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**MAESTRÍA EN PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y
EXTRANJEROS CON MENCIÓN EN ENSEÑANZA DEL INGLÉS**

TOPIC:

**ARTIFICIAL INTELLIGENCE IN THE DEVELOPMENT OF WRITING
SKILLS IN PRE-INTERMEDIATE ENGLISH LEARNING.**

Thesis prior to obtaining the Maestría en Pedagogía de los Idiomas Nacionales y Extranjeros con Mención en Enseñanza del Inglés

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AMBATO – ECUADOR

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That this research work has been reviewed in its entirety and I consider that it meets the requirements and merits sufficient to be submitted for public presentation and evaluation by the designated Examination Board.

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DEDICATION

I want to dedicate this research to God and the Niñito de Isinche for all the blessings I have received and the wisdom they have given me to achieve this goal. To my parents, Luis Balladares and María Antonieta Caisa, who have been a fundamental pillar in my life, helping me to accomplish each of my objectives and teaching me to never give up. To my brothers, Bryan and Estalin Balladares Caisa, who have supported me at all times. Finally, to the teachers and students of the Liceo Policial Educational Unit, where, with effort and dedication, they are innovating in the process of teaching and learning English as a foreign language.

Maycol Balladares

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DIRECCIÓN DE POSGRADO
MAESTRÍA EN PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y
EXTRANJEROS CON MENCIÓN EN ENSEÑANZA DEL INGLÉS

TEMA: LA INTELIGENCIA ARTIFICIAL EN EL DESARROLLO DE LAS HABILIDADES DE ESCRITURA EN EL APRENDIZAJE DEL INGLÉS DE NIVEL PREINTERMEDIO.

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RESUMEN EJECUTIVO

El uso de herramientas de inteligencia artificial en el ámbito educativo ha modernizado el proceso de enseñanza y aprendizaje del inglés como lengua extranjera, así como innovar las estrategias para reforzar las habilidades comunicativas, especialmente la expresión escrita. El principal problema identificado en este estudio fue que los alumnos de segundo año de bachillerato con nivel pre intermedio (A2) tenían un bajo desempeño con la redacción en inglés, ya que presentaban dificultades con la gramática, el vocabulario y la sintaxis. El objetivo de la investigación era evaluar el impacto de la implementación de herramientas de IA en el desarrollo de las habilidades de escritura de los alumnos de segundo año de bachillerato. El enfoque cuantitativo permitió determinar cómo influyen las herramientas de IA en la calidad de la escritura de los alumnos. Del mismo modo, se utilizó el diseño pre experimental para recopilar datos antes y después de la aplicación de los instrumentos, que se basaban en pruebas estandarizadas, en este caso, los exámenes Cambridge English A2 Key (KET), que consistían en escribir historias basadas en imágenes. Los resultados obtenidos en este estudio mostraron que los estudiantes que utilizaron herramientas de IA (ChatGPT y QuillBot) fortalecieron sus habilidades de escritura para producir textos coherentes y claros con información relevante, palabras de enlace básicas, formas gramaticales correctas y vocabulario adecuado, a fin de que el lector estuviera plenamente informado. Además, los resultados indicaron que la integración de herramientas de IA posibilitó la innovación del proceso de enseñanza y aprendizaje del inglés, y mejoró la expresión escrita, evitando el uso de metodologías tradicionales en las aulas de inglés como lengua extranjera. Finalmente, las herramientas de IA ayudaron a los estudiantes a desarrollar actividades de escritura de acuerdo con su nivel y necesidades, alcanzado un aprendizaje significativo.

PALABRAS CLAVE: ChatGPT, habilidades de escritura, herramientas de IA, QuillBot.

UNIVERSIDAD TECNOLÓGICA INDOAMÉRICA

FACULTY OF EDUCATION SCIENCES

MASTER IN PEDAGOGY OF NATIONAL AND FOREIGN LANGUAGES

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THEME

ARTIFICIAL INTELLIGENCE IN THE DEVELOPMENT OF WRITING SKILLS IN PRE-INTERMEDIATE ENGLISH LEARNING

ABSTRACT

The incorporation of artificial intelligence tools into education has transformed the teaching and learning of English as a foreign language, while also innovating strategies to enhance communication skills, particularly in writing. This research identified a significant issue: second-year high school students at the pre-intermediate level (A2) struggled with English writing, facing challenges in grammar, vocabulary, and syntax. The research aims to evaluate the impact of implementing AI tools on the development of writing skills in second-year high school students. The quantitative approach enabled the assessment of how AI tools influence the quality of students' writing. Additionally, a pre-experimental design was used to collect data both before and after the implementation of the tools, which were based on standardized tests, specifically the Cambridge English A2 Key (KET) exams. These exams required students to write stories based on provided images. The results of the research demonstrated that students who used AI tools, such as ChatGPT and QuillBot, significantly improved their writing skills. They produced clear, coherent texts that included relevant information, basic linking words, correct grammar, and suitable vocabulary, ensuring the reader was well-informed. Furthermore, the findings indicated that integrating AI tools fostered innovation in the teaching and learning process of English, enhancing written expression and moving away from traditional methodologies in foreign language classrooms. Finally, AI tools helped students develop writing activities according to their level and needs, achieving meaningful learning.

KEYWORDS: AI tools, ChatGPT, QuillBot, writing skills



INTRODUCTION

Importance and relevance

Nowadays, artificial intelligence (AI) has revolutionised the way languages are taught and learned around the world. Its integration into the process of teaching and learning English as a foreign language offers new strategies and opportunities for developing communication skills, especially written expression. U.S. Department of Education (2023) states that “developing resources that are responsive to the knowledge and experiences students bring to their learning—their community and cultural assets—is a priority, and AI may enable greater customizability of curricular resources to meet local needs” (p. 2). Therefore, the development of English writing skills is important for global communication, both in education and in business.

The line of research of this study is the learning of English as a foreign language and the sub-line of research is communicative strategies, both of which constitute a field of research of vital importance in the current context. English proficiency goes beyond being a mere skill, it becomes a transformative asset and an essential tool for access to information, participation in the international arena, and insertion into global labor markets (Aimen and Khadim, 2024). However, traditional English language teaching often focuses on memorization and repetition, as educators must overcome the challenges posed by technical limitations, and adapt to new AI-based language learning platforms that offer adaptive and personalized learning experiences for learners, which encourages active learning and develops appropriate writing skills (Abdoulaye, 2024).

