

Active Writers or Passive Correctors? AI Engagement Patterns and EFL Writing Skill Development

Prepared by:

Shariar Hasan Siam

ID: 221-10-1025

Department of English

Daffodil International University

Supervised by:

Mohammad Elius Hossain

Assistant Professor

Department of English

Daffodil International University



Date of Submission: 15 December 2025

This thesis paper is submitted to the Department of English, Daffodil International University,
for partial fulfillment of the degree, Bachelor of Arts (BA) in English.

Declaration

I hereby declare that this thesis paper “Active Writers or Passive Correctors? AI Engagement Patterns and EFL Writing Skill Development” is my original work and is a part of the “Project Paper with Internship” (Course Code: ENG431) course. The work has been completed under the guidance of Mohammad Elius Hossain, Assistant Professor, Department of English, Daffodil International University. I hereby also declare that anything used or presented in this thesis paper is not previously published or written by another person except where due reference is made.

Siam
20-12-2025

Shariar Hasan Siam

ID: 221-10-1025

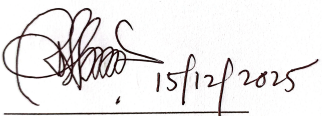
Department of English

Daffodil International University

Certificate

This is to certify that Shariar Hasan Siam, ID: 221-10-1025, is a student of the Department of English at Daffodil International University. He has completed his thesis work “Active Writers or Passive Correctors? AI Engagement Patterns and EFL Writing Skill Development” sincerely under my guidance. He has worked very hard in order to complete the thesis paper as comprehensively as possible within the time frame. The thesis paper has not been submitted to any other institutions for getting a degree or certificate.

I wish him every success in his career.



15/12/2025

Mohammad Elius Hossain

Assistant Professor

Department of English

Daffodil International University

Acknowledgment

Firstly, I am grateful to the Almighty Allah for giving me the strength and patience to complete the thesis paper. Then I would like to express my thankfulness to my supervisor, Mr. Mohammad Elius Hossain, who provided me the knowledge of the whole process of the research and guided me. His patience, tolerance, active supervision, motivation, empathy, and suggestions helped me to finish this thesis paper.

Abstract

In the field of language learning, especially in the writing of EFL students, Artificial Intelligence (AI) writing tools have become omnipresent, yet there is a critical area to explore: whether these usages of AI tools develop genuine writing skills. This study will investigate whether EFL students engage with AI assistants as active writers reflecting on actual writing development or as passive correctors accepting suggestions without critical analysis. We will conduct a quantitative study with approximately 130 undergraduate students of the Department of English at Daffodil International University. We will examine participants' patterns of behavior with AI tools using a quantitative study. We will also examine the relationship of writing to their engagement patterns and self-reported learning in short essay writing. The data will be statistically analyzed with descriptive statistics. We expect that while Active Writers show conscious metacognitive awareness of their language use, Passive Correctors will operate at a more superficial processing level. The implications of this study are to embed reflective practices in AI-supported writing instruction and to recast the pedagogical role of AI from being a correction tool to fostering learning. These suggestions give teachers and scholars concrete strategies for supporting writers who are active rather than passive when they correct writing.

Keywords: AI writing tools, ESL writing, engagement patterns, writing skill development, metacognitive awareness

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Chapter 1: Introduction

1.1 Opening and Contextualization

The advent and increasing adoption of AI in the educational sector, particularly in EFL writing instructions, has significantly reshaped the manner of language learning. With the advent of AI writing tools like ChatGPT, Grammarly and Claude that are now more accessible and sophisticated than at any time in history (Bailey et al., 2025; Moorhouse, 2025), future EFL learners everywhere in the world will be able to integrate such technology into (their own) practice to a degree that earlier generations could not possibly have done (Moore & Whitehill, -). This exciting new technology has garnered attention in academia and was brought to the attention of this thesis, however it also exposed a tension posed by pedagogical discourse on the one hand they provide instant feedback and correction tools, but on the other hand we amply don't have an understanding of the students' interactivity with these tool concerns interactions including if it cultivates real writing capabilities or just correct surface level error (Na et al., 2025; Teng, 2024).

The widespread use of AI writing tools in educational settings has exceeded empirical research on their pedagogic impact. Using AI assistants to write essays for students is now widely reported as being a practice among university-level students, and it especially applies to the digital native in higher education (Phuong, 2024; Wu et al., 2024). Yet, beyond the warm and fuzzy talk of adoption, a fundamental question that has been overlooked by academia is: how do EFL learners engage with AI writing tools when making meaning and deciding on their performance? This discovery has implications for theories of language acquisition, writing instruction, and the future of technology-supported language instruction.

The current research fills this void by examining EFL learners' behavioral engagement with AI writing assistants. Exploring the extent to which students actively, strategically and passively engage with AI-assisted writing, this study provides 'real world' examples to debates about the way in which AI can be aligned with—or stand in opposition to—authentic development through its role in educational practice within writing. This question is particularly pertinent in view of the importance of evidence-based pedagogies that contribute to ensuring the responsible and effective inclusion of AI into EFL writing instruction today (Chapelle et al., 2025; Asadi, 2025).

1.2 Theoretical Framing and Background

Key to understanding how students engage with AI writing tools is the theory that has been used by researchers in educational psychology, second language acquisition, and human-computer interaction, respectively. At the heart of this inquiry is active and passive learning, a long-held pedagogical dichotomy that is rooted in constructivist theory. Active learning that is associated with metacognition, critical scrutiny, and strategic use of feedback has repeatedly been shown to lead to better outcomes in the contexts of language acquisition (Zimmerman 1995; Frazier et al. 2021). Rather, it is assumed that passive learning is characterized by superficial processing and a lack of critical attitude towards the external input and has been found to be related to poor skill-transfer performance, that is, poor adoption of acquired skills.

In the specific context of AI-supported writing, recent research has started to define typologies of learners according to their interaction with the feedback provided by AI. Na et al. (2025) had described three main learner profiles when interacting with L2 writers on ChatGPT:

(i) the Learner, who tries to comprehend and reflectively make use of feedback; (ii) the Controller, who refrains from personal involvement by outsourcing writing tasks to the AI; and (iii) the Adapter, a critical user that decides which suggestions made by the AI are actually useful. Capitalizing on this, they found that the Adapter profile (with independence, selectivity, and critical engagement) showed the most positive trajectories for both language learning development and learner autonomy. This typology is associated with broader theoretical frameworks of self-regulated learning (SRL), which emphasize the significance of metacognitive monitoring, strategic planning, and reflective evaluation in skill acquisition (Zimmerman, 1995).

