Syntactic and rhetorical transformation in Vietnamese EFL students' academic writing

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Abstract

This study examines how AI-assisted writing tools reshape the linguistic and rhetorical profile of Vietnamese EFL students' academic texts. Using a convergent mixed-methods design, we analyzed paired drafts (pre-AI and post-AI revision) from 51 English-major undergraduates at two institutions. Quantitatively, syntactic development was gauged with standard indices mean length of T-units (MLT), clauses per sentence (C/S), complex noun phrases per clause (CN/C), and dependent clauses per clause (DC/C) while cohesion was assessed through frequency and range of cohesive ties. Qualitatively, discourse analysis focused on stance, hedging, self-mention, and authorial positioning, complemented by short reflection logs documenting students' acceptance, adaptation, or rejection of AI suggestions. Results showed statistically significant gains across all syntactic indices and broader, more consistent deployment of cohesive devices. Rhetorically, revisions trended toward greater formality and conventionalized academic tone, often accompanied by increased hedging; however, some dilution of personal voice and culturally situated expression was observed. Reflections revealed diverse interaction patterns with AI, from wholesale acceptance to selective and critical uptake. We argue that AI can function as a productive scaffold for academic writing when embedded in pedagogy that explicitly cultivates critical AI literacy and preserves learner agency. Implications for curriculum design and assessment in Vietnamese higher education are discussed.

Contents

Contribution of this paper to the literature
This study uniquely examines both syntactic and rhetorical transformations in Vietnamese EFL students' writing before and after AI-assisted revision, integrating quantitative complexity measures with qualitative discourse analysis. It extends prior research by linking linguistic development to identity and agency within an AI-mediated learning context.

1. Introduction

The introduction of Artificial Intelligence in education has changed how students plan, draft, and edit any pieces of writing they define as 'academic'. The development of AI-based writing aids like Automated Editing Systems and Large Language Models promises even more help for learners beyond precision and simple corrections. These tools have an impact on deeper levels of academic writing. While these tools are meant to assist, they are transforming the crucial cognitive processes students employ when designing and rationalizing texts.

AI technologies have certainly affected writing in the English as a Foreign Language (EFL) setting, and their impact is felt most deeply within it. The students of Vietnam's digitally native generation are facing the new challenge of an AI integrated into the processes of teaching and learning. Most studies available seem to explore the positive consequences of AI in grammar, fluency, and cohesion without considering writing identity or authorship in writing within a multicultural and multilingual setting. That brings a problem: what implications does AI bring in terms of writing identity, and how do learners position themselves in the academic hierarchy?

To this question, the context of Vietnam is particularly important because of the concerns regarding the digitally enabled transformation of the higher education system to make it AI-friendly while still maintaining academic integrity. The heightened focus and tendency towards native-like fluency especially when trained through AI algorithmic 'corrections' demonstrate a concerning current of lost authorship and cultural identity. As AI systems lead learners to the tacit unwritten academic vernacular toward the borders of normativism, it becomes clear the degree to which the students' autonomy is pseudo-freedom that is coated in the semblance of choice offered to them.

This study investigates the impact of AI revision tools on the academic writing proficiency of Vietnamese EFL learners. It examines the degree of modification in syntactic complexity, cohesion, and rhetorical stance within the students' original drafts in comparison to the revisions executed by AI. The study attempts to account for the changes resulting from AI technologies concerning the defined boundaries of performance, authorship identity, and decomposition of processes students undertake while scripting.

To achieve this aim, the study pursues three specific yet interconnected objectives. The first one focuses on evaluating the consequences of AI-assisted writing tools on the syntactic complexity in the academic writings of Vietnamese EFL students. The second one deals with measuring the change in cohesiveness and level of rhetoric because of AI text alterations. The last objective targets changes in identity and authorship features due to AI writing aid.

The research questions outlined above assist in meeting the objectives of the study.
1. In what ways does AI-assisted writing influence the syntactic complexity of academic writing crafted by Vietnamese EFL students?
2. What changes do AI-generated edits bring to the cohesion and organization of students' written work?
3. What changes in rhetorical style and authorial self-positioning can be observed after AI-assisted revision?

