outputs critically rather than accepting them wholesale. GVW's emphasis on comparing one's own rhetorical instincts with AI-generated alternatives supports the rhetorical awareness Connor (1996) discusses; its effects require classroom investigation.

### *Empirical Evidence and AI Literacy*

Empirical writing studies provide a qualified basis for this proposal. Yan (2023) examined a one-week L2 writing practicum, identifying potential support for text production alongside honesty and equity concerns. Song and Song (2023) reported writing and motivation gains in a study of 50 Chinese EFL students; a later correction (Song & Song, 2026) clarifies the reported content result. Such findings concern particular instructional conditions and do not establish the effectiveness of GVW or delayed independent transfer. The Vietnamese evidence discussed in Section 3 likewise distinguishes an intervention with non-English-major learners from postgraduate perceptions.

Human engagement with feedback remains central. Zhang and Hyland (2018), following two EFL students over 16 weeks, show why learners' engagement matters when interpreting teacher and automated feedback; their pre-GenAI study is not a test of current LLMs. Ng et al. (2021) broaden the rationale from prompting to understanding, evaluating, using, and ethically engaging with AI. These perspectives support examining students' decisions, while keeping assisted-text quality separate from evidence of learning.

## The Non-English-Major EFL Learner in Vietnamese Higher Education

### *Motivational Profile*

Non-English-major EFL students in Vietnamese universities may present different motivational profiles, with implications for pedagogical design. Career aspirations, academic achievement, and intrinsic enjoyment may drive students to learn to write in English. Instructors should establish students' goals locally rather than assume that internal motivation consistently exceeds external motivation across this population.

Motivation may coexist with concerns about error and dependence on assistance. T. Y. P. Nguyen et al. (2025) reported challenges in applying ChatGPT to academic writing among 25 English-major postgraduate students in Vietnam. This evidence supports attention to instructional support and critical use, but it does not establish the motivational profile or anxiety level of non-English-major undergraduates.

### *Linguistic and Rhetorical Challenges*

The linguistic barriers that non-English-major EFL students may face operate at two distinct levels. At the surface level, students may struggle with vocabulary range, grammatical accuracy, and sentence complexity. At the deeper structural level, students face the challenge of contrastive rhetoric described above: learning to organize arguments in ways that meet the expectations of a particular audience and genre without abandoning their own analytical instincts.

These challenges interact in pedagogically important ways. When students spend cognitive resources managing surface-level errors, they have less working memory for higher-order organizational decisions, potentially creating a cycle in which surface struggles compound structural weaknesses. Vu and Nguyen (2026) studied ChatGPT feedback with 42 A2-level non-English-major students. They reported improvement within the AI-feedback group and difficulties with prompting and uncritical acceptance. This supports guided use with the intended population, but within-group improvement alone does not establish a between-group treatment advantage or validate GVW.

The digital context of Vietnamese higher education adds a further dimension. Access to devices, connectivity, and AI accounts should be checked before implementation; equivalent teacher-provided materials may be needed. The pedagogical question is therefore how instructors can provide principled frameworks for students' productive use of AI in writing. GVW is proposed as precisely such a framework: one that meets students where they already are technologically, while redirecting their AI interactions toward practices intended to support competence.

**Table 1**

*Cognitive Barriers of Non-English-Major EFL Students and GVW Interventions*

| Barrier Category | Manifestation in Non-English-Major EFL Students | Proposed GVW Intervention |
|---|---|---|
| **Low-Level Linguistic Barriers** | Limited vocabulary, grammatical errors, excessive cognitive load from syntax management | AI may assist phrasing where permitted by the learning objective; students retain relevant language practice |
| **Contrastive Rhetoric Barriers** | Unfamiliar genre conventions, weak topic sentences, insufficient coherence markers | Students compare their ideas with AI alternatives against audience and genre requirements |
| **Motivational / Affective Barriers** | Fear of error, discouragement from red-marked feedback, avoidance of risk-taking | AI provides opportunities for revision; effects on anxiety and challenge require evaluation |
| **Metacognitive Barriers** | Limited awareness of own writing processes; difficulty articulating textual intentions | Decision logs and meta-languaging prompts make writing processes explicit and assessable |

Table 1 summarizes possible cognitive barriers facing non-English-major EFL students and shows how the proposed GVW might address each.

