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Enhancing Writing Accuracy and Empowering Students: The Transformative Influence of ChatGPT's Informative Feedback on Students' Writing

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ABSTRACT

The rapid adoption of ChatGPT in second language learning has revolutionized the ways learners acquire and practice new languages. This study aimed to evaluate the effectiveness of instructional assistance (IA) formative feedback provided by ChatGPT in enhancing learners' writing skills, addressing the limited research available on the impact of AI tools on writing development. The participants included 50 undergraduate students enrolled in English language courses and 5 experienced English language teachers who served as essay raters. A mixed-methodology approach was employed, combining quantitative data from students' essays and Technology Acceptance Model (TAM) surveys with qualitative insights gathered through the think-aloud technique. The results indicated that positive responses to IA formative feedback significantly boosted the quality of students' writing, with notable improvements in coherence, grammar, and overall engagement with the writing process. Furthermore, the findings revealed that such feedback fostered greater independence among students, empowering them to take ownership of their writing and engage in self-directed learning. Participants reported increased confidence in their writing abilities, correlating with their positive experiences using ChatGPT as a formative feedback tool. This study contributes to the growing body of literature on the role of AI in education, particularly in language acquisition. By demonstrating the potential of ChatGPT as a supportive tool in writing instruction, this research highlights its effectiveness while encouraging further exploration into the integration of AI technologies in language learning environments. Ultimately, the findings aim to enhance educational outcomes for learners across diverse settings

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ARTICLE INFO

Received: 3 May 2025 | Revised: 22 May 2025 | Accepted: 12 June 2025 | Published Online: 23 July 2025
DOI: <https://doi.org/10.30564/fls.v7i7.9849>

CITATION

Aljohani, N.J., 2025. Enhancing Writing Accuracy and Empowering Students: The Transformative Influence of ChatGPT's Informative Feedback on Students' Writing. *Forum for Linguistic Studies*. 7(7): 1109–1128. DOI: <https://doi.org/10.30564/fls.v7i7.9849>

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and promote innovative pedagogical practices that leverage the capabilities of AI in fostering effective language learning experiences.

Keywords: AI Formative Feedback; Writing Skill; Artificial Intelligence; English as a Foreign Language

1. Introduction

Formative feedback refers to targeted instructional guidance provided to learners with the intention of modifying their cognitive processes and enhance their learning outcome. The different kinds of formative feedback include confirmation of reaction precision, description of the right solution, provision of clues and solved instances^[1]. Confirmation is described as the straightforward decision to determine whether a solution is right, while an explanation is the informative element of an instruction giving pertinent hints to direct students towards the right solution. Scholars have indicated that efficient comments should consist of aspects of both confirmation and explanation^[2].

In the virtual world, artificial intelligence (AI) has the ability to provide complete and formative feedback without a tutor's involvement, and strengthen students' written comprehension by providing suggested enhancements and support for linguistic improvement. An important model is the language prototype, ChatGPT, which has exhibited an outstanding ability to evaluate learner writing, recognise sections for enhancement and provide customised recommendations. By effortlessly integrating confirmation and explanation, ChatGPT can involve students in an active, forward and backward discussion, which is an important feature of efficient developmental evaluation. Therefore, the principal aim of the current investigation is to assess the efficiency of instructional assistance (IA) formative feedback in improving learners' writing abilities, in response to the scarcity of existing literature on the effect of ChatGPT on learners' writing abilities^[3]. Steiss et al. asserted that 'further research is needed to understand what writers actually do with the feedback given by AI—does it cause them to do more revision than the little we typically see from students at this age and if so, does the revision improve the essay quality?'^[4]. This can be accomplished by conducting a relative evaluation of learners' writing capabilities before and after the investigational involvement of employing ChatGPT. In addition, the current research intends to investigate the apparent practicality

of IA formative feedback using the Technology Acceptance Model (TAM) as a hypothetical structure. The amalgamation of the objective measurement of students' writing skills and subjective analysis of their perceived usefulness (PU) and perceived ease of use (PEU) will shed light on the efficiency of formative feedback chatbots in improving students' writing skills.

The research input has a twofold influence on language students and academic shareholders. In the case of learners, this demonstrates their intrinsic ability to constantly improve their writing skills in an English as a foreign language (EFL) setting. Such an improvement consecutively enables independent education via the receipt of formative feedback produced by intelligent agents. Customised recommendations that cater to distinct educational types considerably enhance the efficiency of this feedback. In the case of academic shareholders, the study focuses on institutional shareholders by encouraging the use of ChatGPT to enhance learners' linguistic abilities and emphasising realistic inferences for writing pedagogy. Shareholders can benefit from identifying the strong and weak points of feedback given by intelligent agents, allowing them to decide mindfully about whether or not this technique can be incorporated into writing modules. The method can result in the advancement of more efficient tutoring policies and syllabi that maximise the strong points of AI prototypes in providing formative feedback.

2. Literature Review

2.1. Advantage of Using ChatGPT in Language Learning

Applied linguistics scholars, who aim to improve tutoring methods for linguistic teachers and enable linguistic students' language acquisition, have identified the capability of AI in language education and tutoring settings^[5-8]. AI-supported virtual platforms can be used to produce essential language inputs and outputs, helping linguistic students improve their language proficiency. A remarkable tool is

ChatGPT, an AI-supported chatbot designed by OpenAI^[9], which can be efficiently used in distinct linguistic educational modules to improve students' writing skills^[9].

Scholars have previously studied and recognised the advantages of ChatGPT for linguistic education and teaching^[10,11]. Nevertheless, more pertinent investigations must be conducted because ChatGPT is a relatively new technology. For example, Kohnke et al. reviewed its advantages and suggested some applications in linguistic education by providing instances of educational assignments generated by ChatGPT^[12]. These include generation of numerous types of text, text conversion, grammar and content modification, vocabulary description in various respects and formation of text interpretation topics^[13], which could be employed by tutors and students. Owing to their numerous benefits, AI-assisted digital applications, such as ChatGPT, are gradually gaining importance in linguistic learning. Another study by Kim et al. investigated ChatGPT's efficiency in designing course content based on task-based language teaching (TBLT)^[14]. The researchers identified assuring solutions, thereby recommending that ChatGPT has the potential to function as an effective linguistic education tool.

2.2. Advantage of ChatGPT-Based Formative Feedback on Improving Students' Writing

Formative feedback is considered an important and useful tool for enhancing learners' writing abilities. By employing ChatGPT, EFL learners can receive positive feedback, obtain instructions to enhance their writing via the display of mistakes, obtain customised feedback and improve their analytical reasoning abilities^[15]. In addition, Hawanti and Zubaydulloevna conducted a quasi-experimental investigation to estimate the influence of ChatGPT on learners' inspiration^[16]. They found that ChatGPT decreased learners' concerns regarding their writing abilities and encouraged them to study at their own speed. Črček and Patekar assessed learners' involvement in employing ChatGPT in a writing module and discovered the prospects of AI-assisted writing instruction^[17]. By evaluating the outcomes, the learners discovered that ChatGPT was useful in the conception phases of the writing process, which they associated with the programme in rectifying writing inaccuracies. In this way, the learners became involved in conceiving of their responsibilities as writers, thereby demonstrating the significance

of analytical reasoning and enquiring approaches in writing abilities. Although such involvement has presumed that the use of ChatGPT for academic writing intentions maintains significance, an in-depth assessment of the available research shows a lack of studies on the influence of formative feedback offered by ChatGPT on learners' writing, particularly concentrating on attributes, such as syntactic mistakes, logic, word selection, clearness, composition and the rational advancement of thoughts.