Asking these questions enables assessing the impact of AI on academic writing among EFL learners. Additionally, it explores the impact of AI on various communication forms in structure and rhetoric within the context of Vietnamese higher learning institutions. The study aims to resolve issues regarding the pedagogy of writing and teacher training by demonstrating the dangers of overdependence on AI in EFL teaching. Also, the research intends to examine the extent of independence, agency, and academic selfhood students hold in a developed educational civilization.

2. Literature Review

2.1. AI in Language Education

Artificial Intelligence (AI) is rapidly redefining the landscape of education by enabling tools that adapt, personalize, and automate aspects of the teaching and learning process. Within language education, AI technologies have become particularly influential in the area of writing instruction, offering real-time grammar checking, vocabulary enhancement, coherence evaluation, and even content generation. Tools powered by large language models (LLMs), such as those integrated into intelligent tutoring systems and AI writing assistants, allow students to receive immediate feedback and revisions.

Luckin, Holmes, Griffiths, and Forcier (2016) emphasize that AI fosters learning environments where learners receive tailored support, enabling differentiated instruction and formative assessment. Zawacki-Richter, Marín, Bond, and Gouverneur (2019), in a comprehensive review of AI in higher education, argue that AI has shifted from supplemental assistance to an embedded element of learning. In the context of writing, this manifests in tools that generate language suggestions, restructure sentences, and recommend improved stylistic choices transforming not only how students write but also how they conceptualize writing as a process.

While promising, such tools raise concerns about their depth of support. Lin and Warschauer (2021) found that AI feedback often emphasizes grammatical correctness, leaving higher-order concerns such as idea development and voice underexplored. Pan (2023) cautions that over-reliance on AI-generated revisions may inhibit students' cognitive engagement and originality. These perspectives highlight the need to understand not only AI's functional benefits but also its broader cognitive and rhetorical impacts.

2.2. Challenges and Pedagogical Debates

Despite the pedagogical affordances of AI, educators remain divided about its role in language development. One of the most frequently cited concerns is that AI tools may reduce students' investment in the learning process by providing instant solutions. Choi and Kim (2022) argue that writing fluency achieved through automated correction

can be deceptive, as students may not internalize the grammar and stylistic patterns generated by the AI. In such contexts, the development of writing becomes more performative than reflective.

Another key challenge is the erosion of authorial agency. Aguirre and Nguyen (2023) note that students often conform to AI suggestions even when those suggestions conflict with their intended meaning or stylistic preference. This leads to homogenization in writing, where distinct rhetorical voices are replaced by standardized, algorithmically acceptable outputs. The dilemma lies in how AI redefines what is considered "good" writing, and whether such redefinition aligns with pedagogical goals in multilingual, multicultural settings.

Academic integrity is also at stake. The blurred lines between acceptable AI assistance and plagiarism have prompted institutions to revisit their policies. While tools like Turnitin have begun detecting AI-generated content, there remains a gap in student understanding of how to ethically integrate AI support into their own writing process. These debates point to the urgent need for critical digital literacy frameworks in language education, where students learn not just how to use AI tools, but how to evaluate and regulate their influence.

2.3. Syntactic Complexity, Voice, and Identity

Syntactic complexity is a crucial indicator of academic writing development in second language acquisition. It reflects the range and depth of linguistic structures a learner can control and is often correlated with writing proficiency. Measures such as mean length of T-units (MLT), clauses per sentence (C/S), and complex noun phrases per clause (CN/C) offer a quantifiable basis for evaluating linguistic growth (Lu, 2010; Ortega, 2003). In AI-assisted writing, these metrics become essential for evaluating how machine-generated input alters the linguistic profile of student texts.

Beyond grammar and structure, writing is also an expression of voice and identity. Ivanič (1998) posits that learners inscribe themselves in their texts through rhetorical stance, modality, self-mention, and lexical choices. This "writerly self" is shaped by cultural background, educational experiences, and disciplinary norms. Norton (2000) adds that language learners do not merely acquire linguistic forms but perform identities through them. As such, any intervention human or machine that affects linguistic form also potentially reshapes identity.