It is worth noting that these barrier categories are not independent: they interact and compound one another in classroom practice. A student whose vocabulary is insufficient to construct a coherent English sentence will also lack the lexical resources to articulate the rhetorical intent that GVW requires. Conversely, a student unfamiliar with the target genre may produce grammatically acceptable sentences that nonetheless fail to meet the organizational expectations of the assigned academic genre. This compounding effect means that intervention at any single level is unlikely to be sufficient: effective writing instruction for non-English-major EFL students must address surface, structural, affective, and metacognitive dimensions simultaneously. All of these factors create a challenge that GVW is designed to meet through its multi-component scaffolding architecture.

## The Guardrailed Vibe Writing Framework

The GVW framework adapts vibe coding principles to writing instruction through five interrelated components. Drawing on Woo et al.'s (2025) meta-languaging model, Zimmerman's (2002) SRL cycle, and Flower and Hayes' (1981) cognitive process theory, the framework supports the pedagogical benefits of AI-mediated writing while addressing its potential risks.

The five components were derived by linking theory to instructional functions. Planning and genre awareness inform intentional prompting and the RID (Flower & Hayes, 1981; Hyland, 2004). Evaluation within AI literacy informs structured review of outputs and the CEP (Ng et al., 2021). Woo et al.'s (2025) account of talking to, through, and about AI informs meta-languaging; its two-student application-building pilot supplies a conceptual connection, not writing-outcome validation. Monitoring and recursive reviewing inform Decision Logs, while SRL self-reflection informs the MAR (Flower & Hayes, 1981; Zimmerman, 2002). RID, CEP, Decision Logs, and MAR are proposed teaching and formative-assessment tools, not validated

research instruments. Their use in research would require construct definitions, coding guidance, rater preparation, and reliability and validity evidence.

### *Component 1: Intentional Prompting as Rhetorical Act*

The foundational principle of GVW is that prompting AI is not a trivial technical act but a sophisticated rhetorical performance. Before students may engage with any AI tool, they must complete a pre-writing phase that produces what we term a Rhetorical Intent Document (RID): a structured articulation of purpose, audience, genre, stance, and key argumentative moves. The RID serves three functions: it encourages independent ideation prior to AI engagement; it provides material against which AI outputs can be critically evaluated; and it constitutes a learning artifact documenting the student's intended analytical work.

Instructors teach students to construct Foundation Prompts incorporating four elements: role specification ("Act as an academic writing assistant for a third-year engineering student"), purpose articulation ("My goal is to argue that renewable energy adoption in Vietnam requires policy incentives rather than market forces alone"), constraint specification ("Maintain a formal academic register; avoid first-person throughout; do not use the words 'delve,' 'tapestry,' or 'multifaceted'"), and format requirements ("Produce a 250-word paragraph with a clear topic sentence, three supporting points with transitions, and a concluding sentence that connects to my next argument"). The specificity of such prompts can make rhetorical knowledge visible, but should be interpreted alongside students' explanations and independent writing.

### *Component 2: AI-Mediated Scaffolding with Structured Human Agency*

The second component governs students' interaction with AI-generated outputs. In GVW, students are explicitly prohibited from submitting AI-generated text without documented revision. Every AI output must be subjected to what the framework terms a Critical Evaluation Protocol (CEP): students annotate the AI draft identifying elements that accurately represent their intentions and elements that deviate from or inadequately represent their intended argument, register, or rhetorical approach.

This protocol operationalizes the distinction between responsible AI-assisted development and pure vibe coding. It is also intended to support close reading and textual analysis. These skills do not develop spontaneously through AI interaction; they require deliberate instructional scaffolding (Woo et al., 2025). Students justify acceptance, modification, or rejection against their purpose and evidence; no fixed rejection percentage is required.