2.3. Conceptual Framework for Integrating the Advantages of ChatGPT's Formative Feedback

To assess learners' perceptions of the influence of ChatGPT's formative feedback on their writing results, the author employed the TAM, which was first suggested by Davis and designed by several research scholars, including Chau and Hu, Davis et al. (1989) and Ndubisi et al.^[18–21]. The design comprised insights into ChatGPT's formative feedback efficacy, usage simplicity, viewpoints about its usage and users' communicative goals.

The TAM features two concepts: PU and PEU. Specifically, PU refers to 'the degree to which a person believes that using a particular system would enhance his or her job performance'^[21]. On the one hand, PU is recommended as a principal element of designing the incorporation of novel technologies into professional ecosystems, because certain technologies are expected to be excluded if actions are not executed to enhance this viewpoint^[22]. On the other hand, PEU is described as 'the degree to which a person believes that using a particular system would be free of effort'^[18]. An individual's attitude towards use describes how technology users can have a good or bad experience with regard to carrying out the performance. The final variable in the TAM design is the communicative goal, which is manifested when individuals exhibit their acceptance or willingness to be involved in a communication. An earlier investigation has shown that TAM can assist scientists in comprehending the significant aspects of anticipating a learner's choice to accept a specific technical expertise^[23].

In the literature, different investigations have employed TAM in education and CALL studies, which involve efforts on the use of iPads in an English as a lingua franca (ELF) class^[24], the application of Blackboard and the use of mobile

learning technologies^[25,26]. The results of these investigations exhibit how the TAM supports research scholars in unearthing how communicative goals influence users' agreement, as well as other viewpoints and approaches regarding IA formative feedback, via the employment of a computable method.

In summary, the TAM is 'the most robust, parsimonious and influential' prototype between other agreement hypotheses^[27]. This model can help in comprehending hindrances to students' agreement and elucidating them.

2.4. Research Questions

This research aims to address the following research questions (RQs):

RQ1: How does the integration of the formative feedback of ChatGPT into the writing process impact students' writing skills?

RQ2: How do students' PU, PEU, attitude towards usage and behavioural intention to use ChatGPT for formative feedback change before and after their experience with the tool?

RQ3: How does the perceived ease of use (PEU) of ChatGPT for formative feedback correlate with improvements in students' writing skills?

3. Methodology

A cohesive longitudinal model is a research method that unites aspects of longitudinal and cross-sectional findings. In the current study, the investigation included gathering information from the same participants over an extensive duration, allowing for the investigation of the gradual transformations and advancements in their writing abilities and proficiencies. By including a longitudinal element, the investigator can examine the influence of AI formative feedback on learners' writing abilities and monitor their improvements or transformations at several instances of time.

In addition, the research design includes combined techniques, which use the of both quantitative and qualitative methods. In this investigation, the researcher employed the TAM evaluation, which is quantitative method, to collect information on learners' attitudes towards the chatbot-based feedback technique as well as analysing student's essays. The evaluation provides statistical numbers that can be eval-

uated the intervention. Along with the TAM evaluation, the researcher also used think-aloud procedures, which were largely qualitative data collection. Think-aloud procedures allow contributors to express their views and responses while working together with a chatbot-based feedback system, providing insight into their cognitive processes^[28]. This mixed-methods approach improves the value and intensity of the research outcomes, thus offering a complete image of the phenomenon under study.

3.1. Participants and Setting

This study involved three groups of participants. The first group consisted of 50 undergraduate students from an English language institute. Their average age was 24 years old, and their average English language proficiency level was 3, indicating an upper-intermediate level based on the entry test. The entry assessment classified the students in the class as upper-intermediate (Level 3), ensuring that all participants possessed comparable linguistic abilities at the outset of the study. The average age of the participants was 24 years, and the homogeneity of their educational backgrounds contributed to a balanced proficiency in language use. This methodological approach facilitated a more rigorous examination of the learning outcomes. Also, because the study targeted a particular group of students, participants were sorted into groups at random. The similar educational backgrounds and motivations to learn among all participants, which this approach provided, were important for the study. The students were provided with a consent form that explicitly stated that their participation would not affect their grades and that they had the option to withdraw from the study at any time.

The second group consisted of five language course instructors from the same English language institute. Their task was to rate the students' writing outputs before and after the intervention experiments. The third group consisted of the researcher, whose task was to be an observer during the learning process and during the process of conducting the think-aloud protocols. Thus, the researcher can gather rich and detailed insights into students' experiences and perceptions of integrating chatbot-based feedback in the writing classroom. These firsthand observations enhanced the validity and reliability of the research findings.

3.2. Data Collection

3.2.1. Writing Rubric

For the first question, the five language instructors used the rubric for students to assess their essays before and after the experiment. This would assist in the investigation of whether any changes and improvements in the students' writing skills can be observed. The rubric consisted of four criteria: the first criterion is structure, the second criterion is organization, the third is mechanics, style, and diction, and the fourth is argumentation and critical thinking. The structure and organisation criteria assess students' ability to write an introduction, paragraphs for the body of the essay and a conclusion. The criteria of mechanics style assess students' ability to write clear sentences, organise ideas for a smooth flow, choose appropriate vocabulary, spell words correctly and use proper grammar, punctuation and capitalisation. The criteria of argumentation and critical thinking evaluate students' ability to present valid arguments, identify potential biases in the information and generate novel ideas. This rubric has undergone validation, as it has been used by the instructors from the English language institute (see **Appendix A Table A1**).

3.2.2. TAM Survey

For RQ2 and RQ3, the researcher employed the TAM evaluation to estimate the recognised efficacy, recognised simplicity and intent to use ChatGPT. In this investigation, portions of the pre- and post-evaluations were taken from Shroff et al. and adjusted to match the goal of the current investigation^[29]. The method comprised a TAM variable built on 27 instructions, including recognised efficacy (16 elements), recognised simplicity of usage (three elements), intent towards application (five elements) and communicative goal to employ (three elements) (see **Appendix A Table A1**). The instrument used a 5-point Likert scale, with options ranging from 5 = strong agreement to 1 = strong disagreement^[30]. The author distributed the survey after the initial use of the chatbot and after the experiment.

3.2.3. Think-Aloud Protocols

The researcher attended the AI formative feedback sessions in the classroom, during which students were asked to verbalise their thoughts and actions as they engaged with the chatbot feedback system. Students can express their re-

actions, decision-making processes and reflections out loud while interacting with the chatbot during their writing tasks. Think-aloud protocols provide insights into students' cognitive processes, metacognitive strategies and immediate reactions to chatbot feedback. Hoppmann employed the think-aloud protocol to examine users' 'point of frustration'^[31]. Verbalising their thoughts can help reveal their understanding and misconceptions, as well as the challenges they encounter while integrating chatbot feedback into their task completion, thus providing valuable qualitative data. By triangulating data collection for RQ2, this process helped illustrate students' holistic perceptions and understanding of the use of technology that supported the TAM survey results. In this case, the researcher played the role of an observer.