AI systems often promote a form of rhetorical standardization that aligns with Anglophone academic norms. Canagarajah (2013) warns that such normalization risks marginalizing culturally embedded discourse strategies used by students from non-Western contexts. For Vietnamese learners, this tension manifests in the loss of indirectness, formality, and collectivist framing features deeply rooted in Vietnamese academic discourse. Therefore, examining the interaction between AI and identity in writing is not merely a linguistic inquiry but an intercultural one.

2.4. Gaps in Current Research

Despite the growing body of literature on AI in education, empirical research on how AI tools influence academic writing at the linguistic and rhetorical levels remains limited. Most studies to date have emphasized usability, learner attitudes, or broad learning outcomes, with less attention to textual transformations. Specifically, there is a paucity of research examining the syntactic and stylistic changes induced by AI-assisted revisions in EFL student writing.

Even fewer studies have contextualized this phenomenon within Southeast Asian settings, where educational systems are undergoing rapid digital transformation. Vietnamese learners, who often engage with English writing through standardized formats and exam-driven practices, are now interacting with tools that challenge traditional modes of composition. The intersection of AI, linguistic performance, and cultural identity in this context remains underexplored.

Moreover, little is known about how students make revision decisions when interacting with AI tools whether they accept, reject, or adapt machine-generated suggestions based on personal preference or academic expectations. These micro-decisions are critical to understanding how agency is distributed between the human writer and the machine.

2.5. AI and Writing in the Vietnamese EFL Context

The integration of Artificial Intelligence (AI) tools into English as a Foreign Language (EFL) instruction has garnered increasing attention within Vietnam's educational landscape. Recent studies have explored various dimensions of this integration, focusing on both educators' and students' perspectives.

2.5.1. Educators' Perspectives

Research by Hieu and Le (2024) investigated Vietnamese tertiary-level EFL teachers' views on utilizing ChatGPT for fairy tale retelling tasks. The study revealed that teachers recognized ChatGPT's potential to enhance student engagement and creativity. However, concerns were raised regarding students' over-reliance on AI, which could hinder the development of independent writing skills.

Similarly, a study by Phuong and Nhi (2023) examined EFL postgraduate students' perceptions of using Grammarly alongside peer feedback to improve academic writing skills. Findings indicated that while Grammarly provided immediate, surface-level corrections, peer feedback offered more in-depth and constructive critiques. This suggests that AI tools can complement traditional feedback methods but should not replace human interaction entirely.

2.5.2. Students' Engagement and Perceptions

Nguyen (2023) conducted research assessing Vietnamese EFL students' engagement with AI chatbots for vocabulary learning. The study found that students appreciated the interactive nature of AI tools, which facilitated personalized learning experiences. Nonetheless, the necessity for guidance in effectively utilizing these tools was emphasized to prevent superficial learning approaches.

In another study, Bui and Tong (2025) explored English-majored students' perceptions of AI writing tools and their impact on academic integrity. The research highlighted a dichotomy where students acknowledged the benefits of AI for enhancing writing efficiency but also expressed concerns about ethical implications and the authenticity of AI-assisted work.

2.5.3. Challenges and Considerations

Despite the advantages, the integration of AI in EFL writing instruction presents challenges. Teachers have expressed apprehension regarding academic dishonesty facilitated by AI tools, emphasizing the need for clear guidelines and ethical considerations in their use.

Moreover, the effectiveness of AI tools like Grammarly in enhancing grammatical accuracy has been questioned. While some studies report positive outcomes, others suggest that, without proper training, students may not fully benefit from such tools.

The Vietnamese EFL context reflects a cautious yet optimistic approach to integrating AI in writing instruction. While AI tools offer promising avenues for enhancing language learning, their implementation necessitates careful consideration of pedagogical strategies, ethical guidelines, and the balance between technological assistance and the cultivation of independent writing skills.