### *Component 3: Meta-Languaging Development*

The third component addresses the meta-linguistic skills required to direct AI effectively and to articulate textual judgments. Many non-English-major EFL students initially lack the academic vocabulary to describe what they dislike about an AI draft in terms precise enough to generate useful refinements. Instructors must teach what the framework calls the Language of Textual Critique: vocabulary for describing coherence failures ("the topic sentence does not foreshadow the supporting evidence"), register deviations ("this phrase is too colloquial for a research report"), argumentative weaknesses ("this paragraph makes an assertion without providing a warrant"), and voice mismatches ("this phrasing does not represent my stance on the issue"). For beginning learners, simple prompts such as "This changes my main point" and bilingual explanations can precede the more technical vocabulary.

For a short paragraph, the instructor can model a three-question check: Does the main point match the RID? Is the claim supported by a checked source? Does each sentence connect to the

main point? Learners can complete "I want to say __, but the draft says __"; "This claim needs evidence from __"; and "This sentence does not fit because __; I would change it to __." A brief checklist records the text span, criterion, reason, and proposed edit. Bilingual reasons may be accepted initially. These are proposed teaching prompts, not a validated scoring rubric.

This component is intended to develop writing knowledge through the act of critiquing AI outputs. It is a form of critical reading that may also build understanding of genre conventions. Research on automated writing evaluation highlights the need to consider second-language learners and the writing construct being assessed (Weigle, 2013). Engagement with feedback is also relevant (Zhang & Hyland, 2018), but neither source validates the present GVW intervention.

### *Component 4: Iterative Refinement with Documented Decision-Making*

Component four governs the iterative refinement process central to GVW. Students are expected to engage in documented revision cycles appropriate to the complexity of the task for any substantive writing assignment. Each cycle requires a Decision Log entry recording: the specific AI suggestion under consideration, the student's evaluation of the suggestion against the RID, the decision made (accept, reject, or modify), and the reasoning behind that decision. These logs constitute process evidence to be considered alongside independent writing and explanations and are assessed as a major component of writing portfolios.

The decision log requirement serves multiple pedagogical purposes. It makes the writing process visible and discussable and enables instructor feedback on strategic choices rather than only on textual outcomes. It may support metacognitive awareness by requiring students to articulate reasoning that is often tacit. It also creates a record for discussing AI use; documentation alone cannot establish authorship or exclude retrospective AI-generated explanations.

