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UNIVERSIDAD ESTATAL DE MILAGRO

REPÚBLICA DEL ECUADOR

UNIVERSIDAD ESTATAL DE MILAGRO

VICERRECTORADO DE INVESTIGACIÓN Y POSGRADO

FACULTAD DE POSGRADOS

**ARTÍCULOS PROFESIONALES DE ALTO NIVEL
PREVIO A LA OBTENCIÓN DEL TÍTULO DE:**

**MAGÍSTER EN ENSEÑANZA DE INGLÉS COMO LENGUA
EXTRANJERA**

TEMA:

**EXPLORING CHATGPT AS AN AI FEEDBACK ASSISTANT TO
IMPROVE EFL UPPER SCHOOL STUDENTS' WRITING SKILLS**

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Milagro, 2026

RESUMEN

Este estudio analiza el uso de ChatGPT como asistente de retroalimentación basado en inteligencia artificial para mejorar la escritura en estudiantes de inglés como lengua extranjera (EFL) de nivel secundario en Ecuador. Se utilizó un enfoque mixto que combinó un diseño cuantitativo de pretest y posttest con datos cualitativos obtenidos mediante un cuestionario de percepción. Participaron 114 estudiantes de entre 14 y 16 años en una intervención de cuatro semanas desarrollada en el aula. Los estudiantes realizaron tareas de escritura antes y después de recibir retroalimentación guiada a través de ChatGPT, centrada en gramática, vocabulario, organización y contenido.

Los resultados evidenciaron mejoras en todas las dimensiones evaluadas. La gramática presentó el mayor incremento (+0,84), seguida de la organización (+0,66), mientras que el vocabulario (+0,25) y el contenido (+0,22) mostraron avances menores. Los resultados del cuestionario indicaron percepciones generalmente positivas, especialmente en relación con la precisión gramatical, el apoyo al vocabulario y la confianza en la escritura.

Los hallazgos sugieren que ChatGPT puede apoyar el desarrollo de la escritura al proporcionar retroalimentación inmediata que facilita la revisión y la reflexión. No obstante, su efectividad depende de un uso guiado y crítico dentro del proceso de aprendizaje.

Palabras clave: inteligencia artificial, escritura EFL, retroalimentación, ChatGPT, educación secundaria

ABSTRACT

This study examines the use of ChatGPT as an artificial intelligence (AI) feedback assistant to improve writing skills among upper secondary English as a Foreign Language (EFL) students in Ecuador. A mixed-methods design was applied, combining a pretest–posttest quantitative approach with qualitative data from a student perception survey. The sample included 114 students aged 14 to 16 who participated in a four-week classroom intervention. Students completed writing tasks before and after receiving guided feedback through ChatGPT, focusing on grammar, vocabulary, organization, and content.

The results showed improvement across all writing dimensions. Grammar presented the highest gain (+0.84), followed by organization (+0.66), while vocabulary (+0.25) and content (+0.22) showed smaller increases. Survey findings indicated generally positive student perceptions, particularly regarding grammatical accuracy, vocabulary support, and writing confidence.

The findings suggest that ChatGPT can support writing development by providing immediate feedback that facilitates revision and reflection. However, its effectiveness depends on guided and critical use within the learning process.

Keywords: artificial intelligence, EFL writing, feedback, ChatGPT, secondary education.

1. INTRODUCTION

Writing proficiency is a fundamental component of English as a Foreign Language (EFL) education, particularly at the upper secondary level where learners are expected to produce complex texts with linguistic accuracy and rhetorical organization. In the Latin American context, traditional teaching methods sometimes fail to provide enough individualized practice, leading to low self-efficacy in writing tasks.

According to the Ministry of Education, Sport and Culture of Ecuador (2025), the national curriculum aims for students to reach a B1 level of English proficiency based on the Common European Framework of Reference for Languages (CEFR). However, recent data from the EF English Proficiency Index (EF EPI, 2024) reveals that Ecuador continues to rank in the "low proficiency" category, with an average writing score of 473. Ecuador placed 82nd among the 113 countries assessed, positioning itself below nations such as Argentina, Bolivia, and Costa Rica, which restricts access to international academic opportunities.

Feedback is widely recognized as a key mechanism in the improvement of students' writing performance. Through engagement with feedback, students are encouraged to reflect on their writing processes and make informed revisions that contribute to improved writing performance. However, providing consistent and detailed feedback can be difficult in secondary school environments where teachers often manage large classes and heavy instructional workloads.

In response to these limitations, the present study explores the use of ChatGPT as an AI feedback assistant to support the development of writing skills among upper secondary EFL students in Ecuador. The study investigates both the effect of ChatGPT-assisted feedback on students' writing performance and students' perceptions of using this technology as part of the learning process. By examining these dimensions, the study contributes to the emerging

literature on artificial intelligence in language education in two ways: first, by extending research on AI-assisted writing feedback to the secondary school level and second, by providing empirical evidence from a developing educational context.