3.3. Data Analysis

For the essays, expert judgment was employed to ascertain interrater accuracy^[32]. Initially, five ESL raters scored the essays from the first and latest sittings using the aforementioned rubric. Next, the specialist reviewer served as the third evaluator who carried out a blind assessment of each students' essay. One attribute of the specialist discernment design is that the judge should have increased precision and reliability than the other raters—a point that is replicated in this evaluator's heightened recording strength^[32]. The judge's ratings included both initial ratings prior to obtaining the working score. Hence, if the judge gave the highest ratings achievable, the opening judges' ratings did not influence the result. Furthermore, the specialist reviewer could assess the opening ratings and modify one or both ratings prior to confirming them. This prototype presumes that the discernment of the specialist reviewer provides a more accurate evaluation of students' skills than the overall discernment of the opening reviewers^[32].

Multivariate analysis of variance (MANOVA), regression and correlation were conducted to analyse students' pre- and post-intervention writing scores across the four rubric dimensions. Follow-up post-hoc analyses identified specific areas of improvement within each criterion. Regression analysis examined how students' initial perceptions of ChatGPT predicted variations in writing performance changes and attitudes. This approach allowed for a full view of objective improvements that might have taken place in writing and the predictive role played by participants' perceptions in shaping

the outcomes. The research will also examine the effectiveness of using ChatGPT as a tool for providing formative feedback on students' writing skills by running a series of analyses, namely paired-sample t-tests. Descriptive statistics will be used to identify the mean score and standard deviation for each criterion. The importance of the observed differences will be presented in the following analysis.

Furthermore, this research will assess students' perceptions of respect for ChatGPT in terms of their PU, PEU, attitudes towards usage and behavioural intentions. Paired-sample t-tests will be conducted to test significant changes in these perceptions after completing the intervention with ChatGPT. This correlation analysis will examine the relationship between improving students' writing skills and the PU of ChatGPT as a formative feedback tool.

Finally, multiple regression analysis will be conducted to predict students' behavioural intentions regarding their PU, PEU, and attitude towards using ChatGPT before and after the intervention. In other words, this study will investigate the impact of the training workshop on teacher competencies and the potential benefits of the use of ChatGPT in promoting students' writing skills.

The variables of primary focus in this study include the various writing performance scores based on the four criteria found within the rubric, which serve as dependent variables in the MANOVA to check for students' performance improvement. Other independent variables measured through pre- and post-surveys were PEU, PU and attitude towards ChatGPT. These were used in the regression analyses to determine their effects on students' writing performance and attitude changes over time.

Think-aloud protocol was analysis using an inductive thematic analysis approach, the researcher systematically engaged with the complete dataset to identify and categorize emergent themes and recurrent patterns. This method involved a thorough examination of the data to derive meaningful insights and establish thematic categories grounded in the dataset itself, without imposing preconceived frameworks.

3.4. Procedure

First, the researcher secured ethical clearance from the university, obtained informed consent forms from the participants and explained the purpose and the procedure of

the study to them. The participants were explicitly informed of their right to withdraw from the study at any time. The duration of the experiment was set at 16 weeks. Next, the researcher conducted tutorials on how to use ChatGPT to generate formative feedback. Using a structured program that included both workshops and practical exercises, students in our case study learned to effectively engage with ChatGPT. They focused on correctly searching through data, understanding the model's capabilities, and utilizing feedback to enhance their writing. The primary objective was to equip students with the skills necessary for meaningful interaction with AI, enabling them to leverage its potential and improve their essay writing. Then, the TAM survey forms were distributed at two time points: after the participants' initial use of ChatGPT and upon completion of the entire experiment.

During the sixteenth week, the language teachers introduced different types of essays to their students. Over the following two weeks, each unit lasted 4 weeks, allowing students to learn the essay types in depth. In the past two weeks, the students were assigned a task to write their own essays in the classroom. After the lecture, they were required to submit their essays on Blackboard. To ensure that the students did not rely on chatbots or automated assistance while writing their essays, they were required to submit their essays immediately at the end of the lecture. Instead of the teacher providing feedback, the students utilised a chatbot to receive comprehensive feedback on their essays. Additionally, during these sessions, the students conducted small presentations in front of the classroom, verbally reflecting on the most common mistakes in their essays. Throughout the two feedback sessions, the students used the AI chatbot and conducted reflective presentations. At the same time, the researcher played the role of observer and facilitated think-aloud protocols, through which the students voiced their thoughts and reasoning while reviewing their essays. This process was repeated 16 times, allowing for multiple rounds of observation and data collection. Finally, the five language teachers assessed each student's first and last essays, which they wrote and submitted without using AI formative feedback. We implemented a comprehensive training process for assessors to ensure the reliability and accuracy of their scores. This process included detailed instructions on the use of the scoring rubric, exposure to essays representing

various grades, and participation in collaborative exercises to reach consensus on scores for those essays. Regular meetings were held to review discrepancies in scoring and refine the application of the rubric. The aim of this collaborative approach was to enhance the assessors' understanding of the evaluation criteria and promote consistency in scoring across all raters. Through comprehensive training, we aimed to ensure that other researchers utilizing the same methodology could reliably reproduce our findings.

4. Quantitative Results

RQ1: How does the integration of informative feedback from ChatGPT into the writing process impact students' writing skills?

To investigate students' writing skills before and after the ChatGPT-based intervention involving the provision of formative feedback, paired-sample t-tests were conducted

for each of the writing skill criterion identified in the previous section. The descriptive statistics of each criterion before and after the use of ChatGPT are presented in **Tables 1** and **2**.

The findings revealed that the scores for all the criteria used to rate students' writing skills improved significantly after using ChatGPT for formative feedback. In particular, the scores for each criterion increased as follows: structure: before ($M = 4.02$, $SD = 0.901$) and after ($M = 6.10$, $SD = 0.823$) [$t(48) = -11.942$, $p < 0.001$]; organisation: before ($M = 3.84$, $SD = 0.746$) and after ($M = 5.78$, $SD = 0.823$), [$t(48) = -12.218$, $p < 0.001$]; style: before ($M = 3.53$, $SD = 0.680$) and after ($M = 5.49$, $SD = 0.960$), [$t(48) = -11.656$, $p < 0.001$]; and argumentation and critical thinking: before ($M = 4.14$, $SD = 0.842$) and after ($M = 6.43$, $SD = 0.707$), [$t(48) = -14.555$, $p < 0.001$] (**Table 3**). Notably, among all the criteria, argumentation and critical thinking showed the most significant improvement.

Table 1. Descriptive Statistics for Students' Writing Skills Before and After Using ChatGPT.

	ChatGPT	Mean	Std. Deviation
Structure	Before	4.02	0.901
	After	6.1	0.823
Organisation	Before	3.84	0.746
	After	5.78	0.823
Mechanics and diction style	Before	3.53	0.68
	After	5.49	0.96
Argumentation and critical thinking	Before	4.14	0.842
	After	6.43	0.707

Table 2. Results of the Paired-Sample T-Tests.