### *Component 5: Metacognitive Reflection and Disclosure*

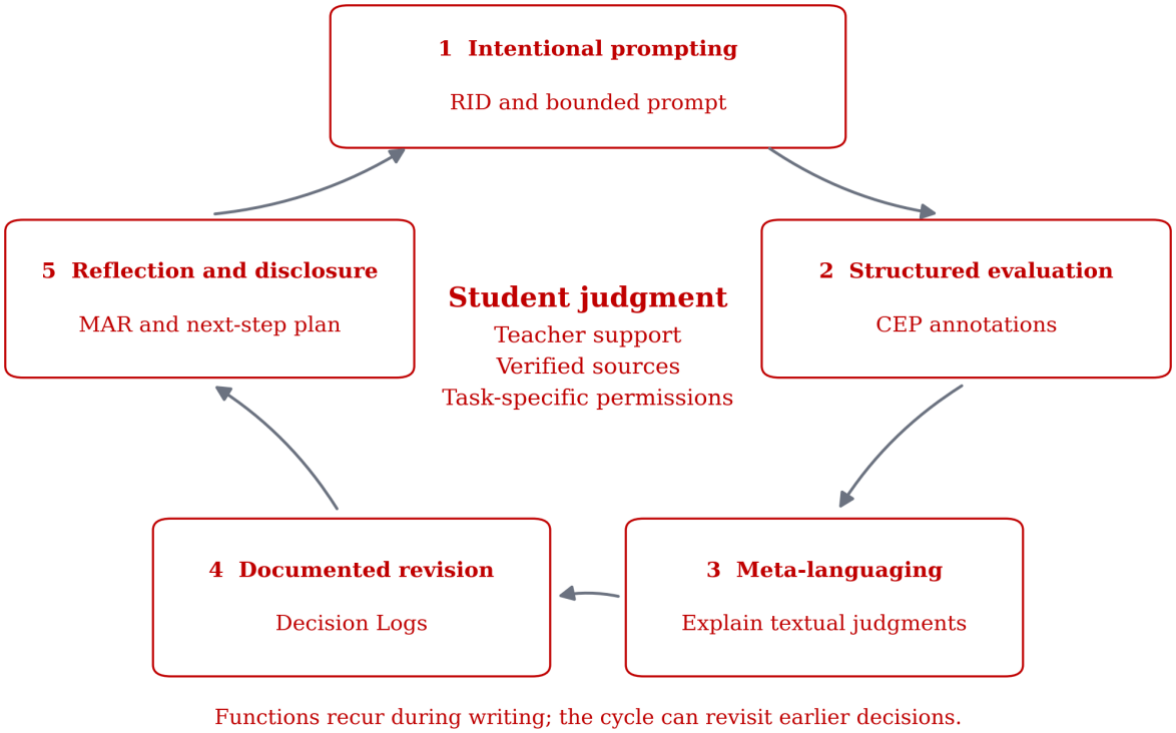
The fifth component requires students to submit a Metacognitive Analysis Report (MAR) alongside major GVW assignments, with brief reflections for routine tasks as described in Section 6.1. The MAR addresses three questions: Where does my thinking differ from what AI suggested, and why? What have I learned about my own writing through this process? What would I do differently in the next iteration? The MAR requirement draws on self-reflection in SRL (Zimmerman, 2002) and provides an opportunity to examine learning. It does not guarantee the development of independent writing competence.

Within GVW, the MAR also documents permitted AI assistance. Students record which tools were used, for what purposes, at which stages of writing, and what human revisions were made. This proposed requirement makes AI involvement available for discussion and assessment against course policy; it does not by itself verify authorship or learning.

Figure 1 illustrates the cyclical structure of GVW, with human agency at the center of each iterative loop.

**Figure 1**

*The Five Components of Guardrailed Vibe Writing*




*Note. The human agent (student) is expected to maintain directorial control at every stage of the GVW cycle.*

## Risks and Mitigation Strategies

Software research provides a counterpoint to optimistic assumptions about AI-assisted productivity; Becker et al. (2025), for example, found slower task completion in the developer setting discussed in Section 5.2. However, software findings cannot establish writing-learning effects. Borrowing the term "cognitive debt" from Kosmyna et al.'s (2025) essay-writing preprint, this paper uses it for the proposed risk of producing fluent text without understanding its argument, rather than a validated diagnosis or a measured GVW outcome.

The following sections examine four proposed risks: limited understanding and textual incoherence, verification workload, integrity violations, and voice homogenization.

### *Cognitive Debt and Textual Incoherence*

By analogy with software code that is produced faster than it is understood, a writing parallel may be termed textual churn: the assembly of AI-generated paragraphs that appear locally fluent but are globally incoherent, because the student has not maintained an organizing argument across the whole text. Students who submit such texts may be unable to defend them in oral examinations or explain the logical relationships among their claims—a possible phenomenon that might be termed the "vibe writing hangover." GVW aims to mitigate this risk through the RID requirement (which maintains argumentative continuity from the outset), decision logs (which track how the overall argument has been built across revisions), and oral defense components that assess students' ability to explain and justify their textual choices.

### *The Productivity Paradox*

A randomized controlled trial by Becker et al. (2025) found that experienced open-source programmers working with state-of-the-art AI tools took 19% more time to complete tasks than those working without them, despite predicting a 24% reduction in completion time and reporting feeling faster after task completion. This finding concerns experienced developers, specific tools, and an early-2025 setting. Whether a similar verification burden occurs in student writing requires direct investigation; it cannot be inferred from the software result. GVW addresses this by teaching students to use AI strategically for specific rhetorical moves rather than delegating entire documents, and by building AI-output verification into every revision cycle.