2. THEORETICAL FRAMEWORK

Literature Review

Writing Challenges in EFL Upper Secondary Contexts

Writing is widely recognized as one of the most demanding skills for learners of English as a Foreign Language (EFL), especially in upper secondary education, where students are expected to produce more coherent, organized, and linguistically accurate texts. At this stage, learners are often required to move beyond sentence-level production and develop greater control over paragraph structure, cohesion, vocabulary use, and grammatical accuracy. However, many students still struggle to meet these expectations because writing requires the simultaneous coordination of multiple linguistic and cognitive processes (Pham, 2025,40).

In the Ecuadorian context, these challenges remain particularly visible. Tamayo & Cajas (2020), in an exploratory study with Ecuadorian EFL teachers, found that writing instruction is often hindered by persistent student difficulties related to sentence construction, grammar, vocabulary, and overall written expression. Their findings suggest that many learners do not yet demonstrate the level of written competence expected in EFL classrooms, which creates additional pressure for teachers who must address both language accuracy and communicative effectiveness.

This concern is also consistent with broader national indicators. According to the Ecuador profile of the EF English Proficiency Index, the country continues to be classified in the “low proficiency” band, and the reported writing score remains below what would be desirable for students preparing for higher education or international academic participation. The profile lists

Ecuador with a writing score of 473, reflecting ongoing weaknesses in productive language skills. (see Appendix A). Although large-scale proficiency rankings should be interpreted cautiously, they still reinforce a broader concern already noted in local educational research: many Ecuadorian learners need stronger support in English writing development.

Because of this, improving writing instruction at the upper secondary level is not only a pedagogical priority but also a matter of educational equity. Students who do not receive enough guided practice and meaningful revision opportunities may reach the end of secondary education without the writing skills required for university study, standardized tests, or professional communication in English.

The Importance of Feedback in L2 Writing Development

Within second language writing pedagogy, feedback has long been considered one of the most influential mechanisms for improving writing quality. Effective feedback allows learners to notice problems in their texts, reflect on language choices, and revise their work more strategically. In writing classrooms, feedback is not simply a way of correcting mistakes; it is also a way of helping learners understand how texts function and how ideas can be communicated more clearly.

Research on written corrective feedback has consistently shown that feedback can support the development of linguistic accuracy when it is timely, understandable, and connected to opportunities for revision. Zhang (2024), in a review of ChatGPT as an automated written corrective feedback tool, emphasizes that traditional teacher feedback remains valuable but it is often constrained by time, workload, and inconsistency, particularly in contexts where teachers manage large groups of learners. Under these circumstances, students may receive delayed or limited feedback, reducing the likelihood that they will engage deeply in the revision process.

For EFL learners, this issue is especially important because many students depend on external guidance to identify patterns of error related to grammar, vocabulary, cohesion, and organization. When feedback is too brief, too delayed, or too general, learners may not know how to revise effectively. By contrast, feedback that is specific and revision-oriented can promote greater awareness of language form and encourage more active engagement with writing as a process rather than a one-time product. In this sense, the relevance of feedback in the present study is clear. If ChatGPT is examined as an AI feedback assistant, its pedagogical value should be understood in relation to this broader tradition of written corrective feedback and process-based writing instruction

Artificial Intelligence in English Language Learning

The growing presence of artificial intelligence in education has opened new possibilities for language learning, particularly in areas where learners need frequent, individualized support. In English language education, AI tools are increasingly being used to facilitate practice, generate examples, provide explanations, and offer immediate responses that are difficult to sustain in traditional classroom settings.

In Ecuador, the discussion around AI in English teaching has already begun to gain academic attention. Ayala-Pazmiño & Alvarado-Lucas (2023) argue that the integration of artificial intelligence into English language education can create opportunities for more personalized learning and may help improve students' language development when used with responsibility. At the same time, their study also highlights practical concerns such as infrastructure, teacher preparation, and the need for critical implementation rather than unreflective adoption.

This balanced perspective is important. AI should not be viewed as a replacement for teachers, but rather as a complementary resource that can expand access to guidance, especially in contexts where class time is limited and learners need more opportunities to practice outside the classroom. For writing instruction, this is particularly relevant because students often need

repeated cycles of drafting, feedback, and revision, yet many classrooms do not have enough time to support this process consistently. As a result, recent research has increasingly focused not just on AI as a general educational innovation, but on its more specific role in providing language-related support, especially in writing, where feedback quality and immediacy can strongly influence student performance.