Metacognitive aspect of writing for AI deserves special attention. One such area has been metacognition which language teachers have long known to be important (Frazier et al., 2021) as it refers to learners' ability of learning about their learning capabilities in terms of monitoring, evaluating and regulating his or her own cognitive behaviour. As students metacognitively engage with AI feedback they are nudged beyond superficial error correction towards more advanced understanding of language structures, schematics and audience considerations. However, there is increasing evidence that AI tools may inadvertently undermine metacognition when learners come to depend on automatic feedback more heavily and neglect their own evaluative abilities (Calle, 2025; Gayed, 2022).

Another key theoretical framework that leverages our account of AI engagement behavior is the concept of perceived self-efficacy as grounded in social cognitive theory (Bandura). Bailey et al. (2025) found that EFL learners who interacted with an AI-based writing assistive system were more likely to perceive themselves as confident in writing than those who did not use it, leading the author to speculate that machine interaction might enhance learners' self-efficacy. However, this finding raises important issues regarding the distinction between

perceived competence and actual skill attainment. Should students be emboldened in their writing by AI that merely conceals flaws rather than corrects them, such confidence could turn out to be an illusion when students are required to compose on their own, without AI helpers.

Relatedly, recent work has highlighted language-related consequences of chronic exposure to AI feedback. Calle (2025) demonstrated that students' EP feedback language is influenced by the exposure they receive to ChatGPT's feedback cycles, leading to the use of a noun-biased corpus in addition to formal aspects of register. Some say that the linguistic closure it suggests can be a positive signal for learning, but if students are never given the chance to develop a voice or write with stylistic flexibility and simply regurgitate patterns produced by an AI, I consider it more than somewhat troubling. This study reinforces the need to investigate not just whether authors use AI tools but also how learners incorporate the AI feedback based on their developing writing competence.

1.3 Research Gap and Justification

Notwithstanding the increased visibility given to AI in learning environments by scholars, there is little understanding about how EFL learners of writing interact with AI tools for writing and if these interactions translate into authentic writing skills development. Although some studies have explored students' appraisals, attitudes, and self-reported satisfaction with AI tools (e.g., Bailey et al., 2025; Phuong, 2024; Khan et al., 2023), research systematically eliciting behavioral patterns of student-AI interaction and its associations with authentic writing development is scarce. Research in this area has generally addressed either attitudinal measures or writing outcomes independently, with relatively little consideration of the essential link between specific engagement behaviors (active vs. passive involvement) and

their variation by students' learning-related beliefs and feelings concerning writing. The fundamental question is not whether or not students use AI, but how their patterns of engagement with AI-driven tools contribute to building authentic skills.

Notably, a major limitation that is widespread in the field is that studies rely heavily on self-reported data and do not cross-validate with writing performance indices. Research into the usage of AI tools often relies on the survey method to measure perceptions, satisfaction, and behavioral intentions (Wu et al., 2024; Tajik, 2025); however, self-reports usually lead to a substantial discrepancy with real learning achievements. Unfortunately, learners can think they are learning well when they are employing the types of practices that decouple them from learning to do those skills for real. Such a gap of alignment between EFL students' self-reported AI engagement practices and their actual writing performance is what needs to be addressed empirically in a context where the stakes are high for L2 writing proficiency: the context of studying English as a foreign language.

In addition, current studies have not adequately addressed the metacognitive aspect of AI-supported writing. Indeed, we are not aware of previous empirical research on the detailed metacognitive strategies students use while interacting with AI feedback (however, see Na et al., 2025; Teng, 2024, who suggest that an awareness of limitations and critiquing cognitive processes is important). To inform the pedagogically effective integration of AI, it is important to explore if students become aware of their metacognition through interacting with AI or if the use of such tools bypasses metacognitive awareness.

Other gaps are the scant research on how students conceptualize AI as either a learning partner or an error-correction tool, the failure to investigate whether enhancing students' writing

through APE translates into independent improvement of students' own writing, and the absence of even general instructional conclusions based on evidence. In light of the widespread use of AI tools in education, research should do more than describe present practices; it should prescribe a set of tactical options—how can educators seek to foster productive, patterned engagement and minimize dependency risk?

1.4 Research Objectives

To investigate EFL students' behavior engagement patterns when interacting with the AI writing tools and to analyze if these patterns present active writing skill cultivation or passive error correction.

Specific Objectives:

1. To typologize the different profiles of behavioral engagement (active, strategic, passive) that EFL students show in their use of AI writing tools.
2. To examine EFL students' perceptions of AI's role in their writing development, whether they view AI as a learning partner or merely as an error-correction tool.
3. To investigate the difference (or discrepancy) between students' self-reported AI practice of engagement and their writing quality.
4. To develop evidence-based pedagogical guidelines for encouraging active, learning-focused interaction with AI writing tools in the EFL classroom.

1.5 Research Questions

Primary Research Question:

How do EFL students engage with AI writing assistants, and do their behavioral patterns reflect active writing skill development or passive error correction?

RQ1: What are EFL students' engagement patterns when using AI writing tools?

RQ2: What do EFL learners consider the function of AI writing assistants in their language learning and writing development?

RQ3: How well do students' self-reported AI engagement practices correspond with their writing performance?

RQ4: What metacognitive strategies do students apply while using AI in writing, and its impact on their writing skill development?

1.6 Significance of the Study

Some parties in the EFL writing education will benefit from what it yields. For language teachers, the research offers evidence-based principles for them to know when AI engagement can be beneficial in promoting writing development, leading instructors to create pedagogical interventions that prompt productive behavior with and sociocartivative responses toward AI. In distinguishing between those who produce text, and those who correct it, the results provide specific cut-off points that can be used for pedagogical goals, test design, and feedback in AI-enhanced writing classes. For policy and practice in education, the research adds to the imperative for individual human institutions to flexibly respond robustly to high levels of AI

penetration providing a more substantial conceptualisation. They can also act as an anchor for success criteria, and policy guidance tools for educators in schools who are interested in the ethical use of AI, or to support the development of curriculums on AI literacy, or evidence based language programs. This research may provide students with increased metacognitive exposure to productive AI interaction strategies and enhance their feedback-seeking skills, which will assist them in learning to write independently at a level required for academic and professional success.

Theoretically, this investigation contributes to the emerging literature on human-AI interaction in language learning by examining learners' use behavior through the lens of self-regulated learning (SRL) theory, metacognition, and second language acquisition (SLA) principles. The study builds on current work but does focus on new affordances and challenges generative AI technologies represent (and imply) for language acquisition from an academic perspective with the objective of advancing our state-of-the-art knowledge about what new tools driven by AI do to language learning—and under what circumstances these influence (negatively or positively) skills development.

Finally, this study adds to the literature gap from a developing country perspective. Although much of the literature considers the experiences of areas with established technological literacy, this work provides insights from Bangladesh, where resources may be scarce, technical know-how varies greatly, and English fluency has precise socio-economic currency. This study provides much-needed understanding on behavioral engagement patterns and their relationships with writing development so that we can better determine whether use of AI-based writing tools supports active writers who are capable of independent action as they

write—or rather leads to passive correctors who rely extensively (if not entirely) on the technological tools available.