Writing is one of the most complex skills for pre-intermediate (A2) students, as it requires mastery of grammar, vocabulary, coherence, and textual cohesion. Al-Mubireek and Arruri (2025) argue that “The development of writing can be mainly and widely attributed to development from cognitive, linguistic, and social

perspectives” (p.1155). In this way, AI tools such as automatic proofreaders, style assistants, and intelligent platforms have become support resources for improving the quality of written production. Ya’u and Mohammed (2025) say that “AI-assisted writing tools, such as Grammarly, QuillBot, and Turnitin’s AI-driven feedback system, are now widely available and utilized by students in many educational environments” (p. 593).

This research is timely and significant because it responds to the new technological demands of contemporary society and proposes solutions that promote autonomous, critical, and creative learning. Moreover, it encourages the use of innovative resources that improve students’ ability to express written ideas with greater clarity and coherence. Therefore, the relevance of this research is based on both international and national regulatory frameworks. At the international level, the Common European Framework of Reference for Languages (CEFR) is the guiding document that establishes language proficiency levels, in this case level A2, which corresponds to second-year high school students in a fiscomisional school. At this level, students can write short, simple texts on familiar topics and topics of personal interest, which highlights the need to strengthen this skill through innovative strategies supported by AI tools (Cambridge Assessment English, 2020).

Likewise, UNESCO (2023) mentions that “artificial intelligence (AI) can support writing assignments and, conversely, can be used to automatically assess writing assignments, including identifying plagiarism and other forms of cheating” (p. 13). UNESCO highlights the importance of digitisation in education and the fundamental role of artificial intelligence in providing personalised and adaptive learning experiences. Similarly, Vincent-Lancrin and van der Vlies (2020) claim that:

Education systems have started to change their curriculum and skills requirements and put a stronger emphasis on skills for innovation and citizenship in a digital era. The skills required to enter and progress in the labour market are undergoing profound changes, with more demand and emphasis on complex skills. (p. 6)

At the national level, article 347 of the Constitution of the Republic of Ecuador (2008) establishes that it is the responsibility of the State: “8. Incorporar las tecnologías de la información y comunicación en el proceso educativo y propiciar el enlace de la enseñanza con las actividades productivas o sociales” (p. 107). Consequently, the Constitution of the Republic of Ecuador recognizes the right to a quality, modern and inclusive education, and emphasizes the need to incorporate Information and Communication Technologies (ICT) in the educational process to enhance the integral development of students. In addition, there are education laws that guarantee the incorporation of up-to-date and innovative methodologies in the teaching-learning process, which promotes the integration of digital tools to strengthen communication skills and values that creates a school environment conducive to learning (LOEI, 2024).

The Ministry of Education, through the Prioritized Curriculum for Foreign Languages – English (2025), establishes in one of its objectives “O.EFL 5.5 Directly access the main points and important details of up-to-date English language texts, such as those published on the web, for professional or general investigation, through the efficient use of ICT and reference tools where required” (p. 109). The curriculum emphasizes the need for students to be able to produce written texts appropriate to their level, which demonstrates coherence, accuracy, and creativity.

Therefore, the authors highlight the importance of developing digital and linguistic skills in the 21st century, which argues that digital literacy and the critical use of technological tools should be integrated into education systems. In this sense, this research responds to international and national demand to improve foreign language learning through innovative resources that promote critical thinking and effective communication.

On the other hand, worldwide, technology has driven the development of artificial intelligence that is transforming the field of education. Molina et al. (2024) state that “The AI revolution is transforming education at an unprecedented pace, offering game-changing opportunities to personalize learning experiences, support teachers in their daily tasks, and optimize education management” (p. 5). The

relevance of these initiatives lies in the fact that writing, which is one of the most complex skills, requires constant support in terms of grammar, coherence, and vocabulary, and AI has positioned itself as a resource capable of meeting these needs in real time. Thus, the integration of artificial intelligence aligns with efforts to modernize education, i.e., revolutionize the way of learning, which makes it more personalized, engaging and efficient, in order to ensure training in line with the challenges of the 21st century (Harry and Sayudin, 2023).

In Latin America, students from several countries face similar difficulties in terms of poor writing skills, as they demonstrate limited textual coherence, poor use of connectors, and a reliance on memorized structures. Davies (2021) argues that:

Writing is a different matter. For a start, until emailing, texting, Facebook, Twitter, and so on, came along, most people seldom wrote much, if anything, even in their native language unless their work involved writing or they were avid letter writers. (p. 176)

Despite the limitations and challenges faced by Latin American countries, several of them have taken the initiative to integrate technology into educational processes. Countries such as Argentina, Colombia and Chile have implemented artificial intelligence to innovate the educational process of language learning in order to accelerate, personalize and provide more efficient educational opportunities (Rivas et al., 2024). These initiatives seek not only to improve educational quality, but also to reduce the digital divide and strengthen language skills, in this case writing, through AI tools and a pedagogical design adapted to the needs of students.

In Ecuador, the challenge of modernizing education is increasingly urgent to improve the teaching-learning process of English language and writing skills. Yunga et al. (2025) mention that:

The main obstacles include the lack of appropriate didactic resources, the frequent use of traditional teaching methods that are ineffective for proper learning, and the lack of technology in the classroom. These limitations

negatively affect skills such as listening comprehension, oral expression, written communication, and verbal fluency. (p. 575)