### *Academic Integrity and Hallucination Risks*

AI language models can generate plausible-sounding but fabricated citations and factual claims, a phenomenon known as hallucination. Walters and Wilder (2023) documented reference fabrication and bibliographic errors in the systems they studied. In academic writing, unverified AI-generated citations constitute a serious integrity violation, even when submitted in good faith. GVW mandates citation verification as a non-negotiable protocol: every reference cited must be independently located and confirmed to exist and to support the associated claim. Additionally, uploading unpublished research data, interview transcripts, or commercially sensitive material to public LLM platforms creates privacy and data protection risks that students must be explicitly warned about. The MAR disclosure requirement creates an institutional record of AI use that can be evaluated in cases of suspected misuse.

### *Homogenization of Voice*

Perhaps the most insidious risk of AI-assisted writing is the erosion of individual and cultural voice. Doshi and Hauser (2024) found reduced collective diversity in an AI-supported short-fiction task. This adjacent evidence motivates attention to similarity, but does not establish a loss of cultural voice in academic writing. For multilingual writers whose rhetorical choices reflect diverse educational and disciplinary experiences, this risk may affect both individual voice and culturally informed perspectives. The active-resistance norm embedded in GVW, specifically the requirement that students justify whether suggestions fit their intended stance, is designed to preserve this distinctiveness. Instructors are encouraged to explicitly affirm the value of culturally inflected perspectives and to assess authenticity of voice as a component of writing quality.

## Assessment Design and Ethical Considerations

### *Portfolio-Based Assessment for GVW*

Traditional writing assessment models that evaluate a single submitted essay at the end of a course are inadequate for GVW contexts because they cannot distinguish between genuine writing development and sophisticated AI delegation. GVW assessment requires a portfolio model incorporating four documented layers: the Rhetorical Intent Document (documenting independent pre-writing analysis), AI-generated drafts with annotations (documenting critical evaluation capacity), decision logs (documenting iterative reasoning), and the Metacognitive Analysis Report (documenting reflective self-awareness). This portfolio model aligns with the AI Assessment Scale's emphasis on linking AI involvement to learning outcomes (Perkins et al., 2025). Independent writing checks are needed to assess whether assisted performance transfers to unaided tasks.

The portfolio model also supports formative assessment throughout the writing process and lets instructors provide feedback on strategic choices rather than only on textual outcomes. Where prior feedback has emphasized grammatical errors, instructors can use the portfolio to make rhetorical and argumentative criteria more visible. GVW assessment shifts the evaluative emphasis toward rhetorical decision-making, argumentative quality, and metacognitive awareness.

Practically, instructors may implement a tiered assessment structure to manage workload in an illustrative class of 40 to 50 students. In this tiered model, low-stakes weekly tasks require only a brief decision log of 100 to 150 words demonstrating that the student engaged critically with AI outputs rather than accepting them wholesale. Mid-stakes assignments add the Rhetorical Intent Document and annotated AI draft. The full four-layer portfolio—including the Metacognitive Analysis Report—is reserved for one or two major assignments per semester. This graduated approach is intended to help students develop GVW competencies progressively without imposing unsustainable grading burdens on instructors. Peer evaluation of MAR components, structured through a shared task-specific rubric, can further distribute the assessment load while potentially developing students' capacity to evaluate AI-mediated writing processes in others.

Where institutional policy permits, AI could make an initial completeness check of anonymized Decision Logs against required fields, flagging missing reasons for teacher review. It should not determine grades, infer authorship, or substitute for examining the writing. Teachers would verify flagged entries and a sample of unflagged entries against drafts. Any time savings, error rates, and privacy implications require evaluation before routine use.

### *Differentiated Implementation: When to Restrict, When to Embrace*

GVW is not appropriate at all stages of writing development. Drawing on the AI Assessment Scale (Perkins et al., 2025), the paper proposes a restriction/embrace continuum. In foundation writing courses where the primary goal is developing basic academic genre awareness and independent ideation capacity, AI-generated drafting should be restricted. AI may function as a grammar coach and vocabulary consultant but should not generate candidate sentences or paragraphs. This restriction is intended to preserve opportunities for foundational schema formation.