Chapter 2: Literature Review

The incorporation of Artificial Intelligence (AI) in the teaching of English as a Foreign Language (EFL) writing has been the focus of much research interest; however, relevant debates revolve around whether AI tools enable genuine writing skills development or only expedite superficial correction of errors. It provides a review of literature in relation to AI writing tools in EFL and includes theoretical frameworks, empirical evidence of student engagement patterns, and research gaps that have motivated the current inquiry.

2.1 Theoretical Foundation

Knowledge of controlled learning process theories and metacognition is necessary to realize how students are using AI writing assistance. Zimmerman (1995) argued that self-regulation is concerned with setting goals, planning, self-monitoring, and reflecting—that is, processes that determine to what extent learners actually construct knowledge or rather passively receive information. Frazier et al. (2021) built on these concepts by including metacognition and hope for the future in their MAPS model of self-regulation, into which learner agency was incorporated. These frameworks propose that the pedagogical value of AI tools is contingent on engagement quality: for example, active, self-regulated learners who approach AI as a resource to inform their budding understanding of linguistic principles stand to gain tremendously by using such technologies, but students who take more passive stances and cede cognitive responsibility do not. Dahri et al. (2024) supported this when they examined 300 preservice teachers and found that metacognitive self-regulated learning significantly predicted acceptance of as well as effective use of ChatGPT, highlighting that AI can enable or bypass metacognitive engagement depending on its implementation and patterns of interaction.

2.2 Student Perceptions and Behavioral Intentions

New research uncovered general, if nuanced, student attitudes toward AI writing tools. Bailey et al. (2025) conducted a study with 399 Saudi EFL students and reported that the regression analysis showed a significant relationship between AI writing strategies and satisfaction ($\beta = .784$), self-efficacy ($\beta = .525$), and behavioral intention ($\beta = .353$), with satisfaction and self-efficacy as the mediators of the strategies-intention relationship. They do, however, note that the cross-sectional self-reports we use capture associations, not causal effects, and that students' perceptions of learning effectiveness might be quite different from actual outcomes—a gap directly addressed by the current report. Wu et al. (2024), with 464 Chinese EFL students, indicated that attitude toward AI positively predicted behavioral intention directly, and perceived ease of use partly exerted influence on intention via attitude rather than through perceived usefulness, showing the significance of affective reaction in addition to functional utility. Khan et al. (2023) reported that Bangladeshi higher education students appreciated the value of AI as well as barriers such as technical problems, potential for plagiarism, and loss of critical thinking—a set of context-specific challenges applicable to the present study's setting at Daffodil International University.

2.3 Engagement Patterns and Interaction Typologies

While perception surveys reveal what students believe about AI, new research is exploring how they actually engage with these tools. Na et al. (2025) identified three types of learners' profiles based on examining the interaction of eight learners writing in ESL for ChatGPT: (a) "Learner," who seeks to understand reflectively; (b) "Controller," who leaves the writing act while minimizing contact; and (c) "Adapter," with a critical perspective selectively

integrating proposals. These profiles also indicated that the most favorable patterns of autonomy and meaningful L2 development were observed in the Adapter's data, whereas the Controller's control tended to hinder more profound involvement. This typology serves as a basis for characterizing the "Active Writers" or "Passive Correctors" defined in the present study, indicating that interaction modes play an important role in development results. Calle (2025) found that school students' discourse-based feedback increased use of nominalizations and more formal register characteristics. This evidence suggests that AI does not only affect learner writing products but also plays a role in the ongoing construction of metalinguistic awareness—effects that need further examination.

2.4 Effects on Writing Performance

Some scholarship shows the beneficial impact of AI feedback on writing performance if appropriately embedded in instruction. Regarding the integrated approach to ChatGPT (combined with teacher) feedback, Asadi (2025) reported that combined ChatGPT and teacher-based written corrective feedback could significantly outperform in terms of IELTS improvements than only-teacher-based written corrective feedback. Thao et al. reported that 384 students in Vietnam who were provided with AI feedback showed greater improvements across output measures of complexity, accuracy, and fluency, particularly for accuracy (Cohen's $d = 0.66-0.71$). Nonetheless, 87.5% reported on continuing needs of interaction with people, and 65% highlighted cultural sensitivity, indicating that the effectiveness and success of AI depended on supplementing rather than supplanting traditional instructional methods. Additionally, improvements in performance have been linked to the interesting and motivational benefits of increased interaction (Tajik 2025; Song 2023), with Song expressing some apprehension about contextual errors and oversolicitation. Most importantly, the majority of studies focused on

AI-supported writing rather than standalone ease-of-writing; therefore, it remains unclear whether the benefits generalize to unaided settings. Short of this clarity, future works should consider combining both independent and assisted writing.

2.5 Critical Challenges

For instance, although the findings have been positive, research clearly shows a number of issues that need to be addressed. In his systematic review, Teng (2024) brings to the fore over-reliance on AI and emphasizes the vulnerability of critical thinking as enduring challenges that need balanced integration. The gap between perceived and empirical learning becomes a significant question that requires investigation, particularly given the high stakes for EFL students' academic careers where writing proficiency is concerned. Second, relatively few studies have attempted to investigate this metacognitive role of AI in writing. Although the significance (Na et al., 2025; Teng, 2024) of critical engagement is acknowledged by researchers, little research has been conducted on specific metacognitive strategies employed by students in everyday learning activities. Another important discrepancy pertains to how the students perceive the role of AI: as a partner that enhances learning and skills or a correction-tool allowing shortcuts. If students consider AI to be merely a mistake eraser, instead of an assistant that helps one grow, its pedagogical potential may well be defeated.

The literature indicates that AI tools have great potential, but pedagogical effectiveness is key to engagement. This study fills this gap by investigating the 117 (N=117) EFL undergraduate Bangladeshi learners' behaviour engagement on their perceptions of writing competence in connection with what they reported that they did. By categorizing users as active writers, control and passive correction students, this study provides empirical evidence on to

which engaging levels learners need to be guided so that skill development does not involve an artificial dependence on other agents – a crucial piece of knowledge when responsibly integrating AI in EFL writing instruction.

Chapter 3: Methodology

3.1 Research Design

The methodology adopted in this study is solid and investigates behavioral engagement patterns of EFL student interactions with AI writing tools; it aims to examine whether such engagement behaviors contribute to an active development strategy for writing skill acquisition or passively correct errors. The quantitative study is survey-based, where students' reported AI engagement behaviors, AI pedagogical role perceptions, and perceptions of writing development are the outcome measures. There is a qualitative component, which utilizes the assessment of writing performance via a short essay writing task, through triangulating self-reported practices with demonstrated proficiency. This integration fills a gap in the literature, where heavy emphasis on self-reported data has thus far failed to answer the question of whether students' perception of learning aligns with actual skill development (Bailey et al., 2025; Wu et al., 2024).