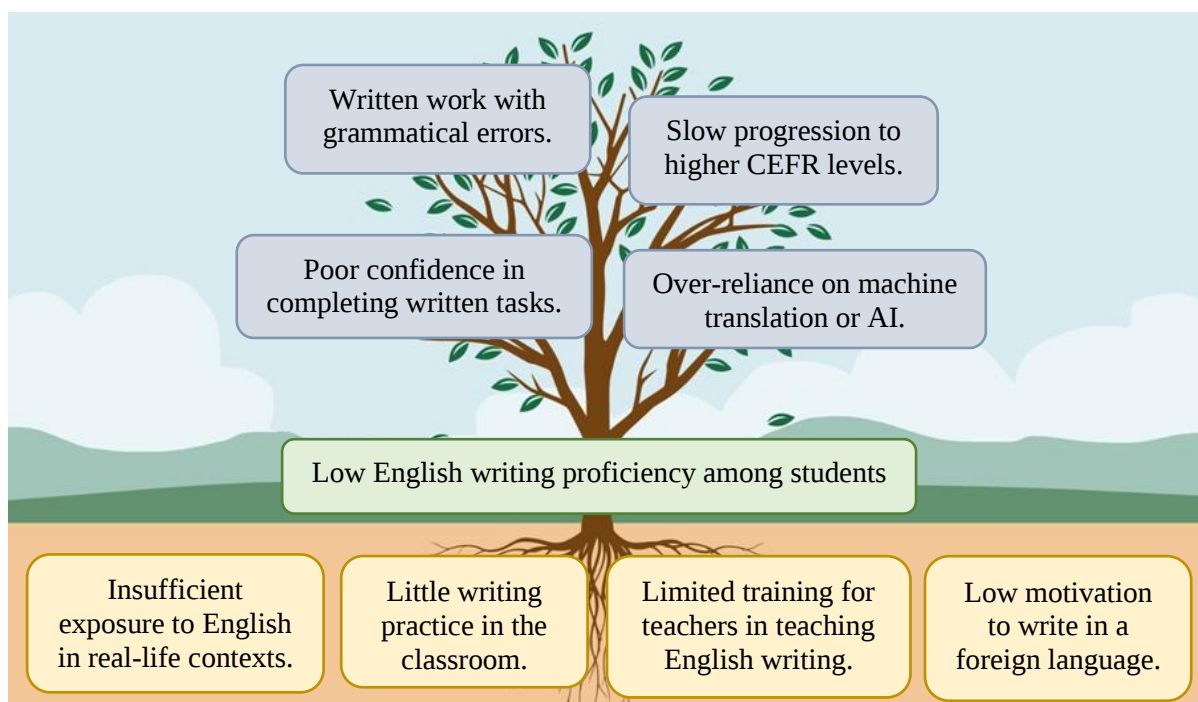
These limitations are due to the low level of writing skills among students learning English as a foreign language, as the lack of training and educational resources prevents the proper integration of AI into Ecuadorian education (Taipicaña et al., 2024). However, national education policies suggest that the progressive implementation of AI, accompanied by clear communication strategies and adequate teacher support, will enable students to improve their English writing (productive skill) (Lascano and Altamirano, 2025).

In this context, this research focuses on analyzing the impact that the implementation of AI tools can have on the English teaching-learning process, specifically on improving students' writing skills. The fiscomisional school faces the challenge of updating its teaching and learning methods, as for the last 10 years it was a public school where teachers and students did not have sufficient physical and digital resources to improve the written expression of second-year high school students, aged 15 to 16 and at a pre-intermediate level (A2), who currently have difficulty organizing ideas, writing coherent paragraphs, conjugating verbs and using connectors correctly. As a result, they need new strategies, such as the use of AI tools that enable them to develop their writing skills efficiently.

Finally, the integration of AI tools can revolutionize English language learning by improving students' ability to write cohesive and coherent texts. By implementing intelligent tutoring systems and real-time feedback tools in language learning environments, the goal is not only to correct errors immediately, but also to stimulate in-depth analysis of writing, which allows students to reflect on the knowledge they have acquired and accelerate their process of acquiring essential writing skills (Rusmiyanto et al., 2023).

Problem tree

To address the problem of low English writing proficiency among students, a problem tree has been developed that identifies the root causes and their direct consequences:



Graph N° 1. Problem Tree

Elaborated by: Balladares Caisa Luis Maycol

Source: Problem analysis

The low level of English writing proficiency among second-year high school students is due to multiple causes that directly interact in the learning process. On the one hand, these causes limit students' opportunities to apply the language in meaningful tasks, as most activities focus on traditional exercises such as repetition or translation, which hinders the transfer of knowledge to practical writing situations (Muñoz and Cadierno, 2021). Most teachers prioritize reading and listening comprehension, relegating writing to complementary tasks without a guided process of planning, drafting, revising, and editing. Similarly, many teachers do not receive frequent training in innovative strategies and the use of technological tools that optimize the teaching of writing in English, which leads students to reduce their writing practice, as they perceive it as a complex and frustrating skill (Endarwati et al., 2023).

On the other hand, the causes described limit educational quality and reduce students' preparation for developing efficient writing skills. Poor written production is observed, characterized by recurring errors in grammar, vocabulary, and syntax, which reflects the absence of systematic practice and effective feedback (Setiati et

al., 2025). This deficit translates into low progress in CEFR levels, as students remain stuck at level A2 and do not reach the expected levels of B1 or B2, which are necessary to access higher education or international programs. In addition, students experience demotivation and low confidence in their writing skills, as they do not have effective strategies to improve their writing, which leads them to rely on machine translators or AI tools in a dependent and uncritical manner to complete tasks without internalizing the writing processes (Iswati, 2025).

Problem statement

According to the problem tree analysis, it was identified that second-year high school students at a fiscomisional school had difficulties writing in English. This was due to the low level of training of teachers in writing pedagogy, in the use of digital tools, and their dependence on obsolete teaching resources to produce formal and academic writing. Arteaga and Valdiviezo (2020) state that “In Ecuador, teachers still need to develop skills that ease the creation of learning environments to enhance the development of cognitive, social, and critical skills in their students through the use of digital tools” (p. 98).

Similarly, the absence of immediate comments and corrections on students' writing meant that they did not progress in their writing, as without constant revision, students repeated incorrect patterns. However, the use of immediate response systems, intelligent tutoring, and automated text analysis allows errors to be identified and corrected in real time, which encourages active and autonomous learning to create clear and coherent writing. Xi (2024) mentions that “these tools can bring huge convenience to students by transcending the boundaries of time and space and providing real-time feedback to their compositions” (p. 59). Thus, the central problem addressed in this research is stated as follows: Low English writing proficiency among students.

Hypothesis

Based on the identified problem, the following hypothesis is proposed: *The integration of artificial intelligence tools into the learning process of English as a foreign language significantly improves the development of writing skills in second-year high school students.*

Beneficiaries

The main beneficiaries of this research were students at a fiscomisional school located in the city of Quito, Ecuador. These 50 students, who were in their second year of high school, were between 15 and 16 years old and had an A2 level of English. The implementation of artificial intelligence tools for the development of writing skills not only improved students' academic performance, but also enabled them to adopt a more analytical and critical attitude towards the use of technology to produce quality writing. In addition, the success of the proposal served as a model for other educational institutions facing similar challenges, which contributed to the modernization of teaching and learning writing.