In advanced writing courses focused on research synthesis, professional communication, or discipline-specific genres, GVW can be fully embraced with appropriate guardrails. The evaluative criterion shifts from “Can you produce a grammatically correct text?” to “Can you direct, evaluate, and critically refine AI-mediated writing processes in ways that serve your disciplinary and professional communication goals?” This shift is defensible only where the relevant independent writing competence has first been checked; course level alone is insufficient evidence of readiness.

### *Institutional and Ethical Requirements*

Institutions implementing GVW must address several ethical imperatives. First, faculty professional development is important: instructors benefit from practical familiarity with the tools they ask students to evaluate. T. T. H. Nguyen (2023), studying 20 Vietnamese EFL teachers, identified interest in ChatGPT alongside training needs and awareness of its limitations. The practice of having instructors complete GVW assignments before designing student tasks is strongly advised. Second, clear AI use policies must be published in course syllabi, specifying which tools are permitted, at which stages of the writing process, and what

disclosure requirements apply. Third, data privacy education must be integrated into GVW instruction: students must understand what happens to data submitted to commercial AI platforms and be trained to anonymize sensitive materials before AI engagement. Fourth, institutions must ensure equitable access to AI tools, recognizing that disparities in technology access can translate into learning disparities if institutions assume AI use without providing access.

Beyond these institutional requirements, the GVW framework raises broader questions about what writing competence means in an AI-augmented era. If a student can produce a well-organized, rhetorically effective piece of academic writing by skillfully directing and refining AI outputs—maintaining a coherent argument, selecting appropriate evidence, and preserving a distinctive voice throughout—it is not self-evident that this competence is inferior to the ability to produce equivalent writing without AI assistance. Indeed, in some professional contexts that these students will enter after graduation, AI assistance may be available and expected. The ethical imperative for writing instructors is therefore not to protect a pre-AI conception of writing authenticity, but to ensure that students develop the critical judgment, rhetorical understanding, and intellectual ownership that make AI-assisted writing genuinely their own. GVW is an attempt to operationalize that imperative through concrete instructional design.

## Implications for Curriculum Design

The GVW framework has concrete implications for curriculum designers in Vietnamese non-English-major EFL programs. A proposed module sequence for a 15-week undergraduate writing course is outlined in Table 2.

**Table 2**

*Proposed 15-Week GVW Module Sequence for Non-English-Major EFL Writing Instruction*

| Weeks | Focus | GVW Component | Assessment Activity |
|---|---|---|---|
| 1–3 | Genre awareness, rhetorical analysis, and source verification | Pre-GVW: independent writing and genre analysis without AI | Annotated genre analysis portfolio and citation-verification exercise |
| 4–5 | Foundation Prompting and Rhetorical Intent Documents | Component 1: Intentional prompting as rhetorical act | RID and prompt design workshop |
| 6–8 | Critical Evaluation and meta-languaging | Components 2 & 3: CEP and meta-languaging | Annotated AI drafts with CEP and decision log (Cycle 1) |
| 9–11 | Iterative revision and voice preservation | Component 4: Documented decision-making across revision cycles | Multi-cycle revision portfolio with decision logs |
| 12–13 | Advanced source integration and hallucination detection | Integrity and verification protocols | Citation verification exercise; data privacy case study |
| 14–15 | Full GVW cycle and metacognitive reflection | Component 5: MAR and integrated GVW portfolio | Complete GVW portfolio: RID + AI drafts + decision logs + MAR; independent writing check |

This sequence deliberately delays full AI integration until foundational genre awareness and independent ideation capacity have been established. This sequencing aims to preserve independent practice: students who begin with AI-generated drafts before developing their own

argumentative instincts may have an insufficient basis against which to evaluate AI outputs critically—they may lack the "first draft of the self" that makes comparison possible. The sequence also builds progressively from simpler (prompting and evaluation) to more complex (multi-cycle revision and metacognitive reporting) GVW competencies.