3.2 Participants

The participants were 117 students of the Department of English, Daffodil International University, Bangladesh.

Table 1

Gender Distribution of Participants

Gender	Frequency (n)	Percentage (%)
Male	26	22.2
Female	91	77.8
Total	117	100

Table 2*Year-wise Distribution of Participants*

Study Year	Frequency (n)	Percentage (%)
1st Year	39	33.3
2nd Year	5	4.3
3rd Year	33	28.2
4th Year	40	34.2
Total	117	100

Table 3*Self-assessed English proficiency level*

Level	Frequency (n)	Percentage (%)
Beginner	19	16.2
Intermediate	63	53.8
Upper-Intermediate	30	25.6
Advanced	4	3.4
NA	1	0.9
Total	117	100

Participants were recruited through convenience sampling from year levels (ranging from 1st to 4th) and language proficiency skill (ranging from beginner to advanced), as self-reported. This heterogeneous sample was purposively selected to have different patterns of AI use exist at multiple ages and proficiency levels, as more than one pathway may typify the engagement behaviors experienced by novices versus experts (Na et al., 2025).

Daffodil International University was strategically chosen for several reasons. First, it has access to a population of numerous EFL learners who are engaged in academic writing. Second, there is a lack of research on AI in language learning in the context of Bangladesh, which is not often seen in literature. Most of the research comes from places where technology is widely used (Khan et al., 2023). Research conducted in Bangladesh contributes towards this geographical gap and is informative for other South Asian and similar developing country contexts where there are social and economic incentives to learn English, but resources may be limited. Third, an undergraduate major in English is a promising population for such a study because they experience high levels of writing demands across the curriculum and have explicit motivation to develop timeless competence in writing and significant metalinguistic awareness to reflect on their own learning processes.

Participation was also entirely voluntary, and there was no compensation. The use of convenience sampling may restrict the extent to which findings can be generalized to a population (Dörnyei, 2007), although it is suitable for exploratory research that seeks to investigate patterns or relationships rather than make generalizations about the population. The

sample of $n = 117$ exceeds the minimum requirements for structural equation modeling ($N \geq 100$) and also is manageable for in-depth qualitative analysis of writing samples (Kline, 2016).

3.3 Instruments (Questionnaire)

The study questionnaire included a multipart instrument that contained demographic questions, an assessment of AI use (availability and frequency), behavioral and perceptual Likert-scale measures, and an argumentative essay task. The instrument was refined by a systematic adjustment of validated instruments (Bailey et al. (2025), Calle (2025), and Phuong (2024)), thus providing both a theoretical base and practical precedent for the measurement method.

Part A: Demographic Information Participants' age, gender, place and year of study, department or program enrollment, and a four-point self-assessment of their English proficiency level (Beginner, Intermediate, Upper-Intermediate, or Advanced) were all assessed.

Part B : AI Tool Usage and Familiarity, consisted of five items modified from Phuong (2024) to measure which AI writing tool (ChatGPT, Grammarly, QuillBot, Gemini, Claude, or others) students used, the level of familiarity with the tools, how frequently they have been using them, whether they had used these in class or not, and then if certain aspects of their writing got influenced by these. These questions provide baseline information of AI exposure and use context among participants.

Part C: Comprised 36 Likert-scale items on a six-point scale (1 = Strongly Disagree to 6 = Strongly Agree) measuring theoretically derived constructs:

- Active Learning Behaviors (4 items)

- Metacognitive Processing Behaviors (4 items)
- Passive Correction Behaviors (3 items, reverse-coded)
- AI as Learning Partner (4 items)
- AI as Error-Correction Tool/Dependency (3 items)
- AI for Confidence and Self-Efficacy (3 items)
- Self-Reported Writing Skill Development (4 items)
- Independent Writing Ability (3 items)
- Satisfaction (2 items)
- Behavioral Intentions (4 items)
- Pedagogical Integration (2 items)

The six-point scale removes the opportunity for the neutral middle response option, which would force a respondent to agree with or against a direction, decreasing acquiescence bias and increasing response variation (Croasmun & Ostrom, 2011). The systematic adaptation process included identifying relevant constructs from the source instruments, modifying item wording to better fit the context, and creating new items where conceptual gaps were found for passive correction behaviors and independent writing ability in particular.

Part D: Writing In this part of the test, you are going to write an argument in the form of an essay. You are instructed (in bold) to do two things: “Read both texts and write an essay that responds to a given prompt.” Here is an example from PARCC and the students' work on it after two years of development with teachers in Ohio and Illinois: Some children spend hours every day on their smartphones. Why is this the case? What is your opinion of this? Do you believe this change is a good or a bad development? This IELTS Task 2 type ensures empirical evidence of writing proficiency free from self-report bias; it reflects performance in a non-assisted setting

(no AI capabilities); and it measures whether students can write by themselves without the need for technological scaffolding. The 40-minute limit and the management of classroom time guarantee authentic student-generated work.

3.4 Data Collection Procedure

Data gathering spanned three weeks during the Fall 2025 semester, halfway through the midterm, when students were well into coursework and had some experience with writing assignments. After obtaining institutional ethics approval and consent from participants, the questionnaire was administered to students using a paper format during designated class hours. The interviewer remained available to respond to procedural questions but not to questions regarding the content of the responses. It was explicitly stated that responses would not affect academic grades, and results were kept confidential—important to provide honest feedback on AI use, as students might have been reluctant to share their experiences with using AI tools if they thought there could be any potential repercussions in terms of academic integrity.

The essay prompt was provided to the participants after they completed the questionnaires, and for 40 min, they wrote by hand to prevent AI access and guarantee genuine independent compositions. Finished materials were identified by the participants' coded identification numbers, and registration data was kept separate from responses for anonymity reasons. 118 complete responses were obtained, with a 100 percent completion rate among consenting participants, indicating successful In-Person Administration (IPA). The resulting dataset includes 118 complete questionnaires for which the corresponding writing samples are available.

3.5 Data Analysis Procedure

Data analytic procedures combined a number of complementary approaches to address the research questions of interest thoroughly, with all quantitative analyses carried out in RStudio (and using the respective packages psych, cluster, mediation, corrplot).

Descriptive statistics were used to describe the sample and summarize response distributions. For demographics (age, gender, year of study or proficiency) and AI use variables (tools used, familiarity, and frequency), frequency distributions were calculated as well as percentages. Means, standard deviations, and the distributional characteristics of engagement behaviors and perceptions were calculated for the 36 Likert-scale items to identify central tendencies and dispersion.

The internal consistency of each theoretical construct was measured by Cronbach's alpha (α) in Reliability Analysis. The constructs with $\alpha \geq 0.80$ were rated as “Good,” the ones with $\alpha \geq 0.70$ were rated as “Acceptable,” and those < 0.70 as “Questionable” (Tavakol & Dennick, 2011). This procedure allowed us to assess which were the most reliable scales useful for further analyses, and, although tentatively rather than definitively, marker constructs that should be interpreted with caution.