Research question

The research question that will guide the development of this study is the following: *What impact does the implementation of artificial intelligence tools have on the development of writing skills in students with a pre-intermediate English level?*

Objectives:

General objective:

- To evaluate the impact of implementing artificial intelligence tools on the development of writing skills in second-year high school students who are at a pre-intermediate level and enrolled in a fiscomisional school.

Specific objectives:

- To examine the current baseline of students' English writing skills.
- To apply an activity guide that uses artificial intelligence tools in students' writing.
- To analyze the improvement of writing skills after the implementation of the activity guide.

CHAPTER I

THEORETICAL FRAMEWORK

The theoretical framework constitutes the conceptual and empirical basis of any research, as it explains the phenomenon studied and the assumptions adopted by the researcher, and analyses the theories, models and previous studies related to the problem posed (Luft et al., 2022). In this context, theoretical foundations are explored to understand the impact of artificial intelligence tools on the development of writing skills in learning English as a foreign language in second-year high school students.

Previous studies

Moncayo, Quiroz and Saltos (2024) conducted research with the aim of analyzing the different methodological strategies used to develop English writing practices in a class of 68 sixth-grade students in the city of Chone. They used a descriptive approach and, at the same time, the sampling was chosen for convenience. The results were obtained from an interview with the school's only English teacher and five observation files of sixth-grade English classes. In addition, the results showed the students' extensive knowledge of grammar and orthography, but also their deficiencies in terms of the clarity and coherence of their texts. Finally, the researchers pointed out that the study is beneficial to the field of education, specifically to factors related to the learning-teaching process of writing.

This research supports the current study, as it indicates that methodological strategies set the tone for the class and are directly responsible for student motivation, which enables them to maintain consistent writing practice in order to adequately convey what the writer wishes to communicate.

Ayala and Alvarado (2023) conducted research with the objective of integrating AI into English teaching in Ecuador, which explored the potential benefits and challenges of using AI to improve English teaching and learning

processes. They adopted a qualitative research approach and interviewed five English teachers from the top five schools in Quito. The interviews provided insight into the English teachers' perspectives on the integration of AI into English language teaching in Ecuador. The results obtained suggest that the integration of AI into English teaching in Ecuador has the potential to improve student learning outcomes. However, effective integration requires adequate infrastructure and training for teachers, as there are concerns about the potential negative impact of AI on human interaction and emotional support for students.

This research supports this study because it shows the adoption of technology, especially AI in the English language teaching-learning process in Ecuador, where AI tools allow to improve students' learning and performance, and to have better management, control, evaluation and feedback.

Narváez, Granda, Castillo, and Quezada (2024) conducted a research whose objective was to emphasize the analysis of AI writing tools in the teaching and learning of English to establish their potential impact on the development of students' writing tasks. They used the methodology proposed by Torres-Carrión and posed five research questions. The search was conducted in the Scopus database, where 169 articles published between 2019 and 2023 were found, of which 37 were analyzed. The results show that artificial intelligence is necessary in English teaching and learning. AI has a negative and positive impact on English teaching, depending on whether it is used correctly and at the right time. In addition, AI helps students improve their English writing skills such as sentence level writing problems, grammar, vocabulary, communicative achievement using AI writing assistants such as: Chat GPT, Quillbot, Grammarly, Plagiarism Checker.

This research supports the current study because it indicates that the integration and use of artificial intelligence tools in EFL classrooms helps students improve their writing, vocabulary, and grammar skills, in order to achieve good communication.

Al-Raimi, Mudhsh, Al-Yafaei, and Al-Maashani (2024) performed a research project that aimed to explore the perceptions and practices of Omani EFL learners towards the use of artificial intelligence tools to improve their writing

skills. The study was carried out at the General Requirements Unit of the Preparatory Studies Center, University of Technology and Applied Sciences-Salalah, at the end of the first semester of the 2023-2024 academic year. The study employed a quantitative methodology to collect and analyze the data. The results showed that translating words, phrases and sentences is where Omani EFL learners most frequently use AI tools. They employ AI techniques to check spelling and grammar. Participants also report using AI writing tools to generate ideas for their writing and to help them compose essays and paragraphs.

This research supports this study because it points to the positive attitudes of using artificial intelligence tools to improve the quality of written content, reduce grammatical errors, and improve language proficiency, in order to overcome academic writing challenges.

Theoretical framework

Constructivist learning theory

Jean Piaget's constructivist theory holds that learning is an active and social process, in which learners construct their own knowledge from their experiences and interaction with their environment. Prakash (2023) claims that “Constructivism is a theory of learning or meaning-making that enables people to create their own new understanding based on an interplay between what they already know and believe and the concepts and knowledge with which they interact” (p. 274).

The research aligns with constructivism because it understands that knowledge is not passively transmitted, but is constructed through reflection and interaction with the environment. Furthermore, in this study, AI tools facilitate autonomous exploration by providing immediate support in grammar and style, which allows students to gradually internalize the stages of writing until they are able to produce more complex texts without assistance.

Similarly, a constructivist approach to learning English as a foreign language and writing skills development emphasizes the co-construction of knowledge as learners compare drafts, reflect on their language choices, and

progressively build textual competencies. Constructivism, in line with the learner-centered learning approach, enables students to discover solutions to problems, as they can play an active role by carrying out activities and reaching clear conclusions, and also allows teachers to guide students in developing ideas and relating them to their prior knowledge, but leaving discovery and discussion to the students (Allen, 2022). Therefore, the use of AI tools in the development of writing skills becomes an extension of the constructivist process that fosters metacognition, self-regulation, and meaningful learning.

Theories of second language writing

Theories about writing in English as a second language offer various approaches to understanding how students develop this skill. Cognitive theory holds that writing involves mental processes such as planning, organizing, drafting, and revising. Students with different cognitive abilities perform and coordinate the writing processes in which they learn to write in another language, that is, the development of knowledge and skills in L2 requires a controlled process, memory capacity, and aptitude for language learning (Kormos, 2023). From this perspective, writing in a foreign language requires activating linguistic knowledge and cognitive strategies to transform thoughts into text.

On the other hand, product-oriented approaches focus on the final result of the text, which emphasizes grammar and structure, while the process-oriented approach considers writing as a recursive activity in which the student plans, drafts, revises, and rewrites, in order to receive feedback throughout the process. It is recommended that teachers adopt both process-oriented and product-oriented writing instruction in their classrooms, as it is worthwhile to use them because planning activities allow students to solve problems through self-reflection and evaluation of the writing process, which provides a conducive learning environment in which students and teachers interact with each other, in order to encourage students to achieve optimal performance in writing (Kadmiry, 2021).