ChatGPT as an AI Feedback Assistant in EFL Writing

Among recent generative AI tools, ChatGPT has attracted particular attention because of its ability to generate immediate, detailed, and interactive feedback in natural language. Unlike more traditional automated writing systems that focus mainly on surface-level correction, ChatGPT can respond to prompts in a more dialogic way, potentially helping learners understand not only what is wrong in a text but also why revisions may be needed.

Recent empirical studies suggest that ChatGPT can support multiple dimensions of EFL writing. Song & Song (2023), in a mixed-methods study with Chinese EFL students, found that AI-assisted writing support was associated with significant improvements in writing performance and writing motivation. Their findings showed gains in areas such as organization, coherence, grammar, and vocabulary, while qualitative data also suggested that students perceived the tools as useful and supportive during the writing process.

Similarly, Polakova & Ivenz (2024) reported that ChatGPT feedback contributed positively to the development of EFL students' writing skills in a mixed-methods study. Their results indicated that students generally benefited from the immediacy and accessibility of AI-generated feedback, while qualitative insights revealed favorable perceptions regarding its role in helping them revise and improve their texts.

From a more focused feedback perspective, Zhang (2024) positions ChatGPT within the field of automated written corrective feedback, arguing that its potential lies in the speed, volume, and adaptability of the responses it can provide. Rather than waiting for teacher comments,

students can receive feedback almost instantly and use it to revise multiple drafts, which may increase opportunities for noticing errors and engaging in iterative writing practice.

At the same time, the literature does not present ChatGPT as a flawless solution. While its feedback can be immediate and accessible, it may also be overly general, occasionally inaccurate, or accepted uncritically by learners who do not yet have the language awareness needed to evaluate suggestions independently. For this reason, many researchers recommend positioning ChatGPT as a support tool rather than an authoritative evaluator. Its strongest pedagogical role may be as a feedback assistant that encourages drafting, reflection, and revision, especially when students are guided to use it critically.

Students' Perceptions of AI-Mediated Feedback

Because this study adopts a mixed-methods design, it is not enough to examine whether writing scores improve; it is also necessary to understand how students experience AI-generated feedback. Learners' perceptions matter because even a potentially useful tool may have limited impact if students find it confusing, unreliable, or difficult to use.

Recent studies indicate that many EFL learners view ChatGPT positively when it is used to support writing, particularly because it provides immediate assistance and can reduce some of the anxiety associated with producing texts in a foreign language. Song & Song (2023) found that students in the AI-assisted condition not only improved their writing but also reported stronger motivation and a more favorable attitude toward the writing process.

In a more detailed exploration of learner engagement, Yan (2024) examined how L2 writers interacted with ChatGPT as a provider of automated written corrective feedback. The study showed that students' engagement with AI feedback was not merely behavioral (i.e., whether they used the tool), but also cognitive and affective. In other words, the effectiveness of AI feedback depended on whether learners understood the comments, trusted them and were willing to apply them during revision.

Likewise, Feng Teng (2024) reported that EFL learners generally perceived ChatGPT as a useful companion in the writing process, especially for idea development, feedback generation, and revision support. However, the study also pointed to tensions: some learners appreciated the efficiency of the tool, while others expressed concern about dependence, overreliance, or uncertainty about the quality of AI-generated suggestions.

These findings are especially relevant for the present study because they suggest that students' perceptions are not secondary or optional; they are part of the explanation for why a tool may or may not improve writing performance. A student may receive useful feedback from ChatGPT, but if that feedback is not trusted, understood, or meaningfully applied, the impact on writing quality may remain limited.

Research Gap and Rationale for the Present Study

Although recent literature increasingly supports the use of ChatGPT in EFL writing instruction, several gaps remain. First, much of the existing research has been conducted in higher education settings, particularly with university students, while upper secondary or upper school learners remain comparatively underrepresented. Second, although some studies report positive effects on writing quality, fewer studies examine ChatGPT specifically as an AI feedback assistant, rather than as a general writing support or text-generation tool. Third, there is still limited evidence from Latin American contexts, and research situated in Ecuador remains scarce despite the clear need to strengthen English writing outcomes in local classrooms.

In addition, while several studies report either performance gains or learner attitudes, fewer investigations combine both dimensions in an integrated design. A mixed-methods approach is therefore especially appropriate because it allows researchers to examine not only whether students' writing improves after receiving ChatGPT-assisted feedback, but also how students interpret, value, and engage with that feedback during the writing process. For these reasons,

the present study seeks to explore ChatGPT as an AI feedback assistant in an EFL upper school context by examining both its effect on students' writing performance and students' perceptions of its usefulness during revision. This focus addresses a meaningful gap in the current research and responds to a pedagogical need that is particularly relevant in underexplored contexts such as Ecuador.