Variables	t	df	Sig. (2-tailed)
Structure	-11.942	48	< 0.001
Organisation	-12.218	48	< 0.001
Mechanics and diction style	-11.656	48	< 0.001
Argumentation and critical thinking	-14.555	48	< 0.001

Table 3. Descriptive Statistics for Repeated One-Way MANOVA.

	ChatGPT	Mean	Std. Deviation	N
Structure	After	6.10	0.823	49
	Before	4.02	0.901	49
	Total	5.06	1.353	98
Organisation	After	5.78	0.823	49
	Before	3.84	0.746	49
	Total	4.81	1.249	98
Mechanics and diction style	After	5.49	0.960	49
	Before	3.53	0.680	49
	Total	4.51	1.286	98

Table 3. *Cont.*

	ChatGPT	Mean	Std. Deviation	N
Argumentation and critical thinking	After	6.429	0.7071	49
	Before	4.143	0.8416	49
	Total	5.286	1.3847	98

The abovementioned results confirm that using ChatGPT for formative feedback significantly increased students' performance in all identified criteria. While the highest increase was linked to argumentation and critical thinking,

style had the lowest improvement, although it still showed a significant increase. **Figure 1** visually shows the mean scores for each criterion taken before and after using ChatGPT, along with improvements in all areas.

Students' writing skills criteria before and after using ChatGPT for formative feedback

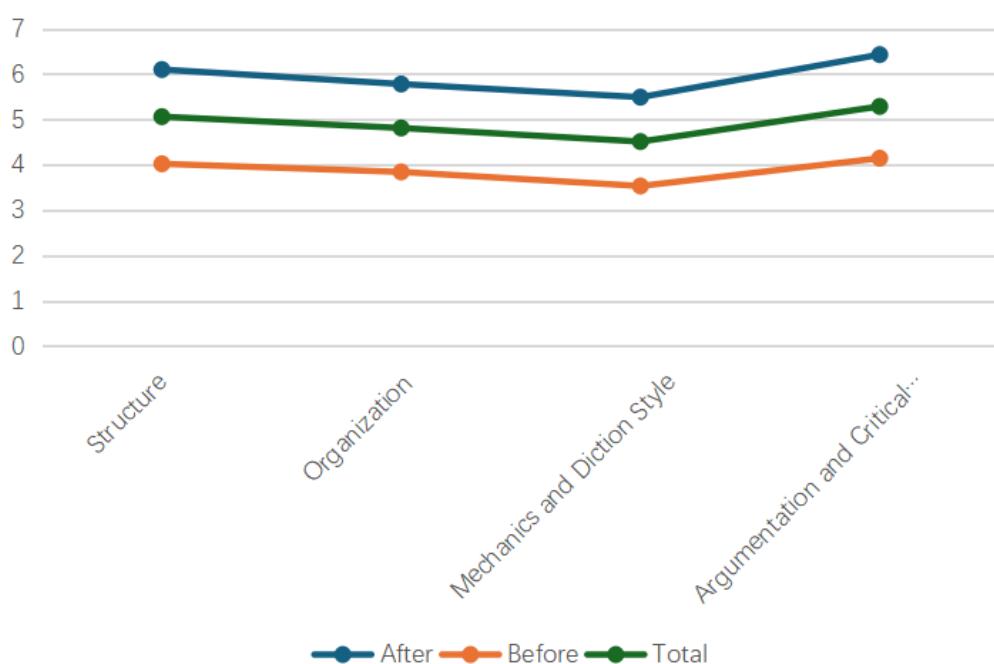


Figure 1. Scores on Students' Writing Skills Before and After Using ChatGPT for Formative Feedback.

The **Figure 2** compares multivariate test results regarding the effects of an intercept versus ChatGPT on writing skills, using four statistical measures: Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root. In each measure, the intercept value significantly outperforms the ChatGPT value, indicating a stronger influence on writing skills. This trend suggests a consistent pattern across all four tests, highlighting the intercept's importance. Lower values in Wilks' Lambda and higher values in other measures reinforce the dominance of the intercept in affecting writing skills. Overall, these findings imply that the baseline performance represented by the intercept is more impactful than

the contributions from ChatGPT.

A one-way repeated measures ANOVA was conducted to examine whether the ChatGPT intervention for formative feedback had different impacts on students' writing performance scores for all four criteria (structure, organisation, mechanics and diction style and argumentation and critical thinking). Descriptive statistics indicated that the means for all criteria were higher after using ChatGPT. Furthermore, multivariate analysis revealed a significant effect of using ChatGPT on combined dependent variables, Pillai's Trace = 0.816, $F(4, 93) = 103.237$, $p < 0.001$ (**Table 4**). This finding thus represents a robust overall effect of the intervention

on students' writing skills. In summary, using ChatGPT as formative feedback significantly enhanced students' writing skills across all measurement criteria.

One-way ANOVA results showed that all four writing criteria significantly improved after the intervention with ChatGPT: structure [$F(1, 96) = 142.602, p < 0.001$], organisation [$F(1, 96) = 149.276, p < 0.001$], mechanics and diction style [$F(1, 96) = 135.862, p < 0.001$], and argumentation and critical thinking [$F(1, 96) = 211.862, p < 0.001$], which showed the most significant improvement (**Table 5**). Furthermore, the most significant gain was found for argumentation and critical thinking: before (mean of

4.143 ± 0.8416 SD) and after (mean of 6.429 ± 0.7071 SD) using ChatGPT. In comparison, the least significant gain concerned mechanics and diction style: before (mean of 3.53 ± 0.680 SD) and after (mean of 5.49 ± 0.960 SD) using ChatGPT. Such results point to the fact that ChatGPT feedback effectively addressed both structural features of writing on higher-order skills. These improvements in all criteria indicate that using ChatGPT as formative feedback has a positive influence on students' writing abilities across multiple dimensions. Such comprehensive improvement underpins the potential to incorporate AI-driven feedback tools within educational settings.

Comparison of Multivariate Test Results: Intercept vs. ChatGPT Effects on Writing Skills

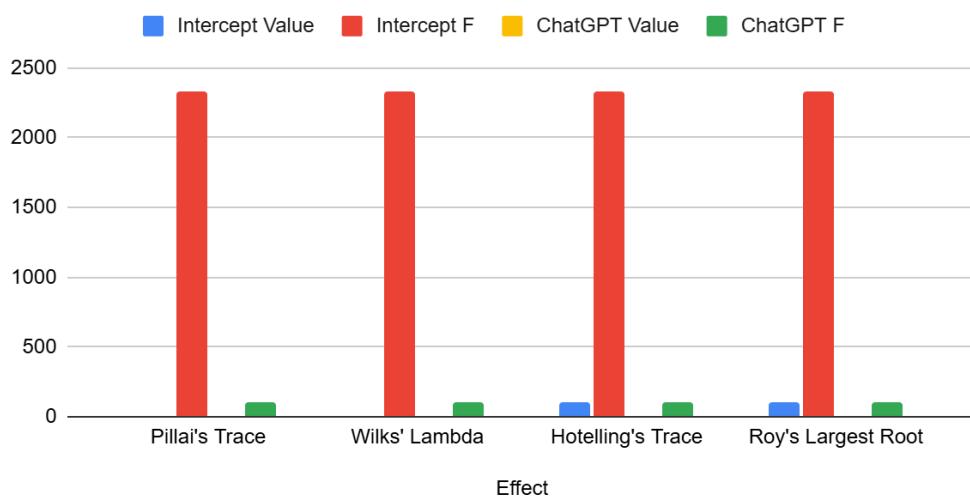


Figure 2. Comparison of Multivariate Test Results: Intercept vs. ChatGPT's Impact on Students' Writing Skills.