Instructors implementing this sequence should expect an adjustment period at the outset, as some students may resist the pre-writing ideation requirement of Component 1—their instinct is to open an AI tool immediately. This resistance is itself worth discussing openly in class. Framing independent ideation not as a rule but as a professional habit—analogous to drafting a brief before handing work to a colleague—offers a practical alternative to explaining the requirement only as a prohibition. Instructors who have worked through GVW assignments themselves will be better placed to have this conversation, and will have realistic expectations about AI output variability and the kinds of revision decisions that arise in practice. Sample decision logs and Metacognitive Analysis Reports generated by the instructor can serve as concrete models for students who have little prior experience with reflective writing documentation.

The module sequence in Table 2 assumes a standalone writing course. Where English writing for non-majors is embedded within general English courses covering all four skills, GVW components can be introduced selectively rather than sequentially: Component 1 (intentional prompting) and Component 3 (meta-languaging) can be taught within existing writing units, with decision logs introduced as a supplementary practice rather than a standalone assessment. Full GVW implementation may be more feasible as a semester-long project thread running alongside regular coursework than as a replacement for conventional instruction. Curriculum designers are encouraged to adapt the framework flexibly to local institutional constraints rather than treating it as a rigid prescription.

## Discussion, Limitations, and Future Research Directions

GVW shares established commitments with existing frameworks. Mizumoto's (2023) Metacognitive Resource Use framework situates GenAI within a wider language-resource environment; GVW specifies how rhetorical intent can be linked to selected revision decisions. Woo et al. (2025) foreground communication with and about AI, while GVW applies that concern to writing artifacts. The refined AI Assessment Scale (Perkins et al., 2025) guides the alignment of AI involvement with learning outcomes; GVW proposes activities and process evidence within those permissions. The proposed contribution is therefore the coordination of familiar practices around the RID, evaluated alternatives, revision records, and independent checks. Comparative superiority is not claimed. A future comparison should include a simpler guided-feedback condition to determine whether the additional documentation provides value beyond existing approaches.

A writing-specific pedagogical proposal by Su et al. (2023) considers ChatGPT support for planning, revision, proofreading, and reflection in argumentative writing. GVW shares this attention to stages of writing and proposes an explicit link between the RID, documented judgments of AI suggestions, disclosure, and independent writing checks. This is a difference in instructional specification, not evidence that GVW is more effective.

This paper presents a conceptual framework rather than an empirically validated intervention. As such, it is subject to the limitations inherent in theoretical work: the proposed pedagogical strategies are grounded in adjacent empirical evidence but have not been tested directly in

Vietnamese non-English-major EFL writing classrooms. Empirical validation through randomized controlled trials, quasi-experimental studies, and qualitative classroom research is urgently needed. Effects on writing competence, metacognition, voice, cognitive load, rhetorical awareness, and dependence remain untested propositions.

Several specific research questions merit prioritization in future work. First, how does GVW instruction affect non-English-major EFL students' writing quality, as assessed by blind raters using established holistic and analytic rubrics, compared with conventional writing instruction or unstructured AI use? Second, does GVW instruction develop transferable writing competencies—that is, do students who learn to direct and evaluate AI for writing demonstrate improved performance on independent (non-AI-mediated) writing tasks? Third, how do factors such as English proficiency level, disciplinary background, and prior AI experience moderate the effectiveness of GVW? Fourth, what implementation challenges arise in practice, and how do instructors and institutions respond?

Additionally, this paper's focus on Vietnamese higher education, while reflecting the most immediate application context, limits the generalizability of some context-specific claims. Cross-national comparative research would be valuable in establishing whether the framework's core principles hold across different higher-education systems, disciplinary cultures, and national AI regulatory environments.