3.METHODOLOGY

Research design

This study employs a mixed-methods approach to examine how the use of artificial intelligence in this case, ChatGPT can help students learning English as a second language improve their writing skills. Mixed-methods research, which is the method used in this study, permits addressing a topic from two perspectives one quantitative and the other qualitative, according to the analysis done by Creswell & Creswell (2018).

This included measuring pre- and post-test performance of students on each condition before and after the treatment to establish potential changes in grammar, vocabulary, organization, and content. The qualitative phase consisted of the students' perceptions of using ChatGPT during writing which were expressed through the student experiences. It allowed the researcher to understand how students felt about and the benefits or problems they faced with using the tool. When both types of input are combined, this study aims to give a deeper view into the impact of ChatGPT in an EFL writing class.

Participants and Context

The participants in this study were upper secondary school students from Santo Domingo de los Colorados, Ecuador. They were enrolled in the first and second years of high school, and their ages ranged from 14 to 16 years old.

This group was selected because students at this educational stage are expected to continue developing their English writing skills and become more familiar with producing short structured texts in English. A total of 114 students participated in the study; 75 belonged to the first grade of baccalaureate, divided into two classes of 39 and 36 students, respectively, while the remaining 39 students were from the second grade of baccalaureate. In many cases, students at this level still face difficulties with grammar, vocabulary, coherence, and organization, which makes writing one of the most challenging language skills in the EFL classroom.

The study was carried out during regular classes, which allowed the activities to be integrated into the students' normal learning environment. This also helped ensure that the use of ChatGPT was connected to the course objectives and classroom practice.

Instruments

Two main instruments were used in this study: an analytical writing rubric and a perception questionnaire.

Analytical Writing Rubric

Students' written compositions were assessed using an analytical writing rubric adapted to the institutional evaluation criteria (see Appendix B). The rubric evaluated four important aspects of writing:

- Grammar
- Vocabulary
- Organization
- Content

Each criterion was assessed during the following scale:

- 2.5 = Excellent
- 2.0 = Good
- 1.5 = Fair
- 1.0 = Needs improvement

The final score was obtained by adding the scores from the four categories, with a maximum possible score of 10 points. The same rubric was used for both the pre-test and the post-test in order to maintain consistency in the evaluation process.

Perception Questionnaire

Following the intervention, students filled out a structured perception questionnaire. This instrument was created to collect qualitative data on students' experiences of ChatGPT using it as a writing aid instrument. Qualitative data was collected using a structured questionnaire (Appendix D) with three questions that asked quantitative and qualitative questions related to students' perceptions about ChatGPT as an approach to delivering written feedback in the English as a Foreign Language (EFL) classroom. In this quantitative component, we used five items which included the Likert scale, where 1 point represented strongly disagree and 5 strongly agree. Such a scale shows us important aspects of ChatGPT use in which we are interested, such as:

- Perceived usefulness,
- Increased grammatical accuracy of language input,
- Enlarged vocabulary,
- Organization of ideas into writing texts,

Greater proficiency in writing with greater confidence using a foreign language. Also, student motivation and autonomy were considered important for learning a second language and in

technology-assisted learning environments. To ensure the content validity of the items, the items were aligned with the study's research aims and were developed based on the literature on computer-assisted language learning (CALL) as well as on formative feedback. This subsection sought for deeper information beyond closed-ended questions. Integrating both qualitative and quantitative components into the same tool facilitated a methodological triangulation, and increased the validity and depth of results. Whilst Likert-scale questions gave quantifiable information for statistical analysis, open-ended answers gave richer and contextual information, which helped to form a more detailed view of students' experiences with ChatGPT in English writing tasks in foreign language.

Procedure

This study consisted of three main stages: the pre-test, intervention and post-test. The intervention was carried out over a period of four weeks with an estimated workload of two hours per week over two instructional sessions. The sessions were 60 minutes per session that involved writing, an AI-aided feedback and guided revision tasks. The scaffolding made complete writing rounds of drafting, feedback, reflection, rewriting possible.

Phase 1: Pre-test (initial writing task)

The first step was to do an introductory writing task with students to ascertain their initial level in English. The focus was on past experiences because it was related to the curriculum that gives students the opportunity to write about real events in life. The chosen topic makes it easier for students to describe their experiences, since they find it easier to recall and express their ideas when writing about something they have personally experienced, while also helping to prevent a certain degree of similarity among the essay.

Moreover, by having students use simple past tense, which includes regular and irregular verbs, it gave them a good opportunity to practice these verbs in a tangible context. Students wrote a paragraph on their own with the teacher. Next, the compositions were assessed using an analytical rubric to assess initial performance in grammar, vocabulary, organization, and content.