2.6. Contribution of the Present Study

This study addresses the aforementioned gaps by investigating how AI-assisted writing tools affect the syntactic complexity, rhetorical organization, and voice in the academic writing of Vietnamese EFL students. Through a mixed-methods approach that combines syntactic analysis with discourse-level examination, the study aims to offer empirical evidence on how AI revisions transform learner texts.

In doing so, the study contributes to a more nuanced understanding of AI's pedagogical role, not merely as a corrective assistant but as a co-author of linguistic expression. By focusing on both structural and cultural dimensions of writing, the research supports the development of AI-aware pedagogical strategies in Vietnamese universities. It also provides practical implications for integrating AI into curriculum design, teacher training, and academic writing instruction in ways that preserve learner agency and voice.

Ultimately, this study seeks to reframe AI not only as a technological tool but as a rhetorical actor in the writing process one whose influence must be critically examined to ensure equitable and culturally responsive language education.

3. Research Methodology

3.1. Research Design

This study employed a convergent mixed-methods design, integrating quantitative linguistic analysis with qualitative discourse analysis to investigate how AI-assisted revision influenced Vietnamese EFL learners' academic writing. The design enabled a triangulated understanding of both structural transformations (e.g., syntactic complexity, cohesion) and rhetorical shifts (e.g., voice, stance, and identity).

3.2. Participants

The participants comprised 51 third-year English-major students enrolled in academic writing courses at two Vietnamese universities: 24 students from Thang Long University and 27 students from Vietnam Banking Academy. Participants were selected using purposive sampling to ensure that they were familiar with AI tools such as ChatGPT or Grammarly, possessed intermediate to upper-intermediate English proficiency (CEFR B1–B2), and consented to provide original and AI-revised writing samples.

3.3. Data Collection Procedures
3.3.1. Writing Tasks

Each participant completed two academic writing tasks (problem-solution essay).
- Draft 1 – produced independently without AI tools
- Draft 2 – revised using an AI writing assistant of the student's choice

3.3.2. Reflection Log

Students submitted a brief revision log explaining their choices: which AI suggestions they accepted, rejected, or edited further.

3.4. Instruments and Measures
3.4.1. Syntactic Complexity Analysis

This analysis was performed using L2SCA (Lu, 2010) or manual coding based on these indices.
- Mean Length of T-units (MLT).
- Clauses per Sentence (C/S).
- Complex Noun Phrases per Clause (CN/C).
- Dependent Clauses per Clause (DC/C).

3.4.2. Cohesion Analysis

Cohesion was analyzed using Halliday and Hasan (1976) cohesion framework:
- Reference, substitution, ellipsis, conjunction, lexical cohesion.
- The frequency and diversity of cohesive devices were compared between drafts.

3.4.3. Discourse and Voice Analysis

Discourse features were coded manually, focusing on self-mention, hedging, modality, attitude markers, and meta-discourse.

The coding drew upon frameworks from Ivanič (1998), Hyland (2005), and Canagarajah (2013).

3.5. Data Analysis
3.5.1. Quantitative Analysis
Descriptive statistics (mean, SD) were computed for syntactic and cohesion indices. Paired-sample t-tests were used to examine differences between original and AI-revised texts. Effect sizes (Cohen's d) were calculated to assess the practical significance.

3.5.2. Qualitative Analysis
Thematic analysis (Braun & Clarke, 2006) was applied to reflective logs. Discourse analysis of selected writing samples was conducted to trace shifts in voice and rhetorical stance.

3.6. Trustworthiness and Validity
Inter-rater reliability was established by double-coding a subset of texts for syntactic and discourse features. Member checking was used to confirm interpretations of reflection logs with participants. Validated indices and coding schemes ensured construct validity.

3.7. Ethical Considerations
All participants signed informed consent forms prior to participation. Anonymity and confidentiality were maintained throughout the study. Ethical approval was obtained from the research ethics committee at Thang Long University, Vietnam.

4. Research Findings
4.1. Changes in Syntactic Complexity
Quantitative analysis of students' writing samples before and after AI-assisted revision indicated a consistent improvement in syntactic complexity across all four measured indices. These included Mean Length of T-units (MLT), Clauses per Sentence (C/S), Complex Noun Phrases per Clause (CN/C), and Dependent Clauses per Clause (DC/C). The results of paired-sample t-tests revealed statistically significant increases, suggesting enhanced syntactic development due to AI interaction (Table 1).