Table 4. Results of the Multivariate Tests.

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's trace	0.990	2326.848 ^b	4.000	93.000	0.000
	Wilks' lambda	0.010	2326.848 ^b	4.000	93.000	0.000
	Hotelling's trace	100.079	2326.848 ^b	4.000	93.000	0.000
	Roy's largest root	100.079	2326.848 ^b	4.000	93.000	0.000
ChatGPT	Pillai's trace	0.816	103.237 ^b	4.000	93.000	0.000
	Wilks' lambda	0.184	103.237 ^b	4.000	93.000	0.000
	Hotelling's trace	4.440	103.237 ^b	4.000	93.000	0.000
	Roy's largest root	4.440	103.237 ^b	4.000	93.000	0.000

Table 5. Tests of Between-Subject Effects.

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Structure	106.163 ^a	1	106.163	142.602	0.000
	Organisation	92.092 ^b	1	92.092	149.276	0.000
	Mechanics and diction style	94.041 ^c	1	94.041	135.862	0.000
	Argumentation and critical thinking	128.000 ^d	1	128.000	211.862	0.000

Table 5. Cont.

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	Structure	2510.367	1	2510.367	3372.007	0.000
	Organisation	2263.684	1	2263.684	3669.320	0.000
	Mechanics and diction style	1993.510	1	1993.510	2880.059	0.000
	Argumentation and critical thinking	2738.000	1	2738.000	4531.862	0.000
ChatGPT	Structure	106.163	1	106.163	142.602	0.000
	Organisation	92.092	1	92.092	149.276	0.000
	Mechanics and diction style	94.041	1	94.041	135.862	0.000
	Argumentation and critical thinking	128.000	1	128.000	211.862	0.000
Error	Structure	71.469	96	0.744		
	Organisation	59.224	96	0.617		
	Mechanics and diction style	66.449	96	0.692		
	Argumentation and critical thinking	58.000	96	0.604		
Total	Structure	2688.000	98			
	Organisation	2415.000	98			
	Mechanics and diction style	2154.000	98			
	Argumentation and critical thinking	2924.000	98			
Corrected Total	Structure	177.633	97			
	Organisation	151.316	97			
	Mechanics and diction style	160.490	97			
	Argumentation and critical thinking	186.000	97			

RQ2: How do students' PU, PEU, attitude towards usage and behavioural intention to use ChatGPT for formative feedback change before and after their experience with the tool?

This study assessed the impact of ChatGPT on user perceptions across four key metrics before and after the ChatGPT-based intervention. PU significantly increased from a mean of 4.21 to 4.90, indicating enhanced recognition of ChatGPT's value (**Table 6**). Similarly, PEU rose from 3.71 to 4.85, suggesting a more intuitive experience. Furthermore, attitudes towards usage improved from 3.88 to 4.90, reflecting a more favourable post-intervention outlook. Finally, behavioural intention increased from 4.33 to 4.88, highlighting a stronger commitment to using ChatGPT. Overall, these findings demonstrate that the ChatGPT-based intervention effectively enhanced users' perceptions of and engagement with the tool.

Table 7 presents the results of a paired t-test analysing

students' perceptions of ChatGPT across four metrics. The results indicated significant improvements in students' PU ($t = 2.559, p = 0.008$) and PEU ($t = 2.244, p = 0.012$), highlighting enhanced user experiences. Attitudes towards usage also showed a notable increase ($t = 3.516, p = 0.001$), reflecting a strong positive shift (**Table 7**). Interestingly, behavioural intention revealed a negative t-value ($t = -2.121, p = 0.003$), indicating a complex post-intervention relationship. Overall, these findings suggest that the ChatGPT-based intervention had a statistically significant impact on user perceptions, thus emphasising its effectiveness.

Plots for each perception measure before and after the intervention with ChatGPT.

Figure 3 visually shows the mean scores students' PU, PEU, attitude towards usage and behavioural intention to use ChatGPT for formative feedback change before and after their experience with the tool.

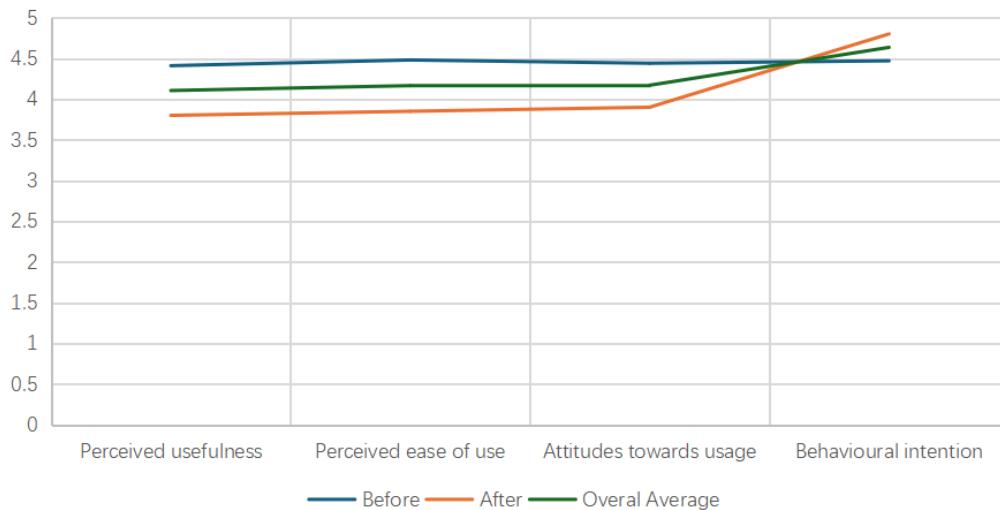
Table 6. Descriptive Statistics for Students' Writing Essays.

	ChatGPT	N	Mean	Std. Deviation
Perceived usefulness	Before	50	4.21	0.452
	After	50	4.90	0.411
Perceived ease of use	Before	50	3.71	0.540
	After	50	4.85	0.572
Attitudes towards usage	Before	50	3.88	0.521
	After	50	4.90	0.481
Behavioural intention	Before	50	4.33	0.575
	After	50	4.88	0.513

Table 7. Paired T-Test Results for Students' Writing Essays.

	t	df	Sig. (2-tailed)
Perceived usefulness	2.559	98	0.008
Perceived ease of use	2.244	98	0.012
Attitudes towards usage	3.516	98	0.001
Behavioural intention	-2.121	98	0.003

Students' writing essays before and after using ChatGPT

**Figure 3.** Multiple Line Graphs of Students' Essay Before and After Using ChatGPT.

RQ3: How does the perceived ease of use (PEU) of ChatGPT for formative feedback correlate with improvements in students' writing skills?