Two additional implementation constraints deserve explicit acknowledgment. The first concerns assessment workload. Section 6.1 proposes a tiered portfolio model—reserving the full four-layer documentation set for one or two major assignments per semester, with lighter requirements for routine tasks—as a practical response to an illustrative non-English-major EFL class of 40 to 50 students. This design choice aims to reduce the most acute grading burden. However, an open empirical question remains: does reducing documentation requirements for lower-stakes tasks also reduce the metacognitive learning the portfolio process is intended to generate? A student who completes a brief decision log rather than a full Metacognitive Analysis Report may engage less deeply with the reflective dimension of GVW. Future research should measure whether, and under what conditions, lighter-touch documentation preserves the hypothesized cognitive benefits of the full model—or whether a minimum threshold of reflective writing is needed regardless of assignment size.

The second constraint concerns what might be termed the meta-languaging paradox. The GVW framework argues that AI scaffolding may reduce low-level cognitive load by managing syntactic and lexical demands, thereby freeing working memory for higher-order rhetorical reasoning. Its net effect on cognitive load remains unmeasured. However, Component 3 of the framework simultaneously requires students to deploy a sophisticated Language of Textual Critique—vocabulary for identifying argument warrant failures, register deviations, coherence breakdowns, and voice mismatches—in order to direct AI refinements effectively. For non-English-major EFL students who already struggle to produce basic academic English, mastering this meta-critical vocabulary adds a new, substantial cognitive demand that may, in the short term, exceed the cognitive load it was designed to reduce. A student who cannot yet write "this argument lacks a warrant" independently is unlikely to use that phrase productively in an AI prompt. The framework proposes scaffolding this vocabulary through instructor modeling, the sentence templates in Section 4.3, and structured checklists, but does not resolve the underlying tension: meta-languaging competence may itself require a threshold of linguistic proficiency that some non-English-major EFL students have not yet reached. This is an honest limitation of the current proposal and constitutes a priority question for future empirical work—specifically, whether simplified, rubric-guided evaluation protocols can substitute for full meta-linguistic

competence during early GVW implementation, and at what proficiency level students begin to benefit most from the approach.

The rapid evolution of AI technology also poses a practical limitation: specific tool recommendations quickly become outdated, and LLM capabilities are advancing faster than educational research can document their effects. The GVW framework is designed to be tool-agnostic precisely to address this limitation, but future work should empirically examine how specific platform affordances and constraints shape GVW implementation.

## Conclusion

This paper has proposed the Guardrailed Vibe Writing framework as a principled response to the dual challenge facing non-English-major EFL writing instruction in Vietnamese higher education: the growing availability of AI writing tools, and the need to preserve opportunities for independent writing development. By adapting the iterative, intent-driven workflow of vibe coding to academic writing contexts, GVW offers a middle path between AI prohibition and unrestricted AI delegation. The five components are intentional prompting, AI-mediated scaffolding with human oversight, meta-languaging, documented revision, and metacognitive reflection and disclosure.

The framework rests on three propositions for investigation. First, prompting AI is itself a form of rhetorical practice that may develop meta-linguistic awareness and genre knowledge when taught explicitly. Second, the potential cognitive benefits of AI scaffolding for non-English-major EFL students—reducing the load of surface-level error management—might be realized without sacrificing the higher-order writing development that constitutes the real educational goal, provided that AI interaction is structured, documented, and critically reflective. Third, the risks associated with AI-assisted writing—cognitive debt, productivity paradox, integrity violations, and voice homogenization—may be addressed through deliberate instructional design rather than prohibitive policy.

The broader significance of GVW extends beyond its immediate application. Consistent with Mollick's (2024) emphasis on learning to work with AI, instruction can address how students evaluate and use AI assistance. Teaching vibe writing responsibly may help students develop the capacity to direct AI systems, evaluate their outputs, and take intellectual responsibility for the resulting texts. For non-English-major EFL students, this capacity should complement continued development of independent writing competence.

Future empirical work will be essential to test, refine, and contextualize the claims advanced here. We hope this framework provides a productive starting point for that research agenda.

## Acknowledgments

The authors wish to acknowledge the contribution of existing research in applied linguistics, educational technology, and software engineering that informed the conceptual foundation for the theoretical framework proposed in this paper.

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