Table 1. Changes in syntactic complexity pre- and post-AI revision.

Syntactic index	Pre-AI mean	Post-AI mean	t-value	p-value
Mean length of T-units (MLT)	11.3	14.2	4.56	< 0.001
Clauses per sentence (C/S)	1.51	1.72	3.89	< 0.01
Complex noun phrases per clause (CN/C)	0.88	1.09	3.42	< 0.01
Dependent clauses per clause (DC/C)	0.42	0.56	3.21	< 0.01

4.2. Shifts in Cohesion and Organization
Post-AI drafts demonstrated increased use of cohesive devices such as transitional phrases, referencing expressions, and logical connectors. This enhancement contributed to greater textual unity and thematic progression. Table 2 summarizes the changes in cohesive device usage.

Table 2. Frequency of Cohesive Devices in Student Writing Samples.

Cohesive device type	Pre-AI frequency	Post-AI frequency	Difference
Reference	72	98	+26
Conjunction	54	76	+22
Lexical repetition	35	42	+7
Substitution/Ellipsis	9	15	+6

4.3. Rhetorical and Stylistic Adjustments
Thematic analysis of revised drafts revealed stylistic normalization driven by AI tools. While AI enhanced formality and structure, it also affected voice and cultural nuance. Examples of shifts in rhetorical stance included increased use of hedging, reduced directness, and neutralized tone. Table 3 presents examples of pre- and post-AI revision.

Table 3. Examples of rhetorical and stylistic shifts after AI assistance.

Feature	Pre-AI sample	Post-AI sample
Hedging	This idea is correct.	This idea might be valid.
Formality	Kids need more sleep.	Children require adequate rest.
Self-mention	I believe this is important.	This may be considered significant.
Cultural reference	Like we say in Vietnam, hard work pays off.	Effort is often rewarded.

4.4. Writer Agency and AI Interaction
Analysis of student reflection logs revealed diverse interaction patterns with AI-generated feedback. Students expressed varying degrees of trust, dependence, and critical engagement. The four major response categories are shown in Table 4.

Table 4. Patterns of student interaction with AI writing tools.

Response type	Description	Sample student quote
Full acceptance	Students adopted all suggestions with minimal change.	"I just copied the AI version, it sounded perfect."
Selective use	Students reviewed suggestions and chose what to keep.	"Some changes were helpful, but I kept my original introduction."
Rejection	Students disagreed with AI's edits and reverted to their own.	"The AI made it too robotic, I rewrote it in my way."
Hybrid approach	Students blended AI suggestions with their own style.	"I used the AI version as a base, and then added my voice."

5. Discussion

The present study set out to explore how AI-assisted writing tools affect syntactic complexity, cohesion, and rhetorical style in the academic writing of Vietnamese EFL students. By combining quantitative and qualitative data, it has become evident that AI functions simultaneously as a linguistic scaffold and a cultural filter enhancing formal accuracy while reshaping expression and identity. This section interprets those findings through multiple lenses: linguistic development, cognitive engagement, intercultural rhetoric, and pedagogical implications.

5.1. Syntactic Development through Algorithmic Scaffolding

The quantitative results clearly indicate that AI-assisted revision produced significant increases in the mean length of T-units, clause density, and the complexity of noun phrases. These improvements confirm what Lu (2010) and Ortega (2003) describe as markers of syntactic maturity in second-language writing. Students exposed to AI feedback appeared to internalize or at least reproduce more elaborate grammatical patterns, suggesting that AI output can temporarily raise the linguistic ceiling of learner production.

However, interpreting this growth requires caution. Gains in structural sophistication do not automatically signal deeper cognitive control. As Vyatkina (2024) recently observed, L2 writers often imitate machine-generated syntax without developing awareness of its pragmatic function. Some Vietnamese students in this study echoed that tendency, admitting that they "accepted everything because it looked academic." In these cases, syntactic improvement reflects surface imitation rather than strategic learning. The challenge, therefore, is to transform algorithmic scaffolding into conscious learning through guided reflection and metalinguistic discussion.