Cluster Analysis: Participants were divided into different engagement profiles based on five core behavioral aspects (Active Learning, Metacognitive Processing, Passive Correction, and Perception of the learning partner as well as perception of Error Correction Tools) by means of K-means clustering. The number of optimal clusters was decided by elbow method scanning and interpretability check. Profile means and standard deviations on all engagement and outcome variables were examined to describe the profiles after the clusters were identified. T-tests

determined whether there were significant differences among the clusters for each of the engagements, perception, and writing performance with effect size (η^2), which addresses RQ1 related to patterns of participating engagement.

Perception about the role of AI was studied by comparing awareness with it while being LPT versus ECT; hence, perceived roles of AI were taken as dependent variables, and paired-samples t-tests were done between the means for students' rated responses on AI as Learning Partner or Error Correction Tool. The size of effect (Cohen's d) measured differences. Cluster-specific means were analyzed to explore how AI's pedagogical role was conceptualized across diverse engagement profiles.

Alignment between self-reported practices and writing performance (RQ3) was analyzed through Pearson correlation coefficients in Correlational Analysis. Bivariate correlations were computed between engagement behaviors (active learning, metacognitive processing, passive correction, learning partner, error correction) and writing scores, and also between self-reported outcomes (skill development, independent writing, confidence) and performance. These correlations would provide evidence for a misalignment of perception and performance.

Canonical Correlation Analysis was used to test whether the set of engagement variables predicted writing performance. The regression model was based on all the engagement forms and demographic covariates (sex, proficiency level, and year) as the predictors of writing assessment scores. Model goodness-of-fit was tested with F-statistics, R^2 , and adjusted R^2 . The significance of the independent predictors was tested with standardized regression coefficients (β) and p-values.

Independent Samples t-Tests were conducted comparing the writing scores of students who reported relatively high with those reporting low levels on these independent variables (e.g., skill development, metacognitive engagement). Cohen's d effect sizes were computed to determine the magnitude of group differences; significant perception-performance gaps existed for dissimilarities less than 0.88 dB in all except two comparisons.

RQ4 (Mediation Analysis) tested whether Metacognitive Processing mediated the relationship between Active Learning and writing performance. Mediation using the mediation package was performed to decompose the total effects into Average Causal Mediation Effects (ACME) and Average Direct Effects (ADE) with 5,000 bootstrap samples. A 95% CI of the mediated effect not including zero would indicate that there was a significant mediating pathway.

Writing Performance Assessment This task required two EFL teachers to score essays on a 0-9 scale based on adapted IELTS Task 2 criteria, holistically and separately. Inter-rater reliability was evaluated, and final scores are presented as mean values of the ratings. Writing scores functioned as the direct objective measure of performance with which self-reported engagement and outcomes were compared.

The broad range of strategies that were integrated into the analyses previously allowed the triangulation of results across descriptive, comparative, correlational, and inferential methods, thus providing strong evidence as to whether various engagement patterns with AI are related to actual development in writing skill or alternatively represent a perception/performance disassociation.

3.5 Ethical Considerations

This study was performed according to strict ethical standards at all stages of the research. The institutional review board approved this study prior to recruiting any subjects. The participants were made aware that they had the right to refuse participation and that any confidential information, response could be shared and treated voluntarily. Anonymity was guaranteed by dissociating identity data from collected responses. Participants were also reassured that there would be no grade-related ramifications from their responses—a critical detail in eliciting honest reports of usage. The study is low-risk, with a possible reward when considering its contribution to the enhancement of AI in language learning.

Chapter 4: Results and Findings

4.1 Participant Profile and Use of AI

Participants of the study were 117 (77.8% Female, 22.2% Male) undergraduate EFL students ($M_{age} = 22.14$, $SD=1.52$) from Daffodil International University, Bangladesh. The participants were evenly distributed among the different academic years: first-year (33.3%) fourth-year (34.2%) third-year (28.2%) and second-year (4.3%). Self-evaluated competency of English level; 53.8% Intermediate, 25.6% Upper-Intermediate, 16.2% Beginner and only 3.4% classified as Advanced.

AI use was ubiquitous (98.3%); ChatGPT led the way (95.8%) followed by Gemini (39.8%) and Grammarly (21.2%). The intensity of use was high: 64.4% used AI daily, and the percentage that used it weekly was 26.3%; 58.5% identified themselves as regular users when learning English and 33.1% were prone to using AI for academic tasks frequently. Students applied AI more often for grammatical correction (47.9%), academic vocabulary (38.5%), paraphrasing (37.6%) and content arrangement (32.5%). Clearly, the 59.8 % percentage declared that AI tools are used in their classroom.

4.2 Reliability of Measurement Scales

Cronbach's internal consistency reliability coefficients (α) were between 0.042 and 0.834 (Table 4). Six scales had high reliability ($\alpha \geq 0.80$) including Active Learning (0.826), Metacognitive Processing (0.834), Learning Partner (0.822), Skill Development (0.822), and Behavioral Intentions (0.812). Two dimensions presented acceptable reliability: Confidence (0.773) and Satisfaction (0.703). Questionable reliability was found in four scales: Passive Correction (0.535), Error Correction Tool (0.498), Pedagogical Integration (0.481), Independent

Writing (- 0.042). And one should be careful with the interpretation of results related to scales with $\alpha < 0.70$.

Table 4.

Descriptive Statistics and Reliability of Measurement Scales

Scale	M	SD	α	Assessment
Active Learning	4.21	1.12	.826	Good
Metacognitive Processing	4.19	1.08	.834	Good
Passive Correction	3.46	1.13	.535	Questionable
Learning Partner	4.19	1.06	.822	Good
Error Correction Tool	3.54	1.12	.498	Questionable
Confidence	4.11	1.11	.773	Acceptable
Skill Development	4.19	1.13	.822	Good
Independent Writing	3.93	0.84	.042	Questionable
Satisfaction	4.30	1.15	.703	Acceptable
Behavioral Intentions	4.06	1.08	.812	Good
Writing Score (0-7)	4.49	2.05	—	—

4.3 RQ1: Engagement Profiles

K-means cluster analysis based on five scales (Active Learning, Metacognitive Processing, Passive Correction, Learning Partner, and Error Correction) revealed three different profiles (Table 5). Cluster 1: Pragmatists (61.0%, n=72) were moderately oriented and perceived a learning partner (Learning Partner orientation: M = 4.09; Error Correction perception: M = 3.10). Cluster 2: Strategic Adapters (22.9%, n = 27) showed the highest use of Active Learning

($M = 4.90$), Metacognitive Processing ($M = 4.84$), Learning Partner ($M = 4.90$), and Error Correction ($M = 4.37$). Cluster 3 (15.3%, $n=18$): Disengaged Users Here, due to lack of engagement perceived by the user with all dimensions.