Phase 2: Intervention (use of ChatGPT)

In four weekly English lessons across standard English lessons over three hours of class each week, the intervention was implemented. ChatGPT served as an AI-based writing assistant for guided writing activities on every activity over a four-week period of students. Teachers gave guided directions for ethical and pedagogical use, including: Write original texts on your own independently. Leveraging ChatGPT to get comments and suggestions. Reading the text critically, not copying responses. The intervention was conducted during regular English lessons for four weeks, i.e., for three hours per week. All of the activities were conducted in the classroom which made sure that the process flowed naturally into the educational classroom environment, and corresponded with formal learning objectives of the courses undertaken by the individuals.

The sessions were arranged as follow-ups, created to support both self and to aid in creating the right sentences and writing structure and utilize ChatGPT as an AI writing assistant. At the beginning of the procedure, however, students were required to write their texts manually on the fly and without help by technology. This step was to make sure that the teacher was able to see the initial writing performance of the students with respect to, e.g., grammar, vocabulary, coherence and organization. Written drafts were then graded with an analytical rubric, and students were given a rough ranking, along with some brief feedback.

During the second stage, students transcribed their handwritten texts into a Word document. This step was not only a way for students to familiarise themselves with digital writing, it was also a way to get them ready to interact with ChatGPT with their text. Once they digitized the texts, students were able to receive feedback and recommendations to improve their writing from ChatGPT. They were prompted to make targeted searches for specific areas of question asking about correcting grammar, expanding vocabulary, improving coherence and improving structure, instead of the need to repeat their texts a few times. Critical review was the last phase of every session.

Students critically looked into ChatGPT generated feedback and decided how to enhance their work. We emphasized that it was not okay to copy the AI's answers, but that students should reflect on the suggestions, choose the most relevant ones, and then apply them to their own papers. Teachers were also provided with straightforward guidance regarding the ethical and pedagogical aspects of the use of AI tools at school, including academic integrity and authorship and the proper use of technology. By guiding them through this systematic journey, students were better able to incrementally improve their writing whilst also developing critical thinking and digital literacy skills.

Phase 3: Post-test (revised writing task)

The students will complete a second writing task with the same properties as the pre-test. The same rubric will be used to ensure consistency and comparability. After completing the post-test, students will respond to the perception questionnaire.

4. DATA ANALYSIS

Quantitative Analysis

Quantitative data will be analyzed in detail using descriptive and inferential statistics.

- Descriptive statistics will summarize overall writing scores before and after intervention including mean, standard deviation, minimum, and maximum.
- Paired-samples t-tests will be used to determine whether differences between pre-test and post-test scores are statistically significant.
- Percentage distributions will be calculated for each rubric category (Grammar, Vocabulary, Organization, Content). Performance trends will be presented using graphical representations (bar charts and comparative line graphs).

Qualitative Analysis

The information obtained from the responses to an open questionnaire will be analyzed using qualitative analysis (Braun and Clarke, 2006). The answers will be coded and categorized into themes including:

- Perceived benefits (e.g., immediate feedback, vocabulary expansion).
- Perceived challenges (e.g., dependency, confusion).
- Ethical considerations.
- Motivation and autonomy.

This triangulation of quantitative data (score improvement) and qualitative data (student perceptions) will significantly strengthen the validity and reliability of the study.

Validity and Reliability

To safeguard against lack of reliability, two trained raters will independently assess a sample of compositions using the analytical rubric. Inter-rater reliability will be measured through Cohen's kappa coefficient. Content validity is maintained as the rubric aligns with national

EFL curriculum standards and research objectives. The questionnaire will undergo expert validation prior to administration.

Ethical Considerations

The study will adhere to ethical research principles, including voluntary participation, confidentiality, and anonymity. Students' identities will be coded numerically. The use of ChatGPT will be framed as a pedagogical support tool rather than a replacement for students' original work, emphasizing academic integrity.

This mixed-methods approach allows for a comprehensive evaluation of both measurable writing improvement and students' subjective experiences, contributing empirical evidence to the growing field of AI integration in EFL education within the Ecuadorian context.

Table 1

Grammar results

PRE	Student	POST	Student
6,75	12	7,59	12
6,85	12	7,69	12
6,95	13	7,79	13
7,05	13	7,89	13
7,15	14	7,99	14
7,25	13	8,09	13
7,35	13	8,19	13

7,45	12	8,29	12
7,55	12	8,39	12
Total	114	Total	114

As shown in Table 1, students' grammatical performance improved following the implementation of ChatGPT as a writing support tool. The average score rose from 7.15 in the pre-intervention phase to 7.99 in the post-intervention phase, representing an increase of 0.84 points. This upward trend is further supported by changes in the distribution of scores: the minimum score rose from 6.75 to 7.59, while the maximum increased from 7.55 to 8.39.