Writing skills in English as a foreign language (EFL)

Writing skills in English as a foreign language (EFL) are an essential component of communicative competence, as they enable students to express ideas, thoughts, and feelings in a cohesive and coherent manner. Writing in English encourages reflection, critical thinking, and reinforces linguistic competence. Bhowmik (2021) mentions that “In an EFL context, writing is all the more important as a high percentage of students learn English for academic and professional purposes that require advanced writing skills” (p. 30).

Hence, writing in English involves not only knowledge of grammar, vocabulary, syntax, and textual cohesion, but also the ability to organize information and ideas efficiently in sentences and paragraphs.

Likewise, writing in English as a foreign language (EFL) reinforces the cognitive ability to organize information and convey coherent, well-structured messages. In the field of education, academic writing encourages independent learning and self-assessment of linguistic progress in the target language. Mujiono et al. (2023) indicate that “Academic writing proficiency is critical for English as a Foreign Language (EFL) learners. It is a gateway to effective communication, knowledge dissemination, and participation in academic and professional communities” (p. 245).

Thus, strengthening English writing skills is a priority in language teaching and learning programs, where students with optimal strategies begin to produce quality texts and improve the accuracy and coherence of their writing.

Importance of writing in English as a foreign language (EFL)

Writing in English as a foreign language is the process by which students use the language in written form to communicate ideas, share experiences, and express opinions. This skill is essential because it consolidates the learning of other language skills (reading, listening and speaking) and promotes a more solid understanding of the language.

In addition, writing is considered a fundamental skill for learning English and a productive activity that allows students to communicate their emotions, thoughts, and arguments, however, writing in an unfamiliar language is difficult when learning English (Ghafar and Mohamedamin, 2022). Hence, students' success in writing in English depends on the guidance and support of teachers, who are responsible for providing them with the necessary tools to achieve their learning goals.

Students practice grammatical structures, expand their vocabulary, and develop critical thinking skills through writing. From an academic point of view, it enables them to reflect on their own learning and improve their communication skills. Bora (2023) claims that:

Writing enables a learner to develop their thinking and imaginative abilities and allows them to record their ideas. Writings enables record keeping which ensures documentation. This as a result, helps the learner to recover or revisit their ideas by bringing back their old and almost forgotten memories for use in the present. (p. 2)

In this sense, writing in English prepares students for professional and academic contexts in which written communication is essential. As a result, writing is not only a linguistic skill, but also a cognitive and communicative tool that facilitates students' integration into a globalized and interconnected world.

Characteristics of writing at the pre-intermediate (A2) level

Pre-intermediate (A2) English learners demonstrate basic proficiency that allows them to write simple texts on familiar and everyday topics. In terms of grammar, they can usually compose simple sentences using basic verb tenses, such as the present simple, past simple, and future with "will", although they still make frequent mistakes in the use of articles, prepositions, and connectors. Álvarez et al. (2021) argue that:

To be considered A2 proficient in English, a person must demonstrate a range of language skills. That is, a person must be able to understand

language in personal, family and work contexts, with basic performance; demonstrate proficiency in structuring clear but slow speech; and understand short, simple texts on familiar topics. (p. 44)

Similarly, students' vocabulary is limited, but sufficient for sharing personal experiences, routines, and opinions. Students begin to use connectors such as "and," "but," "because," or "then" to link ideas, although their texts still contain repetitions and lack fluency. The pre-intermediate level of English writing encourages students to be creative in expressing their thoughts and ideas about real-life contexts through emails, stories, and short notes, however, they need the support and guidance of the teacher to achieve coherent writing (Vula et al., 2024).

Therefore, the main goal at this level is to build confidence, expand creativity and fluency, and reinforce coherence to produce clear and accurate writing.

Challenges in developing writing skills

Developing English writing skills presents multiple challenges for pre-intermediate level students. Grammatical and syntactic limitations make it difficult to develop complex sentences and use verb tenses correctly. Moreover, a limited vocabulary restricts the expression of ideas and lexical variety, which leads to repetition or imprecise expressions. In this context, writing is one of the most difficult skills in language learning, as English as a Second Language (ESL) students must deal with several external factors when writing, such as structuring ideas, mastering vocabulary, and using the language accurately, as well as internal factors such as lack of interest, motivation, and self-confidence, which cause them anxiety when writing (Baharudin et al., 2023).

Interference from the mother tongue (L1) generates various literal translation errors and inappropriate structures in English, such as incorrect use of verb tenses and sentence structure, limited vocabulary, spelling mistakes, problems with the organization and clarity of ideas, punctuation problems, lack of confidence

due to low self-esteem or fear of making mistakes, plagiarism, and lack of effective feedback also limits students' progress in writing (Husni, 2025).

Consequently, to overcome these challenges, it is necessary to apply teaching strategies focused on the writing process, the use of interactive technologies, and continuous feedback to reinforce writing practice and autonomous learning.

Artificial intelligence (AI)

Artificial intelligence (AI) is a technology that develops systems and algorithms capable of simulating functions of human intelligence, such as learning, reasoning, perception, and decision making. Ghosh and Thirugnanam (2021) say that "Artificial Intelligence (AI) is the branch of computer science, which makes the computers to mimic the human behavior to assist humans for better performance in the field of science and technology" (p. 23). AI aims to give computers the ability to "think" and adapt in a manner similar to humans.

Furthermore, AI ranges from traditional algorithmic and machine learning techniques to more advanced methods, such as deep learning and generative AI, which deal with the development of intelligent computer systems capable of perceiving, analyzing, and responding appropriately to inputs and prompts (Boucher, 2020).

AI in applied linguistics and education

Artificial intelligence (AI) has transformed the field of applied linguistics and education in order to provide innovative tools that facilitate language analysis, teaching, and learning. Lee (2025) states that:

The rapid evolution of artificial intelligence (AI) has fundamentally reshaped many aspects of modern education, offering unprecedented opportunities to enhance learning experiences across diverse contexts. Within the realm of Instructed Second Language Acquisition (ISLA), AI

tools are transforming traditional pedagogies and enabling dynamic, personalized approaches that were once inconceivable. (p. 2)

AI is used in applied linguistics and education to process linguistic data using machine learning and natural language processing techniques. This type of technology makes it possible to analyze usage patterns, common errors, and communication strategies of foreign language learners. Likewise, U.S. Department of Education, Office of Educational Technology, (2023) mentions that:

Educators see opportunities to use AI-powered capabilities like speech recognition to increase the support available to students with disabilities, multilingual learners, and others who could benefit from greater adaptivity and personalization in digital tools for learning. They are exploring how AI can enable writing or improving lessons, as well as their process for finding, choosing, and adapting material for use in their lessons. (p. 1)

AI in education contributes to the design of personalized environments that adapt to students' needs to offer them immediate feedback and specific resources according to their level and learning style. In addition, AI in education not only complements the work of teachers, but also innovates the teaching-learning process, which makes it more dynamic, interactive, and focused on the development of communication skills.