Table 5.

Cluster Profiles and Writing Performance

Variable	Cluster 1: Pragmatic Users ($n=72$)	Cluster 2: Strategic Adapters ($n=27$)	Cluster 3: Disengaged Users ($n=18$)	F(2,114)	η^2
Active Learning	4.09 (1.04)	4.90 (0.91)	2.40 (0.86)	77.94***	.578
Metacognitive	4.24 (0.94)	4.84 (0.89)	2.54 (1.03)	75.44***	.570
Passive Correction	3.55 (1.16)	3.48 (0.97)	2.41 (1.09)	15.79***	.217
Learning Partner	4.09 (0.92)	4.90 (0.87)	2.40 (0.95)	90.50***	.614
Error Correction	3.10 (1.03)	4.37 (0.96)	2.33 (0.82)	57.75***	.503
Writing Score	5.03 (1.84)	4.22 (2.26)	4.28 (2.53)	1.29	.022

Note. Values are M (SD). *** $p < .001$.

One-way ANOVAs revealed highly significant differences among clusters on all engagement variables (all $p < .001$, $\eta^2 = .217-.614$). However, clusters did not differ significantly in writing performance, $F(2, 113) = 1.29$, $p = .279$, $\eta^2 = .022$.

4.4 RQ2: Perceptions of AI's Role

Students rated AI significantly more strongly as a Learning Partner ($M = 4.19$, $SD = 1.06$) than as an Error Correction Tool ($M = 3.54$, $SD = 1.12$), paired $t(116) = 6.18$, $p < .001$, $d = 0.61$. By cluster, Strategic Adapters had the highest endorsements for both roles (Learning

Partner $M = 4.90$; Error Correction $M = 4.37$), and very low endorsements of either role were observed in Disengaged Users ($M = 2.40$ & $M = 2.33$). Of note, however, the percentage of students who agreed to “It is unnecessary to study English deeply because AI can solve writing problems,” was also relatively high at 23.9%, suggesting dangerous levels of reliance among a considerable number of EFL learners.

4.5 RQ3: Alignment between self-report and performance

Correlational analyses indicated that there weren't any significant correlations between engagement behaviors and writing performance: active learning ($r = .02$, $p = .874$), metacognitive processing ($r = .07$, $p = .453$), passive correction ($r = -.17$, $p = .070$), learning partner ($r = .12$, $p = .195$), and error correction ($r = -.12$, $p = .202$). Likewise, when self-reported outcomes were considered, little in the way of correlations was found: Skill Development ($r = .09$, $p = .335$), Independent Writing ($r = .04$, $p = .679$), and Confidence ($r = .13$, $p = .157$) (Figure 1).

Multiple regression predicting writing scores from engagement variables yielded a non-significant model, $F(10, 105) = 1.57$, $p = .126$, $R^2 = .130$, adjusted $R^2 = .047$. No individual predictor reached significance except gender, with females scoring 0.94 points higher ($\beta = 0.945$, $p = .041$).

Students reporting high versus low Skill Development did not differ significantly in actual writing scores: high self-reporters ($M = 4.62$, $SD = 1.98$) versus low self-reporters ($M = 4.24$, $SD = 2.18$), $t(115) = 1.02$, $p = .310$, $d = 0.19$, indicating substantial perception-performance misalignment.

4.6 RQ4: Metacognitive Mediation

The item level analyses showed moderate-to-high levels of metacognitive endorsement--"I apply vocabulary learned from AI" ($M = 4.35$, $SD = 1.23$), "AI helped identify areas needing improvement" ($M = 4.30$, $SD = 1.23$), "My writing is now different after feedback from AI" ($M = 4.13$; $SD = 1.31$) and "I apply the evaluation of criteria of AI" ($M = 3.98$, $SD = 1.26$).

Mediation analysis (5,000 bootstrap samples) tested whether Metacognitive Processing mediated the Active Learning-writing score relationship. Although Active Learning strongly predicted Metacognitive Processing ($b = 0.85$, $SE = 0.05$, $p < .001$, $R^2 = .739$), neither variable significantly predicted writing scores. The mediation yielded non-significant results: ACME = 0.192, 95% CI [-0.168, 0.562], $p = .298$; ADE = -0.146, 95% CI [-0.651, 0.331], $p = .542$; Total Effect = 0.046, $p = .874$, indicating no mediating effect.

Students with high versus low metacognitive engagement did not differ significantly in writing scores: $M = 4.60$ ($SD = 2.08$) versus $M = 4.35$ ($SD = 2.02$), $t(115) = 0.66$, $p = .511$, $d = 0.12$.

Chapter 5: Discussion and Conclusion

The present study examined whether EFL students engage with AI writing tools as active writers developing genuine competence or as passive correctors accepting suggestions without critical engagement. Through robust analysis of 117 Bangladeshi undergraduate students' behavioral patterns, perceptions, and writing performance, the findings revealed a paradoxical landscape: while students demonstrated diverse engagement profiles and predominantly viewed AI as a learning partner, these patterns showed minimal relationship to actual writing performance. This chapter interprets these findings within existing scholarship, acknowledges study limitations, proposes pedagogical implications for educators and institutions, and suggests directions for future research in AI-assisted EFL writing instruction.

5.1 Three Types of Engagement: Beyond the Active-Passive Dichotomy

Three types of AI engagement were detected in the EFL students through this study, thus extending the work of Na et al.'s (2025) task content typology to a broader, quantitative sample. But, opposite to the self-regulated learning theory predictions (Zimmerman, 1995), these profiles did not significantly predict independent writing performance.

The largest group, Pragmatic Users (61%), presented the average level of volunteering time with an intermediate tendency to AI as a collaborator or corrector; for them the use of AI seemed to be guided by practical utility. Strategic Adapters were otherwise moderate across all dimensions, signifying the group of metacognitively aware, self-regulated learners who are hypothesized to gain the most from AI (Frazier et al., 2021). Disengaged show very little AI interaction in general (15%).

Perhaps, this study's the most theoretically challenging finding is the lack of performance relationship ($\eta^2 = .022$, $p = .279$). The following are among those which may be worth considering: (1) Deficit of transfer— students could have attained AI-supported proficiency without a trailing-off to self-sustained level if the AI scaffolding never waned and allowed the students to synthesise the skills on their own; (2) Lag—that effects of engagement take longer than captured in this cross-sectional study; (3) Insensitivity—that one combined score for essays will mask dimension-specific improvements in vocabulary, syntax or organization; And (4) Confounding —unmeasured combinations of prior schooling, L1 literacy and cognitive abilities might prove stronger predictors than patterned amounts of engagement with an AI.

This result contradicts the general belief that active, metacognitive engagement with educational technology leads to better learning outcomes and implies that theories built for human-mediated environments might need a substantial revision when considering AI-mediated environments.