These results demonstrate not only an overall improvement in performance but also a positive shift in the analyzed skill; it is evident that the intervention may have benefited both lower-performing and higher-performing students. These findings align with previous research highlighting the potential of AI-assisted tools to improve grammatical accuracy and student autonomy in EFL context

Table 2

Vocabulary results

PRE	Student	POST	Student
7,51	12	7,76	12
7,61	12	7,86	12
7,71	13	7,96	13
7,81	13	8,06	13

7,91	14	8,16	14
8,01	13	8,26	13
8,11	13	8,36	13
8,21	12	8,46	12
8,31	12	8,56	12
Total	114	Total	114

As presented in Table 2, students' vocabulary performance showed a consistent improvement after the implementation of ChatGPT as a writing support tool. The mean score increased from 7.91 in the pre-intervention phase to 8.16 in the post-intervention phase, reflecting a gain of 0.25 points. In addition, the distribution of scores indicates a positive shift across performance levels: the minimum score rose from 7.51 to 7.76, while the maximum score increased from 8.31 to 8.56.

Although the magnitude of improvement is more moderate compared to other writing components, these results suggest a steady enhancement in students' lexical use. The upward movement in both lower and higher scores indicates that the intervention supported vocabulary development across different proficiency levels. This pattern may be explained by the role of ChatGPT in providing lexical suggestions, synonyms, and contextualized language input, which can facilitate vocabulary expansion and more precise word choice in EFL writing.

Table 3

Organization results

PRE	Student	POST	Student
7,64	12	8,3	12
7,74	12	8,4	12
7,84	13	8,5	13
7,94	13	8,6	13
8,04	14	8,7	14
8,14	13	8,8	13
8,24	13	8,9	13
8,34	12	9	12
8,44	12	9,1	12
Total	114	Total	114

As shown in Table 3, students' performance in organization improved notably following the intervention. The mean score increased from 8.04 in the pre-intervention phase to 8.70 in the post-intervention phase, representing a gain of 0.66 points. In terms of score distribution, the minimum score rose from 7.64 to 8.30, while the maximum score increased from 8.44 to 9.10.

This consistent upward shift suggests a substantial improvement in students' ability to structure and organize their ideas more effectively. The results indicate that the use of ChatGPT may have supported learners in enhancing textual coherence and logical sequencing, which are key components of writing organization. Furthermore, the improvement across both lower and

higher score ranges suggests that the intervention had a positive impact on students with varying levels of writing proficiency.

Table 4

Content results

PRE	Student	POST	Student
8,28	12	8,5	12
8,38	12	8,6	12
8,48	13	8,7	13
8,58	13	8,8	13
8,68	14	8,9	14
8,78	13	9	13
8,88	13	9,1	13
8,98	12	9,2	12
9,08	12	9,3	12
Total	114	Total	114

Table 4 presents the results for the content dimension, which also demonstrate a positive trend after the use of ChatGPT. The mean score increased from 8.68 in the pre-intervention phase to

8.90 in the post-intervention phase, reflecting a gain of 0.22 points. Additionally, the minimum score improved from 8.28 to 8.50, while the maximum score increased from 9.08 to 9.30.

Although the improvement in this dimension is more moderate compared to grammar and organization, the results indicate a steady enhancement in students' ability to develop and express ideas. The relatively high pre-test scores suggest that students already had a solid foundation in content development; however, the observed gains imply that ChatGPT may have contributed to refining idea clarity, relevance, and elaboration. This pattern reinforces the role of AI-assisted feedback as a supportive tool for improving higher-level writing skills.

Results

The comparison between pretest and posttest scores revealed improvements in all evaluated dimensions.

Dimension	Pretest Mean	Posttest Mean	Difference
Grammar	7.15	7.99	+0.84
Vocabulary	7.91	8.16	+0.25
Organization	8.04	8.70	+0.66
Content	8.68	8.89	+0.22

Percentage of Improvement

Dimension Improvement

Grammar 10.51%

Vocabulary 3.06%

Organization 7.55%

Content 2.44%

The largest improvement occurred in **grammar**, followed by **organization**, while smaller gains were observed in vocabulary and content.

Survey Results

Table

Students' Perceptions of ChatGPT (Likert Scale Results)

Item	1	2	3	4	5	Total
Grammar improvement	3	7	14	52	38	114
Vocabular	4	9	18	49	34	114

y improvement						
Writing confidence	5	10	20	46	33	114

There is a definite trend toward favorable student perceptions, according to the descriptive results. The mean score for grammar development was the greatest ($M = 4.01$), followed by writing confidence ($M = 3.81$) and vocabulary improvement ($M = 3.88$). The comparatively higher grammar score indicates that students thought ChatGPT was especially good at addressing language's rule-based components, which are better supported by automated feedback.