AI in language teaching and learning

Artificial intelligence has revolutionized multiple areas such as education. Çela et al. (2025) state that “the integration of AI technologies into educational settings has the potential to revolutionize teaching and learning processes, offering personalized experiences, enhancing administrative efficiency, and fostering innovative pedagogical approaches” (p. 2). Consequently, the evolution and potential of AI in improving educational processes adapt students' learning according to their needs, which is important for improving writing skills.

AI supports educational contexts with different applications, from intelligent tutoring systems to predictive analytics, which seek to improve the

learning experience for students, as AI tools leverage machine learning, natural language processing, and data analytics to create learning environments that adapt to students' requirements (Çela et al., 2025).

Similarly, AI tools help provide personalized learning, as they create activities and provide information tailored to the students' needs and the reality of the EFL classroom. Mariam et al. (2024) argue that “the primary goal of artificial intelligence is to create systems capable of executing tasks autonomously, learning new information, and adapting to changing situations” (p. 4).

Pedagogical theories supporting AI integration

The integration of artificial intelligence into education is based on various pedagogical theories, since, according to constructivism, learning is actively constructed through interaction with the environment. In this sense, AI tools encourage exploration, experimentation, and the acquisition of linguistic knowledge of English as a foreign language. Wahono et al. (2025) claim that:

Constructivist pedagogy, which emphasizes active learning, collaboration, and the construction of knowledge through experience, aligns well with the capabilities of AI. As educational institutions seek to enhance student engagement and learning outcomes, the integration of AI into constructivist approaches presents an opportunity to create dynamic and personalized learning environments. (p. 227)

Furthermore, the theory of personalized learning supports the use of AI, as it adapts content and feedback to each student's needs and learning pace, reinforcing their autonomy and confidence to write in English. Jian (2023) says that:

Artificial Intelligence (AI) has emerged as a driving force for personalizing the learning experience, bringing about a paradigm shift in the conventional instructional methods. At its core, personalized learning refers to tailoring educational experiences to accommodate individual learners' unique needs, learning styles, and pace. (p. 16)

Likewise, the scaffolding provided by AI guides students step by step in order to help them correct mistakes and improve their performance without relying entirely on the teacher. Alexandrowicz (2024) mentions that “Instead of viewing AI as a replacement, teachers use these tools to enhance their teaching methods, allowing for more personalized student interactions and supporting individualized instruction” (p. 347).

In recent years, AI has also evolved the teaching and learning process and innovated traditional feedback methods, which makes them more adaptable and effective in providing students with continuous feedback, which is a key element for meaningful learning (Donmez, 2024).

These theories collectively justify the pedagogical use of AI as a tool that enhances active participation, critical thinking, and autonomous learning for each student, which contributes to a more student-centered approach in line with the educational demands of the 21st century.

Artificial intelligence tools for developing writing skills

Artificial intelligence tools applied to the development of English writing skills consist of programs and platforms that provide automated feedback, error correction, and personalized suggestions to improve written production. In addition, AI tools are capable of providing immediate grammatical feedback on texts created by students, who receive explanations, brief examples, and personalized support from these tools, which makes AI tools a modern method for learning grammar (Narváez et al., 2024).

Artificial intelligence tools allow learners to receive immediate and tailored prompts, which promotes autonomous learning through immediate and individualized feedback that can identify linguistic errors and propose alternative expressions or vocabulary options, provide suggestions to improve readability, detect cases of plagiarism, among others, thus incorporating gamification to enhance motivation and engagement to create quality writing (Al-Raimi et al., 2024).

AI changes students' writing and improves educational technology, as AI-based instruction develops students' confidence and critical thinking, as well as AI tools help solve language learning problems (Khan et al., 2024). Moreover, AI tools allow students to actively participate in the development, revision and restructuring of their writing, in order to encourage critical reflection and self-evaluation. Song and Song (2023) state that:

These AI-assisted writing tools offer automated feedback on various aspects of writing, including organization, coherence, grammar, and vocabulary, thereby facilitating more effective writing performance improvements. Additionally, learners can expedite their writing development as AI tools help them identify and rectify grammatical and lexical errors, while also suggesting alternative sentence structures to enhance the overall writing quality and structure. (p. 02)

Therefore, AI has a relevant impact on students' writing, as it can provide meaningful writing samples, adjust the difficulty level of texts to the students' proficiency level, facilitate guided writing, among others, in order to enhance the development of language skills in a comprehensive way (Mahapatra, 2024).

AI writing assistants

AI-powered writing assistants such as QuillBot and ChatGPT have established themselves as essential tools for learning English. QuillBot specializes in paraphrasing and rephrasing sentences, and offers alternatives that improve the clarity, coherence, and fluency of the text. It also includes grammar correction, text summarization, and vocabulary recommendations. El-Garawany (2024) states that "QuillBot rewrite options help students to construct such understanding by delivering instant feedback and suggestions for improvement, encouraging them to critically evaluate their work and make modifications informed by their knowledge of language conventions" (pp. 173-174).

On the other hand, ChatGPT has key functions as a writing assistant, as it generates coherent and well-structured texts, helps students create new ideas or

phrases, provides personalized feedback, and corrects students' writing by suggesting grammatical, syntactic, and spelling corrections through conversational prompts (Imran and Almusharraf, 2023).

Both AI tools analyze the semantic context of texts and encourage students to review, edit, and improve their writing in real time. Thus, QuillBot and ChatGPT are complementary educational resources that enhance practice, accuracy, and creativity in written production.

Benefits of AI for writing development

Currently, the practical implementation of AI tools in educational contexts focuses on the classroom environment and the daily experience of students and teachers in the English language teaching-learning process. AI offers educators and students novel tools and resources that can modify traditional practices in the EFL classroom, as artificial intelligence offers innovative solutions to enhance the learning experience (Vera, 2023).