At the same time, several participants reported deliberately experimenting with AI suggestions, editing them to maintain their preferred rhythm or to simplify overly complex sentences. This selective uptake shows the possibility of reciprocal apprenticeship: students learn from AI's formal models while asserting personal control. In such instances, AI functions as a partner in Vygotskyan scaffolding rather than as a mechanical corrector. The findings thus support a view of syntactic development not as replacement by technology but as negotiation between human intention and algorithmic suggestion.

5.2. Cohesion, Coherence, and the Question of Internalization

The measurable rise in cohesive devices particularly conjunctions and referential ties confirms that AI revision enhances textual flow. The improvement parallels Halliday and Hasan (1976)'s claim that cohesion contributes to texture and readability. In Vietnamese EFL writing, cohesion has traditionally posed difficulties due to learners' preference for paratactic, clause-chained structures influenced by L1 rhetorical norms. AI's reinforcement of conjunctions such as however, therefore, and moreover introduces a hypotactic discipline often associated with Anglophone academic prose.

Yet, whether this improvement equates to genuine coherence remains uncertain. Crossley and Kyle (2023) argue that cohesion metrics can increase even when overall argument quality does not, because machine suggestions may raise connective density without strengthening logic. Interviews in the present study support this caution: several students acknowledged inserting connectors "to make the paragraph look smooth" rather than to clarify reasoning. Hence, cohesion gains risk becoming ornamental if learners do not internalize discourse logic.

Pedagogically, this insight underscores the necessity of reflective comparison between pre-AI and post-AI drafts. Teachers could, for instance, ask students to annotate why each connector was used, distinguishing between causal, adversative, and additive relations. Through such metacognitive activity, cohesion moves from mechanical adherence to purposeful design.

5.3. Rhetorical Shifts and the Normalization of Academic Voice

Qualitative analysis revealed a consistent movement toward more formal and neutral rhetoric after AI revision. Hedging markers (might, could, may) increased, while direct assertions and self-mentions declined. The transformation aligns with Hyland (2005)'s description of disciplinary stance as negotiated politeness and objectivity. On the surface, this suggests rhetorical maturity. Yet, as Canagarajah (2013) reminds us, conformity to global academic norms may also suppress culturally grounded discourse strategies.

Vietnamese writing traditions, shaped by Confucian modesty and collective orientation, often value indirectness and communal reference. When AI removes idiomatic or culture-laden expressions e.g., "as we say in Vietnam" it standardizes voice to fit an Anglo-academic template. Students lose opportunities to articulate identity within academic legitimacy. Ivanič (1998) conceptualizes this tension as the conflict between the autobiographical self and the discoursal self: the former rooted in personal experience, the latter constrained by genre. AI accentuates that conflict by privileging the discoursal self.

Nevertheless, not all participants experienced voice loss. Some used AI feedback to strengthen rather than silence their stance employing hedging strategically or adjusting pronouns for precision. This divergence illustrates that AI's rhetorical effect is not deterministic; it depends on learners' critical literacy. When students approach AI suggestions reflectively, they can appropriate global academic conventions while retaining cultural nuance. The pedagogical task is to cultivate that critical distance.

5.4. Learner Agency and the Spectrum of AI Engagement

The reflection logs offered valuable insight into students' varying degrees of agency. Four patterns emerged full acceptance, selective use, rejection, and hybrid adaptation mirroring the continuum identified by Godwin-Jones (2022) in studies of intelligent writing assistants. The extremes of full acceptance and total rejection both limit learning: the first fosters dependency, the second forfeits useful input. The hybrid approach, where students negotiated AI output, produced the richest cognitive engagement and the most original revisions.