Correlation analyses were conducted to determine the relationships between improvements in students' writing skills and their PEU of ChatGPT for formative feedback (**Table 8**).

Table 8. Correlation Analysis of Students' Essays Before and After Using ChatGPT.

Before Using ChatGPT					
		Structure	Organisation	Mechanics and diction style	Argumentation and critical thinking
Structure		1			
Organisation		0.539	1		
Mechanics and diction style		0.392	0.394	1	
Argumentation and critical thinking		0.037	-0.078	0.083	1
After Using ChatGPT					
		Structure	Organisation	Mechanics and diction style	Argumentation and critical thinking
Structure		1			
Organisation		0.191	1		
Mechanics and diction style		0.015	0.512	1	
Argumentation and critical thinking		-0.041	0.312	0.421	1

Before the introduction of ChatGPT, there were significant positive correlations between structure and organisation ($r = 0.539$) and between structure and mechanics and dic-

tion style ($r = 0.392$). A moderate positive correlation was observed between organisation and mechanics and diction style ($r = 0.512$) and between argumentation and critical

thinking and mechanics and diction style ($r = 0.421$) after ChatGPT use. Surprisingly, the correlation between structure and organisation decreased from 0.539 to 0.191 upon using ChatGPT. The correlation between argumentation and critical thinking with other skills increased after the intervention, especially with mechanics and diction style. Overall, these results indicate that the use of ChatGPT influenced

the interrelations of some writing skills, revealing that the students developed a more integrated approach to writing after the intervention.

Next, multiple regression analysis was applied to predict students' behavioural intention in using ChatGPT for formative feedback based on their PU, PEU and attitude towards usage before and after the intervention (**Table 9**).

Table 9. Regression Analysis Before and After Using ChatGPT for Improving Students' Writing Skills.

	Before using ChatGPT			After using ChatGPT		
	B	T-value	P-value	B	T-value	P-value
Perceived usefulness	0.411	1.950	0.042	-0.345	-2.817	0.0145
perceived ease of use	-0.552	-2.188	0.002	-0.614	-3.189	< 0.001
Attitudes towards usage	0.566	3.189	0.012	0.952	5.646	< 0.001
R2	0.69838			0.7784		
F-value	20.771			27.441		
P-value	< 0.001			< 0.001		

Regression analysis revealed statistically significant differences in the results before and after the ChatGPT-based intervention. The overall model was highly significant: $F(3, 46) = 20.771, p < 0.001$, with an R² of 0.698, explaining 69.8% of the variance in behavioural intention. In this model, PU was a positive significant predictor: $B = 0.411, T = 1.950, p = 0.042$. PEU was also significant, with a negative coefficient of $B = -0.552, T = -2.188, p = 0.002$, along with attitude towards usage: $B = 0.566, T = 3.189, p = 0.012$, thus contributing meaningfully to predicting students' behavioural intention.

After using ChatGPT, the model fit improved, as indicated by $F(3, 46) = 27.441, p < 0.001$ and by the increased R² of 0.778, thus explaining 77.8% of the variance. PU became a negative predictor, $B = -0.345, T = -2.817$, which could mean that practical use moderated students' initial perceptions of usefulness. PEU remained a negative predictor, but with a slightly stronger coefficient: $B = -0.614, T = -3.189$. Finally, attitude towards usage was significantly enhanced, $B = 0.952, T = 5.646, p < 0.001$, indicating its more active role in shaping behavioural intention after experiencing ChatGPT.

Comparing the before and after analyses upon completing the ChatGPT-based intervention showed a sizeable and significant improvement in model fit ($\Delta R^2 = 0.08$), with attitude towards use serving as an increasingly strong predictor. A larger overall strength of the relationships between the variables after using ChatGPT was reflected by the increased

F-value ($\Delta = 6.67$), whereas the statistical significance remained at $p < 0.001$ for both measures. The effect of such a result emphasizes how attitudes become increasingly important in predicting behavioral intentions, especially after students gain practical experience working with ChatGPT.

5. Results of the Think-Aloud Protocols

5.1. Theme 1: Prediction and Uncertainty in the Early Stages

At the writing stage, learners may come to class without clear ideas of what they want to argue or what they want to pass across. This stage is characterized by the difficulty of coordinating ideas and finding purpose in the work that is being done. For instance, one student expressed, "Before interacting with ChatGPT's feedback, I couldn't really define my thesis. It was all over the place." However, through the process of argumentation, they realized the necessity of narrowing their focus, stating, "I finally understood that I needed to be more specific." Also, one student mentioned that before interacting with the feedback from ChatGPT, they could not really define what they meant by their thesis; however, while making the argument, they later understood that their thesis must be narrowed down. This case exemplifies how a student overcomes the initial confusion and comes up with a better writing path to follow. Additionally, students

utilized various strategies to overcome their vulnerabilities, with one remarking, “I started to feel more confident as I figured out what I wanted to say.” Their willingness to leverage chatbot feedback further indicates their executive potential to refine their work.

The abovementioned stage also focuses on the metacognitive activity that involves students’ thinking and their use of different strategies when necessary. At the early stage, they transform their initial vulnerability into a positive fundamental attitude for growth, eager to write and wanting to write better—an awesome positive disposition for development. Furthermore, the use of chatbot feedback to elaborate on their arguments highlights their executive potential to modify their works and incorporate external data to improve them. Finally, students’ readiness to use feedback to further develop their skills and improve their work speaks about the real progress in this field.

5.2. Theme 2: Emotional Responses and Interactions with Feedback

Receiving or giving feedback carries an emotional weight because criticism is likely to evoke specific feelings. Based on the responses, most students expressed being frustrated or at least discouraged when initially provided feedback from ChatGPT, especially in cases when the feedback highlighted problems in their writing that they were unaware of, such as grammatical errors or flaws in the structure of the paper. One student noted, “I felt really upset when I found out my introduction was not engaging. I thought it was great!” For example, one student mentioned feeling discomfort when they were told that their introduction was not engaging despite having positive feelings about the introduction. Another student shared, “At first, I was discouraged by the grammatical errors pointed out, but it made me want to improve.” This sort of emotional response is typical of students, as feedback interferes with their positive self-concept of being a writer.

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5.3. Theme 3: Revisions as Part of Learning and Cognitive Development

Revising is especially vital during the writing process, as it defines the learning taking place in our minds. The results revealed that after peers and instructors provided feedback, the students managed to correct their mistakes, showing an increased level of analysis and perspective in the writing process. For instance, one student reflected, “After the feedback, I realized my thesis needed a different focus, and it made my argument stronger.” Another found feedback on sentence structure valuable, stating, “The suggestions helped me clarify my ideas. I could see the difference in my writing.”

Regarding this theme, an understanding emerged that feedback was not only a search for errors but also a process of development. As students rewrote their work, they analyzed prepositions and, where necessary, modified their argumentation or organisation of a composition to achieve more scholarly outputs. In turn, this iterative process helped the students to forward model the introduced writing strategies, enhance their understanding of relative clarity and work on improving their overall writing skills. This revision shows how, in the course of operational and further learning, feedback can improve the overall learning process.