The integration of artificial intelligence technology has contributed significant advances in the field of education. In addition, Mananay (2024) indicates that “personalized learning paths, scaffolded language practice, automated feedback and assessment, integration with authentic materials, and collaborative learning environments are critical strategies leveraged to enhance language learning experiences” (p. 379).

Similarly, Vera (2023) claims that “with the assistance of AI, teachers can access data-driven insights and analytics, enabling them to offer personalized feedback tailored to each student's needs. This targeted feedback fosters student growth and allows for more individualized instruction” (p. 68). As a result, AI tools in the EFL classroom contribute to more interactive and personalized learning, which allows teachers to monitor individual student progress and adjust pedagogical strategies in real time, which is essential for the improvement of writing skills (Taipicaña et al., 2024).

Limitations and challenges of AI in writing instruction

Despite the numerous advantages offered by AI tools, their use in teaching and learning writing can present various limitations and challenges. On the one hand, limitations stem from dependence on AI, which causes students to reduce their critical and analytical skills, leading to a lack of academic rigor in their writing, as AI lacks critical thinking and can often generate superficial and unreliable information, given that AI is incapable of synthesizing ideas, theories, and findings, which results in mediocre and uncreative content (Abdul Rahman et al., 2024).

Furthermore, errors in AI-generated comments can lead to incorrect interpretations or inaccurate grammatical suggestions that raise ethical issues such as plagiarism, authenticity of work, and academic integrity, as some students may use AI to generate entire texts without prior analysis.

On the other hand, the challenges students may face when using AI stem from a lack of pedagogical criteria, as it does not always consider the educational context or the learning objectives to be achieved. The lack of responsibility on the part of students when using AI leads them to make mistakes and rush into decisions when selecting information for their written work without a clear understanding of the content, which may be generated by AI in a mechanized way and with plagiarism, leading to a lack of academic honesty in their work (Abd-Elsalam and Abdel-Momen, 2023).

Likewise, unequal access to technology can create gaps in students' learning and knowledge, as not all students have the same opportunities for permanent connectivity with technology. Therefore, a balanced integration is required, in which the teacher acts as a mediator and guide in the responsible use of these AI tools, which should be considered as a pedagogical complement and not as a substitute for the teaching and learning process.

CHAPTER II

METHODOLOGICAL DESIGN

It is the study plan that details how data collection and analysis will be carried out, and its purpose is to guide the research so that the process is orderly and appropriate for completing the study (Pandey and Pandey, 2015). Therefore, the methodological design of this research focuses on establishing the approach, design, sample, context, instruments, and data collection techniques to analyze how AI tools influence on the development of writing skills in pre-intermediate level students.

Research approach and design

The research approach of this study is quantitative, which involves collecting measurable data, using structured tools, and performing statistical analyses to determine the results of a study. Creswell and Creswell (2018) state that “Quantitative research is an approach for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures” (p. 44). This approach enables to determine how the use of AI tools can influence the quality and consistency of writing among second-year high school students, as well as reinforce writing skills as a linguistic competency. Furthermore, it guides the collection of data variables, the analysis and interpretation of results, and the verification of the hypothesis based on the results obtained. Similarly, this approach allows us to analyze the feasibility of providing optimal information and results to innovate in the field of education and foreign language learning through the use of technology.

This research also applies a pre-experimental design, which helps identify specific elements such as cause and effect, i.e., one or more dependent groups are

examined to determine the effect of an independent variable that causes a change (Zubair, 2022). The pre-experimental design of this study is applied on the basis of a single group determined in the general objective, in this case, second-year high school students. The application of this design helps to collect data before and after the application of the instruments to identify the cause and effect of the variables and explore the feasibility and impact of AI tools in a real classroom context, through an activity guide as a learning strategy based on the development of writing activities to reinforce writing skills.

In addition, this research is descriptive in nature, as it focuses on collecting, organizing, and analyzing data numerically in order to interpret it clearly and accurately. Ghanad (2023) argues that “Descriptive research aims to accurately describe a population, situation, and phenomenon and the characteristics which are more concerned with “what, where, and when” rather than “why” something has happened” (3796). Consequently, it allows for the objective collection, synthesis, and presentation of data obtained before and after the intervention, which facilitates a systematic and quantifiable understanding of the progress of students’ writing skills.

Description of the sample and the context of the research

The sampling method used in this research is purposive, which is a non-probabilistic sampling technique in which researchers deliberately select participants based on specific characteristics and research objectives. Memon et al. (2025) claim that:

Purposive sampling is a cornerstone of business and management research, as it enables researchers to collect data that aligns closely with specific parameters, contexts and research objectives. This non-probability sampling method involves a deliberate process of selecting participants or cases based on predefined criteria or characteristics most relevant to the study’s focus. (p. 02)

The sample for this study consisted of 26 second-year high school students from a fiscomisional school located in Quito, Ecuador, which includes English as an essential part of its curriculum. These students were selected based on criteria of accessibility and representativeness, taking into account that they were in the process of learning English as a foreign language, in which they were developing communication skills, especially written expression. In addition, the homogeneity of the sample in terms of educational level and exposure to the language minimized variations that could distort the analysis of the impact of the intervention. The population established for the research is a total of 50 second-year high school students, so the selected sample consists of 15 males and 11 females between the ages of 15 and 16.

The educational institution where the research was conducted was a public school for approximately 10 years, where teachers and students did not have sufficient physical and digital resources to reinforce and improve students' writing skills. Currently, it is a fiscomisional school where students are trained in the values, principles, and institutional philosophy of the Ecuadorian National Police. In addition, since the 2024-2025 school year, it has been acquiring physical and technological resources in order to innovate the learning of English as a foreign language and strengthen students' writing skills in a creative way, through five hours of class per week.

Data collection process:

According to Creswell (2014), data collection follows a structured process in order to conduct ethical and valid research. First, when conducting this study, informed consent signatures were obtained from the students' legal representatives before beginning the research. Second, in the pre-test, 26 students completed a writing task from the Cambridge English A2 Key exam, which consists of writing a story based on three images, in order to assess the students' current writing level in relation to the first specific objective. Third, an activity guide with AI tools (QuillBot and ChatGPT) was implemented over a six-week period, during which one or two activities were carried out each week in 40-minute sessions, with the

aim of helping students strengthen their writing skills through innovative activities (emails, social media posts, reviews, descriptions, among others) that were worked on in groups and individually. These activities allowed students to improve the cohesion, coherence, grammar, and vocabulary of their texts, in line with the second specific objective.