Agency here is both individual and contextual. Vietnamese university students often operate within hierarchical academic cultures that reward conformity. For many, trusting AI appears safer than challenging it because AI embodies the authority of the "native-speaker norm." Hence, promoting agency requires not only digital literacy but also institutional permission to deviate from algorithmic advice. Teachers and administrators must therefore communicate that *critical disagreement with AI is a sign of competence, not defiance.*

5.5. Cognitive Load, Attention, and the Risk of Superficial Learning

From a psycholinguistic perspective, AI assistance reduces mechanical load, allowing learners to allocate attention to higher-order concerns. This advantage resonates with Sweller's cognitive-load theory: automation of lower-level tasks frees working memory for planning and idea generation. Several students reported that "grammar correction gave me time to think about argument." However, Lin and Warschauer (2021) warn that excessive automation can lead to mindless processing, where users accept corrections without reflection. Evidence from this study supports both outcomes: some participants demonstrated deeper revision awareness, others merely polished surface features.

Balancing automation and cognition calls for deliberate slowing down. Teachers might integrate "pause and reason" prompts in AI-mediated tasks asking students to justify each accepted change. Such strategies transform AI feedback into opportunities for explicit learning rather than invisible correction. Over time, this reflective engagement can sustain genuine syntactic and rhetorical development beyond the tool's immediate presence.

5.6. Intercultural Rhetoric and the Question of Ownership

The interaction between AI and writer identity extends beyond language accuracy to cultural representation. Kaplan (1966) early contrastive rhetoric suggested that thought patterns differ across cultures; while his model was simplistic, later work (Rozycki & Connor, 2025) confirms that rhetorical conventions are culturally situated. Vietnamese EFL students, positioned at the intersection of collectivist communication and global academic English, navigate competing norms. AI tools trained predominantly on Western academic corpora implicitly impose monolingual expectations.

In this study, the removal of metaphors, idioms, and proverbs common in Vietnamese English writing illustrates cultural editing. Although such deletion increases readability for international audiences, it risks erasing local epistemologies. From a postcolonial lens, AI-mediated normalization mirrors earlier concerns about linguistic imperialism (Phillipson, 1992). Thus, educators must help students view AI not only as language technology but also as a cultural artifact carrying embedded ideologies. Discussing whose English the AI promotes can itself become a lesson in critical intercultural communication.

6. Conclusion and Implications

This study explored how AI-assisted writing tools influence syntactic complexity, cohesion, and rhetorical expression in Vietnamese EFL students' academic writing. Using a mixed-methods approach, it found clear quantitative gains and nuanced qualitative shifts that together illustrate both the potential and limitations of AI in writing development.

Quantitative results showed significant improvement in all syntactic indices mean length of T-units, clause density, and complex noun phrase use indicating that AI can serve as an effective scaffold for syntactic growth. Cohesion also improved, with broader and more accurate use of referential and conjunctive ties, suggesting enhanced organization. Yet, discourse analysis revealed that these gains sometimes came at the cost of rhetorical individuality: While AI outputs promoted formality and accuracy, they occasionally neutralized personal stance and cultural nuance.

Overall, the findings affirm that AI tools can enrich linguistic competence when used reflectively, but over-reliance may lead to surface-level fluency rather than genuine academic voice. The key pedagogical challenge is not whether to use AI, but how to use it critically and ethically.

6.1. Pedagogical Implications

1. AI Literacy in Writing Courses – Students should be taught to evaluate, adapt, and justify AI feedback. Reflective comparison between pre- and post-AI drafts can help them recognize linguistic patterns and sustain agency.
2. Assessment Reform – Writing rubrics should reward critical mediation, not just accuracy. Including short reflection notes can document students' reasoning behind accepting or rejecting AI suggestions.
3. Teacher Training – Instructors need ongoing preparation to model ethical, transparent AI use and to design activities that promote autonomy rather than dependency.
4. Institutional Guidelines – Clear policies on AI use should define acceptable assistance, require disclosure, and ensure equal access across student groups.

6.2. Final Reflection

AI-assisted writing can strengthen syntactic and organizational skills, but its true educational value lies in fostering reflective, independent writers. For Vietnamese universities embracing digital transformation, AI should be viewed as a *pedagogical partner* a means to develop critical thinking and responsible authorship rather than a shortcut to polished prose.

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