Despite having somewhat lower mean values, vocabulary and confidence both fell within the "Agree" category, suggesting generally positive opinions. Individual variances in tool engagement or differing degrees of trust in AI-generated feedback may be reflected in the presence of some neutral and lower replies. However, the general trend shows that students thought ChatGPT was a useful tool for writing assistance.

5. DISCUSSION

The study aimed to investigate whether ChatGPT could assist EFL learners in improving their writing skills and to explore the effectiveness of combining a language learning application with the scaffolding instructional strategy. The findings showed that, on average, EFL learners' writing performance enhanced significantly after employing ChatGPT under the guidance of the teacher. Most EFL learners held positive views of using ChatGPT to assist their writing, with the improvements made most frequently in the area of grammar. Grammar feedback

provided by the learning application and the corresponding explanations offered by ChatGPT may have enhanced the participants' grammatical awareness.

The analysis of the writing samples indicates that students' texts became more organized following the intervention, suggesting that the use of the AI tool played a significant role in supporting textual organization. Specifically, the tool provided suggestions for linking words and phrases that helped students connect ideas more effectively, enabling them to construct narratives with a clearer beginning, middle, and end. In contrast, improvements in vocabulary and content development were more limited, as these aspects of language acquisition typically require longer periods of exposure and sustained practice, which may explain the more modest gains observed in these areas.

In summary, these findings suggest that the use of AI can serve as a pedagogical scaffolding tool that assists students to revise and regulate their thinking throughout the writing process. This study, however, also highlights the crucial role of teachers in ensuring that students appropriate the use of AI as a learning tool rather than doing the work for them.

6. CONCLUSION

This study aimed to investigate the impact of teaching narrative writing skills through guided ChatGPT use on high school EFL students' narrative writing achievement. The findings revealed that the students' narrative writing achievements had significantly improved in relation to all the variables measured, namely, language use, grammar, vocabulary, vocabulary quantity, vocabulary richness, syntax, and complexity and also overall textuality and organization.

According to results, the use of artificial intelligence in language learning, by means of learning activities, leads to positive outcomes. The research explores the function of AI in language learning within the framework of pedagogical activities focused on providing

feedback, enabling the process of revision and leading to self-reflection, and reveals that, for instance, ChatGPT can assist students in realising their own writing strategies and achieving higher levels of language control.

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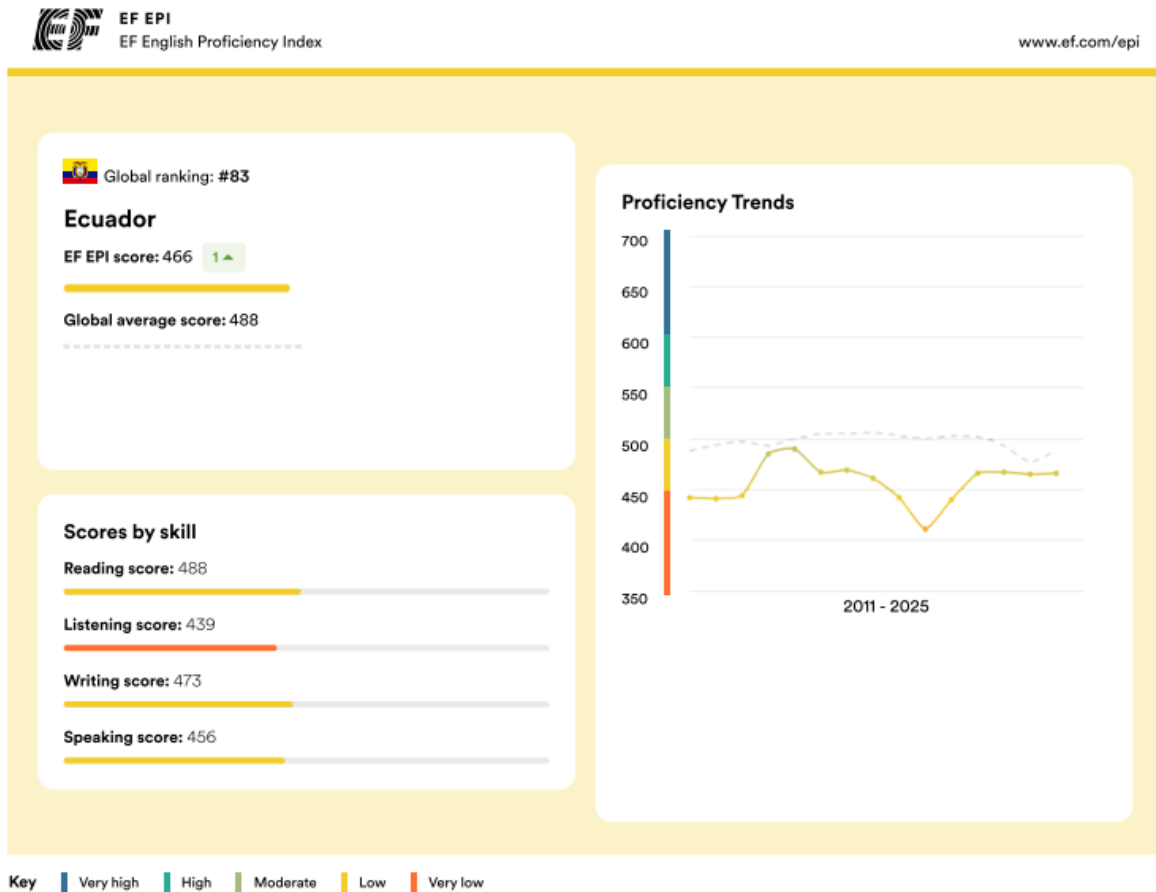
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Appendix A:

Ecuador's EF English Proficiency Index profile (2024)



Note. Screenshot from EF English Proficiency Index: Ecuador Profile (EF Education First, 2024). Retrieved from <https://www.ef.com/assetscdn/WIBIwq6RdJvcD9bc8RMd/cefcom-epi-site/fact-sheets/2025/ef-epi-fact-sheet-ecuador-english.pdf>

Appendix B:

Rubric

Criteria	2,5 Excellent	2 Good	1,5 Fair	1 Needs improvement
Use of Grammar	Uses past tense correctly with almost no mistakes.	Mostly correct; few errors.	Many errors; meaning sometimes unclear.	Incorrect or not used.
Vocabulary	Uses a variety of topic words correctly.	Uses some topic words; generally correct.	Limited vocabulary; some incorrect use.	Very limited or incorrect vocabulary.
Organization	Clear, logical order; easy to follow.	Mostly organized; small issues.	Some organization problems; ideas unclear.	Disorganized; hard to follow.
Content	Fully answers the question with details.	Answers the question but with few details.	Partially answers; missing information.	Does not answer the task or very short.

Note: Made by authors

Appendix C: Structured Prompts for AI-Assisted Writing Intervention

The following prompts were used during the instructional intervention to guide students in using ChatGPT as a feedback tool for improving their narrative writing in English as a Foreign Language (EFL). The prompts are organized chronologically according to the stages of the intervention.

Week 1 – Grammar Awareness

1. Correct my story but DO NOT rewrite it completely. Show me my grammar mistakes.

Explain why they are wrong in simple English.

2. Give me more examples of my most common grammar mistakes.
3. What grammar mistakes do I repeat the most in my story?

Week 2 – Vocabulary Enrichment

4. Improve my vocabulary but keep my original ideas. Suggest stronger verbs and better adjectives. Do not change my story structure.

5. Give me 5 better transition words for my story.
6. Give me synonyms for the simple words I used in my story.

Week 3 – Coherence and Structure

7. Does my story have a clear beginning, middle, and ending? Give suggestions for improvement.
8. How can I make my story more coherent and connected?
9. Suggest linking words to improve the flow of my story.

Week 4 – Metacognitive Reflection

10. Compare these two versions of my story. Tell me how I improved in grammar, vocabulary, and coherence. Be specific.
11. What are my strengths and weaknesses in writing based on my final version?
12. What should I improve next to become a better writer in English?

Appendix D: Survey

Title: Students' Perceptions of ChatGPT as a Writing Feedback Tool

Instructions: Please indicate your level of agreement with the following statements using the scale below:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

1. ChatGPT helped me improve my grammatical accuracy in English writing.
2. ChatGPT helped me improve my vocabulary and word choice.
3. ChatGPT increased my confidence in writing in English.



Casa Editora del Polo (CASEDELPO), hace constar que:

El artículo científico:

**“Exploring ChatGPT as an AI Feedback Assistant to Improve Upper
Secondary EFL Students’ Writing Skills”**

De autoría:

**Loyola Borja Jorge Efrén, Velasco Bautista Priscila Elizabeth, Rojas Velasco
Pamela Liset, Pereira Loor Josceline Michelle**

Habiéndose procedido a su revisión y analizados los criterios de evaluación realizados por lectores pares expertos (externos) vinculados al área de experticia del artículo presentado, ajustándose el mismo a las normas que comprenden el proceso editorial, se da por aceptado la publicación en el **Vol. 11, No 6 Junio 2026**, de la revista Polo del Conocimiento, con ISSN 2550-682X, indexada y registrada en las siguientes bases de datos y repositorios: **Latindex Catálogo v2.0, MIAR, Google Académico, ROAD, Dialnet, ERIHPLUS.**

Y para que así conste, firmo la presente en la ciudad de Manta, a los 28 días del mes de mayo del año 2028.

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