5.2 Perception-Performance Gap: Illusion of Competence

There was virtually no association ($r = .09$, $p = .335$), revealing substantial perception-performance misalignment. Students perceived writing to be improved through their AI engagement, although this did not correlate with independent performance to any appreciable degree. This phenomenon is an example of what Bjork and Bjork (2011) have referred to as "illusions of "competence"—individuals confuse the signs they might exhibit with real learning.

In AI-guided writing, learners see the fine product of their written AI-corrected output and may assume this level of quality to be one of their own competency rather than an external

scaffolding. Everything falls apart when you take AI out (or do an independent analysis). Support for this caveat comes from an analysis that revealed that 61% of Pragmatic Users and 28% of Disengaged Users said they develop a high degree of ability, despite moderate-minimal engagement schedules (c.f., overconfidence), in particular those with low levels of metacognitive awareness, which is at least cohesive with Kruger and Dunning's findings that those least able are bad at knowing that they don't.

The 24% of those expressing dependency attitudes (i.e., “It is unnecessary to study English deeply, because AI can solve writing problems for me”) highlights the danger that students perceive AI not as a form of scaffolding but as an endogenous substitution for autonomous capacity, which might result in learned helplessness (Abramson et al., 1978) and failure to build independent competence.

5.3 The Metacognition Without Transfer: The Missing Link

Although the relationship between Active Learning and Metacognitive Processing was significant ($R^2 = .739$), metacognition was not a mediator in the relation between engagement and performance (ACME = 0.192, $p = .124$) or intelligibility ($t = -1.298$), and neither variable was itself a predictor of writing scores. Such a null effect contradicts Frazier et al.'s (2021) MAPS model where metacognition is at the core of self-regulated learning outcomes.

A few interpretations arise: Students can carry out something like metacognitive monitoring (noticing that the AI fixed something) while doing little actual metacognition about regulation (actually coming up with their own ways to avoid those mistakes). The self-report items might do a good job capturing recognition without transfer—that is, the student notices AI's feedback patterns but learns no generalizable principles. Alternatively, metacognition may

not be sufficient even if it is required, and it could require extra conditions to work: extensive practice on its own to store declarative knowledge into procedural skill (Anderson, 1982) or feedback that is integrated on a deeper level than simple surface feedback.

The immediacy, scope, and depth of AI feedback may also disrupt the effortful processing that is necessary for effective learning. While human teachers guide students towards discovery, AI provides them with answers to digest. Even when agents possess the same agency as students, they may still transfer the cognitive work to agent AI instead of the student internalizing it.

5.4 Pedagogical Implications

Ironically, given the null results that follow, this study returns pedagogical dividends. The perception-performance gap and reliance attitude both imply that the mere application of AI without guidance can foster overconfidence in the absence of any real independent skill. We propose evidence-based strategies:

Calibrate Self-Assessment: Implement "AI-free zones" with unassisted writing assessments followed by self-prediction exercises, making perception-performance discrepancies explicit. Dual-submission assignments requiring both AI-assisted and unassisted versions of parallel tasks reveal dependency gaps non-threateningly.

Progressive Scaffolding Down to Independence: Build courses with stepwise reduction of AI access: intensive AI-supported writing-with metacognitive protocols (Weeks 1-4), and restricted AI for specific purposes only (5-10) use, after independent first drafts, and completely independent final assessments. This follows good scaffolding principles (Wood et al., 1976).

Cultivate Deep Metacognition: Require mandatory justification protocols transforming passive correction into active learning: students must identify AI's change, analyze underlying principles, evaluate appropriateness, generalize application rules, and self-test through independent application. Focus on error pattern analysis rather than instance-level corrections.

Combat Dependency: Provide explicit AI literacy instruction distinguishing AI-assisted competence from independent capability, emphasizing why independent skill matters. Train inquiry-based interactions where students prompt AI for explanations rather than corrections, repositioning AI as tutor rather than ghostwriter.

Contextual Adaptations: In resource-limited contexts like Bangladesh, provide scheduled lab access for students lacking home resources, explicit academic integrity education addressing plagiarism concerns, and scaffolded introduction of metacognitive protocols for students from educational backgrounds emphasizing rote learning over reflection.

5.5 Theoretical Contributions and Limitations

The present study expands self-regulated learning theory to AI-imbedded environments and uncovers how the relationships between regulatory (micro-level) behaviors and their outcomes might be dampened or occur at longer lags compared to previously observed contextual analysis. AI could even change the nature of learning ecologies with instant feedback that denies students productive struggle, externalized error detection concealing weakness in monitoring one's own comprehension, and assisted output obviating limitations on one's independent ability.

The quantitative affirmation of original typologies of engagement ($n = 117$) is more robust than previous qualitative work and indicates that engagement falls along continuous

dimensions, not distinct types. The perception-performance paradox provides the first empirical evidence for illusions of competence in technology-rich settings, which might question the limits of self-efficacy theory (Bandura, 1997) when AI participates in boosting confidence without an equivalent increase in actual competencies.

Interpretations of these findings are limited: As the study is cross-sectional, causal conclusions cannot be drawn; single-sample writing may not fully manifest competence; self-report measures could measure social desirability rather than outputs; there was poor reliability in some scales chosen while using it (specifically Independent Writing, $\alpha = .042$), which undermines confidence in the related findings; convenience sampling from one school curtails generalizability; and unobserved confounds (prior instruction, L1 reading, cognitive skills, and task motivation) might also attenuate engagement-performance connections.

Future research should employ longitudinal designs tracking developmental trajectories, experimental interventions testing pedagogical recommendations, behavioral trace analysis using actual AI interaction logs, multi-dimensional writing assessments across genres and modalities, and cross-cultural replication examining how contextual factors moderate AI engagement effects.

5.6 Conclusion

This portrayal, in turn, provides a more nuanced picture of EFL learners' engagement with AI: near universal adoption (98.3%) and high use (64% on a daily basis); three empirically based usage patterns that nevertheless accord to theoretical expectations; general acceptance of AI as a learning partner rather than just an error corrector; but little evidence of it being linked

to any kind of independent writing performance decoupling and substantial perception–performance gaps indicating overattering impressions of competence.

The results are a blow to the idea of technology being good or bad in itself, but only as effective educationally as it is used. The absence of those relationships (given present AI use, even in the Strategic Adapters engaging systematically with metacognition) indicates that this level of use is not enough to lead to genuinely independent writing growth. Students may be receiving AI-assisted competence (producing sound answers with the help of prompts) without a corresponding increase in independent capability (the capacity to write persuasively while alone).

The lesson for educators is simple: When AI use is unchecked, it can be at best incomplete or even harmful. By "teaching" them the kinds of balanced instructional opportunities mentioned above, they could have been left not knowing that their digital crutches had prevented them from falling, given them faux confidence and reinforced their dependence.