5.4. Theme 4: The Role of Peer and Instructor Feedback in Skill Development

The students stressed that both peer feedback and that of teachers were very valuable during their writing process. They received clear ideas for improving as well as a gentle push to take their work more seriously. As one student pointed out, “Speaking with my classmates allowed me to view my argument from different perspectives. I didn’t realize how important that standpoint would be for me. I was able to fix my entire approach because of the comments I got from my instructor. Because of that, my essay became much

more organized." This illustrates that by working together, feedback helps students learn to write better and feel more confident.

5.5. Theme 5: Strategic Use of Feedback for Improvement

Students demonstrated that they could use advice from others to enhance their writing. Most participants paid attention to comments and suggestions, incorporating them when updating their work. For example, one student followed a checklist generated from ChatGPT's suggestions, which helped him address issues in his draft step by step. Another student mentioned using feedback to make their arguments more organized, and it worked well for them. This illustrates how much students care about becoming better writers by utilizing feedback. According to one student, feedback acts as a guide, helping them improve their writing.

6. Discussion

The results of this study offer theoretical and empirical contributions towards understanding the effects of AI applications, such as ChatGPT, on students' writing skills, including the detailed correlation between quantity and quality. In particular, descriptive and inferential statistics analyses indicated positive changes in several dimensions (structure, organisation, mechanics and diction style and argumentation and critical thinking) of students' writing, thus supporting the PU of ChatGPT as a formative feedback tool. Furthermore, the qualitative answers for these enhancements were in line with the student's perceptions of ChatGPT as user-friendly, efficient, offering valuable detailed feedback and providing timely instructions on making revisions.

Again, students' PU of ChatGPT is parallel with their awareness of the application's ability to improve their performance in the writing domain by pointing out structural weaknesses. In terms of PEU, students found it easy to use the interface and apply the feedback to their assignments, which aligns with Ajzen's theory of planned behavior (TPB)^[33]. In particular, all these aspects positively contributed to students' attitudes related to ChatGPT's use and their behavioral intention to implement AI feedback tools in their writing exercises.

This finding also supports prior empirical research,

which shows that feedback facilitation devices, especially those powered by AI technology, substantially enhance the quality of students' written works by prompting repeated cycles of review and reflection and by fostering higher-order thinking processes^[33,34]. In the same manner, the present study builds on another work^[18], which revealed that individualized feedback contributed to motivational functions, demonstrating how ChatGPT-based feedback not only reinforces mechanics but also higher-order thinking abilities involved in argumentation^[34]. To elaborate on the feedback loop theories, the integration of AI is seen to encourage gradual but consistent transformation during the revision process.

The findings of this study parallel those of Nguyen et al.^[35]. This study reveals that revision frequency has increased and that students are more involved. As researchers have observed, students who use AI-powered tools, including ChatGPT, revise and improve their work more frequently, and this is what we also noticed in our participants. Helpful feedback helped students get more involved in the revision process. Also, Lo et al. found the students reported feeling more in control of their writing and more confident that they could improve due to the kind and less demanding style of the feedback^[36]. So, the similarities suggest that well-integrated AI tools like ChatGPT might help students achieve results like those described in previous studies by encouraging them to learn and revise cyclically.

At the same time, behavioral intention theory, as postulated by Davis in the TAM^[18], is also supported by the findings of the present study, specifically in relation to organisation, mechanics and diction style and argumentation and critical thinking, thus highlighting the PU of ChatGPT as a tool for providing formative feedback. These improvements were supported by qualitative responses, in which students emphasized ChatGPT's user-friendly interface and ability to provide timely, detailed and actionable suggestions for revisions. This finding is consistent with previous studies that highlight the role of AI tools in enhancing the writing process by providing immediate feedback^[37].

Students' PU of ChatGPT also aligns with their recognition of its potential to enhance their writing skills, particularly by identifying structural gaps and suggesting refined phrasing. This is supported by research by Marzuki et al.^[38], who found that AI-driven platforms can effectively identify weaknesses in academic writing, thus leading to better clarity and

structure. Additionally, PEU was evident in how students recognized the intuitive interface of ChatGPT and its ability to provide feedback that they could readily apply to their assignments. Similar conclusions were drawn by Kim^[27], who observed that the simplicity and user-friendliness of AI tools significantly influenced their adoption in educational settings.

These factors contributed positively to students' attitudes towards usage, strengthening their behavioral intention to incorporate AI feedback tools into their regular writing practices. This finding aligns with Ajzen's TPB^[33], which suggests that PEU and PU are critical factors in shaping individuals' intentions to adopt new technologies. Moreover, students' intention to use AI tools regularly reflects findings from previous research, which demonstrated that PU and PEU directly influence individuals' intention to continue using educational technologies^[39].

6.1. Perceived Cognitive and Affective Workplace Implications of Feedback

The second fundamental concept that was observed during the think-aloud protocols with the students was the element of embarrassment that they initially felt when receiving feedback. This emotional reaction was expressed prominently as confusion, frustration or self-doubt, which were strongly experienced by the students who read their first drafts and saw the feedback. The above reactions can be appropriately examined by a study on cognitive dissonance, whereby people develop stress, uneasiness, or guilt when their perception or knowledge is threatened with new information. However, in the present study, the students were able to deal with these emotions and move on with healthy responses to the feedback they received. This shift in cognition must be made because it presents the students' potential to modify their behaviors whenever they are given enough time to do so, as supported by research into the cognitive processes of metacognition^[40]. The study finding also supports the opinion of Marzuki et al.^[38], who stressed that metacognitive feedback helps promote self-regulation.

As for strategies, this research provides contrasting findings with those that assume that sufficient feedback involves metacognitive critique to produce meaningful cognitive changes^[37]. This finding also indicates the specific time at which metacognitive feedback should be provided to

students to help improve their learning outcomes. As such, students may receive the necessary results, as investigated in the existing stage of the learning process within the framework of the cognitive development and feedback structure.

Additionally, the observed emotions are consistent with the literature on feedback and emotion in learning. According to Hattie and Timperley^[41], feedback is likely to be overwhelming if not well managed or delivered. In this regard, emotional strength may determine whether a learner is capable of overcoming the initial feelings of anger and unwillingness to work with feedback. This finding speaks to the need not only to offer correct information to students but also to help them regulate their emotions as they react to the knowledge being given to them.

6.2. Self-Awareness and Meaning of Metacognition

A distinguished characteristic of the cognitive processes reported by the students in the current study was the use of metacognition. This process enabled them to have coherent reflections on their writing processes and make worthy decisions regarding the changes that they needed to make, thus improving their writing abilities over time. This ability is associated with enhanced writing results, because being involved in metacognitive processes makes writers focus more on the content as they write and spend more time revising the text^[42].

AI feedback tools, such as ChatGPT, have features that encourage students to think about their previous work. This finding corresponds to other studies that underscore how technology contributes to reflective practice improvement^[38]. Although previous studies have focused on describing the potential of AI technologies in fostering reflections, our findings explain how such tools enable students to focus on evaluating previous endeavors critically, which seems to be understudied in comparison to the reflection concept per se^[43]. This idea implies the existence of a more complex function of AI in metacognitive development than previously theorized—one that involves cognitive feedback alone. For example, in the case of Student A, when the AI tool offered points for elaboration on their thesis, the student was able to think about how the thesis could be supported further, resulting in the enhanced organization of the overall written work. This is not an exercise in proofreading, editing or even

attention to detail, but learning how to present an argument and build a case. Thus, the feedback received from ChatGPT, for example, can help in metacognitive development, mainly because it forces students to engage in the revision process.