The guiding objective is to produce Empowered Writers: students who can write well when left to their own devices and for whom AI serves as a strategic tool—who, in other words, can generate successful texts with or without the help of AI, know when to use one mode over the other, and can leverage AI as a learning booster rather than treat it simply as a prosthetic that's been installed forever into their brains. If this vision is to become a reality, AI's role in pedagogy would have to be fundamentally reconceived—from corrector to confederate, from performance enhancer to development accelerator, and, most crucially of all, from external intervention to internal capability.

If, however, AI is as widespread in education as Microsoft Office, then the question isn't whether students use these apps—it's whether they develop capacity or just dependency. This kind of research gives us the data and support to form our ideas about thoughtful, evidence-driven, educationally responsive integration that harnesses the power of AI without denying its pitfalls so that we can ensure a new generation is not trained for a world where there is no AI but prepared for one where they must stand on the twin foundations every graduate will need in academic, professional, and personal life—IT literacy and authentic linguistic competence.

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Appendices

English Learner Questionnaire

This questionnaire has been designed to explore AI engagement patterns and the development of English writing skills among undergraduate students in Bangladesh. This questionnaire consists of four sections. Please read each instruction and write your answers. This is not a test, so there are no “right” or “wrong” answers, and you do not even have to write your name. The results of this survey will only be used for research purposes, so please give your answers sincerely. Thank you very much for your help!

PART A: Demographic Information

1. Age: _____ years
2. Gender: ☐ Male ☐ Female
4. Department/Program: _____
3. Current Year: ☐ 1st Year ☐ 2nd Year ☐ 3rd Year ☐ 4th Year
5. Self-assessed English proficiency level:
☐ Beginner ☐ Intermediate ☐ Upper-Intermediate ☐ Advanced

PART B: AI Tool Usage and Familiarity

1. Which AI writing tools do you use? (Select all that apply)
☐ ChatGPT ☐ Grammarly ☐ QuillBot ☐ Gemini ☐ Claude
☐ Other (please specify): _____
☐ I do not use any AI writing tools

2. How familiar are you with AI writing tools?

- ☐ I use it as a regular tool for my English learning
- ☐ I often use it for academic assignments
- ☐ I have used it sometimes because of my curiosity
- ☐ I barely use it because I find it unnecessary for English learning
- ☐ I have never used AI writing tools

3. How frequently do you use AI writing tools for English writing?

- ☐ I use AI on a daily basis ☐ I use AI on a weekly basis
- ☐ I use AI once a month ☐ I rarely use AI ☐ I never use AI

4. Do you use AI writing tools in classrooms?

- ☐ Yes ☐ No

5. Which aspects of your English writing have benefited most from using AI? (Select all that apply)

- ☐ Vocabulary (academic/specialized)
- ☐ Vocabulary (general English)
- ☐ Grammar correction and accuracy
- ☐ Paraphrasing and sentence variety
- ☐ Content organization and coherence
- ☐ Writing style and tone

PART C

In this part, we would like you to tell us how much you agree or disagree with the following statements by simply circling a number from 1 to 6. Please do not leave out any items.

Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
1	2	3	4	5	6

(Ex.) If you strongly agree with the following statement, write this:

I like playing cricket very much.	1	2	3	4	5	6
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1. I learn new English words and phrases using AI when writing in English.	1	2	3	4	5	6
2. I am confident that I am learning how to write in English while using AI tools.	1	2	3	4	5	6
3. I accept AI suggestions without carefully reviewing them.	1	2	3	4	5	6
4. I seek feedback on my English writing from AI tools.	1	2	3	4	5	6
5. I am satisfied with using AI as a tool to enhance my English writing.	1	2	3	4	5	6
6. It is unnecessary to study English deeply because AI can solve writing problems.	1	2	3	4	5	6
7. I ask AI to clarify English grammar rules and concepts when writing.	1	2	3	4	5	6

Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
1	2	3	4	5	6
8. Interacting with AI increases my confidence in understanding and expressing complex ideas in my writing.				1	2 3 4 5 6
9. I can write well in English without AI now compared to before using AI.				1	2 3 4 5 6
10. AI should be used in English writing classrooms.				1	2 3 4 5 6
11. AI is useful for my English language learning.				1	2 3 4 5 6
12. AI feedback helped me identify areas in my writing that needed improvement.				1	2 3 4 5 6
13. I have gained more English vocabulary after using AI.				1	2 3 4 5 6
14. AI feedback is aligned with what I consider good and helpful feedback.				1	2 3 4 5 6
15. I apply vocabulary words and expressions that I learned from AI feedback in my subsequent writing				1	2 3 4 5 6
16. I rely on AI primarily to fix errors quickly rather than to understand my mistakes.				1	2 3 4 5 6
17. I intend to continue using AI for English writing improvement.				1	2 3 4 5 6
18. I think grammar correction is more important than feedback on content and structure.				1	2 3 4 5 6

Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
1	2	3	4	5	6
19. I am satisfied with the functions AI provides (explanations, corrections, suggestions).				1	2 3 4 5 6
20. I would recommend AI writing tools to other students.				1	2 3 4 5 6
21. My English writing has changed after receiving feedback from AI.				1	2 3 4 5 6
22. I intend to use AI as an autonomous learning tool to enhance my writing skills.				1	2 3 4 5 6
23. When reviewing my writing, I use evaluation criteria that AI used (like coherence, structure, word choice).				1	2 3 4 5 6
24. I intend to explore various features of AI to enhance my writing.				1	2 3 4 5 6
25. I am committed to incorporating AI as a regular part of my writing routine.				1	2 3 4 5 6
26. I improved my writing skills after using AI.				1	2 3 4 5 6
27. AI boosted my confidence in completing writing assignments.				1	2 3 4 5 6
28. I make fewer mistakes when writing independently (without AI) now.				1	2 3 4 5 6
29. Using AI tools boosts my confidence in my English writing skills.				1	2 3 4 5 6

Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
1	2	3	4	5	6
30. I repeat the same mistakes even after AI has corrected them multiple times.				1	2 3 4 5 6
31. AI enhances my confidence in my written communications.				1	2 3 4 5 6
32. I compare my English writing with examples generated by AI.				1	2 3 4 5 6
33. I copy-paste AI-generated text directly into my writing without modification.				1	2 3 4 5 6
34. My interest in English writing increased after using AI.				1	2 3 4 5 6
35. AI is a good model to imitate for improving my writing.				1	2 3 4 5 6
36. I feel dependent on AI to write well in English.				1	2 3 4 5 6

END OF QUESTIONNAIRE

PART D: Writing Task

You should spend about 40 minutes on this task.

Write about the following topic:

Some children spend hours every day on their smartphones. Why is this the case? Do you think this is a positive or a negative development?

Give reasons for your answer and include any relevant examples from your own knowledge or experience.

Write at least 250 words.

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