6.3. Importance of Specific Behavioral Feedback

In the present study, feedback type, specifically the content of each feedback given and the quantitative feedback received by students, strongly influenced the reactions students made and the subsequent edits they incorporated into their works. As stated by Nicol and Macfarlane-Dick^[44], feedback is most helpful when it provides detailed and clear information on what recipients need to do to enhance the quality of their work. This approach not only helps students appreciate the rules associated with writing but also puts them at the front line of the delivery of knowledge.

Furthermore, the responses from ChatGPT are live and personalized to the individual student, making them more useful for writing skills development. Based on recent literature, individualized feedback significantly improves the learning process. This idea corresponds with our study, in which students mentioned that the use of AI tools, such as ChatGPT, enhanced their engagement and the speed at which they wrote their work. However, unlike conventional writing assistance, ChatGPT provides dynamic interactions that, when implemented—as revealed in recent papers on the use of AI in learning—can improve the effectiveness of ChatGPT in the learning process of students.

Thus, AI formative feedback is an example of Continuous Assessment and Support System (CASS) learning feedback which is defined as an interactive within-course feedback system, setting it apart from the delayed feedback system. Here, a course instructor can provide feedback months after completing a course or activity. CASS learning, on the other hand, provides students with feedback as they perform their writing tasks. This introduces an iterative and more progressive approach wherein students are given the opportunity to make corrections instantly. Such immediate feedback enables people to be more proactive, progressive and able to produce improved writing after several cycles. Furthermore, CASS learning feedback is different from instructor feedback because with CASS learning, students can learn in real time and make necessary adjustments immediately.

This immediacy makes the writing activity more cyclic and constant. Hence, more participation and corrections lead to better writing skills.

7. Pedagogical Implications

One of the major opportunities for integration lies in providing instant, helpful feedback while articles are being drafted. Teachers can improve their students' writing by instantly providing feedback on drafts. By introducing AI tools early in the drafting process, educators help students produce more drafts. For example, an instructor might want students to first write their essays, review feedback from AI, and then revise the document, considering both AI and peer advice. Students learn to critically assess their work and process insights from multiple sources.

The first potential issue is that students may rely on AI so heavily that they begin to shape their thinking around it. This dependency could prevent them from thinking deeply about what they write. To address this, teachers can emphasize that self-assessment and reflection should accompany insights from artificial intelligence.

The second challenge is academic integrity. AI tools can raise questions about whether an assignment is truly the student's own work. Educators should clarify how AI should be used responsibly. Students should acknowledge the role of AI in their writing, fostering a culture of sincerity and transparency.

Moreover, there will always be a need for teacher mediation. Even though AI provides useful information, it cannot offer the detailed insights that come from teaching students. Teachers can play an active role in helping students use suggestions from AI effectively when revising.

To support these practices, several recommendations can be made for educators. First, instructors should take the initiative by emphasizing responsible AI use and demonstrating it in activities or workshops. They should teach students how to utilize AI feedback effectively. These sessions can help students learn to apply AI recommendations while maintaining their own style.

Secondly, instructors should encourage reflection. Promote critical thinking regarding the feedback students receive, whether from AI or from the teacher, using reflective exercises. This helps students leverage criticism to improve their writing skills.

Third, ensure students can collaborate on their writing by sharing their AI responses with the class and educators. Discussing feedback with peers enriches their learning experience and promotes diverse perspectives in writing. Lastly, regularly monitor students' work to ensure they are both using AI and improving their writing skills. Use formative assessments to evaluate student progress and adjust teaching methods accordingly.

If these issues are addressed with guidance from AI feedback, teachers can enhance students' writing and create a more engaged learning atmosphere. Moreover, this study explores how generative AI tools affect essay editing and student involvement. Results show that students benefited more from online feedback using AI in both the content and organization of their drafts. As a result, using AI tools improves the learning process as students receive feedback promptly.

8. Future Research Directions

Building on the findings of the article, future research could explore several avenues to deepen our understanding of ChatGPT's impact on education. Longitudinal studies could be designed to assess how its use affects writing outcomes and revision habits over time, providing insights into long-term learning benefits. Additionally, integrating ChatGPT into classroom settings could allow researchers to evaluate its influence on student engagement and collaborative learning dynamics. Comparative studies could be conducted to analyze the efficacy of ChatGPT against traditional writing support methods, offering a clearer picture of its advantages. Finally, qualitative research involving student interviews could uncover personal perceptions and experiences, enriching our understanding of ChatGPT's role in fostering motivation and confidence in writing.

9. Limitations

We acknowledge that our sample size was relatively small. A larger, more diverse sample could provide a more comprehensive understanding of the effects observed. Re-

garding generalizability, while our findings indicate positive outcomes within the context studied, they may extend universally to other EFL groups or proficiency levels. Different educational settings, cultural backgrounds, and varying levels of familiarity with technology could all impact how students interact with AI tools like ChatGPT.

10. Conclusions

In conclusion, positive responses to AI-generated feedback can boost the quality of students' writing, apart from fostering their independence in performing this task. Hence, the use of AI tools, such as ChatGPT, is useful at the level of flexibility, wherein students come up with several solutions that diverge from their initial thought strategies. Indeed, the feedback offered by ChatGPT challenges appropriate responses that can greatly improve students' quality of work and promote their autonomy.

Funding

This work received no external funding.

Institutional Review Board Statement

The study was conducted in accordance with the Declaration of Helsinki, and approved by Ethics Committee of Jeddah University (protocol code 4356-2 and 24-6-2024).

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

Data Availability Statement

Not applicable.

Conflicts of Interest

The authors declare no conflict of interest.

Appendix A

Table A1. Example Caption.

	Criteria	Excellent (3 points)	Good (2 points)	Fair (1 Point)	No evidence (0 Point)	Score
	*Any indication of plagiarism will result in a total score of zero.					
Structure	<ul style="list-style-type: none"> The title is creative, sparks interest, and is related to the topic. The essay is well structured including an introduction, 2-3 body paragraphs, and a conclusion. The introduction is well-developed and engages the reader and creates interest (has a “hook” or catchy beginning). 					
Organization	<ul style="list-style-type: none"> The introduction has a thesis statement that states the main idea of the essay and tells what the organization of the information will be. Body Paragraphs are supported with concrete and detailed examples illustrating the comparison. The conclusion restates thesis and provides opinion, suggestion, or an insight. 					
Mechanics Style & Dictions	<ul style="list-style-type: none"> Writing is clear and sentences have varied structure. Uses precise and appropriate vocabulary. Sentences are grammatically correct. Punctuates and spells correctly. Transitions are used to enhance organization and the smooth flow of ideas. Paragraphs are unified and developed with originality and great clarity. 					
Argumentation and Critical Thinking	<ul style="list-style-type: none"> The essay presents a compelling, well-reasoned argument that demonstrates critical analysis of the topic. 					
Total Student's Point	Comments:					

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