The students used QuillBot to correct the grammar and spelling of the texts, while ChatGPT was used to add phrases, replace words, use new vocabulary, among other things, in order to create high-quality texts in the academic field. Fourth, in the post-test, 26 students completed a task of the same type and level as the pre-test (writing a story based on three images) after the intervention, in accordance with the third specific objective. Fifth, the results obtained in the pre-test and post-test were analyzed and compared using descriptive statistics. Therefore, this process ensured an adequate assessment of the impact of AI tools on the development of the writing skills of pre-intermediate level students.

a. Techniques and data collection instruments

The main technique used for data collection in this research was the use of tests, which provided objective and quantifiable measurements of students' writing skills. Hayati et al. (2020) state that:

The test is a method used by educators to measure and assess students' abilities systematically, fairly, objectively, and procedurally by giving tasks in the form of questions and statements that must be done by students so that they can produce values that symbolize student achievement. (p. 1198)

This technique allowed for the evaluation of students' language skills, especially written expression, which includes aspects such as grammatical accuracy, textual coherence, vocabulary, and appropriate language use. In addition, to collect data on the current status and improvement of students' writing skills, a pre-test and post-test were administered as instruments based on the pre-experimental design. Pan and Sana (2021) argue that “the pre-test consists of assessing students before they study the information to be learned, while the post-

test consists of assessing them after they have studied the information” (p. 239). Therefore, the pre-test and post-test allowed data to be collected before and after the treatment to determine the impact of using AI tools on the development of students' writing skills.

b. Validity and reliability

Validity in research refers to the level of quality with which an instrument or method measures what it is intended to measure. Sürücü and Maslakçı (2020) claim that “Validity refers to whether the measuring instrument measures the behavior or quality it is intended to measure and is a measure of how well the measuring instrument performs its function” (p. 2696). Thus, the instruments used in this research were standardized and taken from the Cambridge English A2 Key (KET) exams to ensure the effectiveness of measuring the writing skills of second-year high school students. The instruments used in this study were not validated, as they are instruments that have been previously validated and examined by Cambridge, a world-renowned institution.

On the other hand, the reliability of the instruments used in this research ensured that clear and specific data were obtained, so that they could be accurately measured and correctly interpreted. In this way, reliability allowed for the evaluation of the usefulness of the instruments in analyzing the writing skills of second-year high school students before and after the intervention (Segal and Coolidge, 2018). The reliability of the instruments used in this study was not evaluated, as the instruments had been previously verified by Cambridge prior to their global implementation.

Analysis of the results

The data obtained in this research through the application of the instruments were analyzed using descriptive statistics, which allowed the results to be organized, summarized, presented, and interpreted in a coherent and accurate manner using tables and figures. Dong (2023) argues that “Descriptive statistics is

the simplest form of statistics: it is a tool to help people organize and summarize the inevitable variability in collections of actual observations or scores” (p. 16).

Table N° 1. Pre-test Results

Student	Content	Organization	Language	Total Score	Percentage (%)
1	1	1	1	2	20
2	1	1	1	2	20
3	1	1	2	2.67	26.67
4	1	1	2	2.67	26.67
5	2	2	2	4	40
6	2	2	2	4	40
7	2	2	2	4	40
8	2	2	2	4	40
9	2	2	2	4	40
10	2	2	2	4	40
11	2	3	2	4.67	46.67
12	2	3	2	4.67	46.67
13	3	2	2	4.67	46.67
14	2	2	3	4.67	46.67
15	3	3	2	5.33	53.33
16	3	3	2	5.33	53.33
17	3	3	2	5.33	53.33
18	3	3	3	6	60
19	3	3	3	6	60

20	4	3	3	6.67	66.67
21	3	4	3	6.67	66.67
22	4	4	3	7.33	73.33
23	3	4	4	7.33	73.33
24	4	4	4	8	80
25	4	4	4	8	80
26	4	5	4	8.67	86.67

Elaborated by: Balladares Caisa Luis Maycol

Source: Taken from the Pre-test Results

The pre-test was developed by twenty-six students in order to assess their current level of written expression. The stories written by the students were graded according to the Cambridge rubric “Assessment of Writing Scale (A2 Key),” which includes criteria such as content, organization, and language, with a band score from 0 to 5. The total score was the sum of the three criteria, which was converted to a score out of 10 using the rule of three method.

Table 1 shows that 5 of the 26 students had a score above 7 that represented a percentage above 70%. However, 21 students had a score below 7 which represented a percentage below 70%. Student (26) obtained the highest score, 8.67 (86.67%), demonstrating that their text contained accurate and coherent information, but students (1 and 2) obtained a score of 2 (20%), indicating that they had difficulty writing clear and relevant stories.

Based on the individual scores for each criterion, it can be seen that students (20, 22, 24, 25, and 26) scored 4 for content, demonstrating that the content of their stories was relevant in keeping the reader well informed. However, students (1, 2, 3, and 4) scored 1, reflecting that their texts contained irrelevant and misinterpreted information.

In terms of organization, student (26) received a score of 5 and students (21, 22, 23, 24, and 25) received a score of 4, demonstrating that their stories had basic

linking words, which made the content coherent and easy to understand. However, students (1, 2, 3, and 4) received a score of 1, reflecting that their texts lacked connectors, which made the content difficult to understand.

Finally, in terms of language, students (23, 24, 25, and 26) received a score of 4, demonstrating that they used appropriate vocabulary and correctly controlled grammatical forms in their stories, which helped the reader determine the meaning of the writing. However, students (1 and 2) scored 1, indicating that their texts contained simple vocabulary consisting of isolated words and phrases and limited control of grammatical forms.

In this regard, it has been observed that most students had difficulty writing clear and coherent stories. Therefore, students needed interactive and innovative activities that would enable them to improve their writing skills so that they would be able to include relevant information, basic linking words, correct verb tenses, and appropriate vocabulary in their texts in order to fully inform the target reader.

Table N° 2. Pre-test Descriptive Statistics

Descriptive Statistics	Content	Organization	Language	Total Score	Percentage (%)
Mean	2.54	2.65	2.46	5.10	51.03
Median	2.5	3	2	4.67	46.67
Mode	2	2	2	4	40
SD	0.99	1.09	0.86	1.85	18.47

Elaborated by: Balladares Caisa Luis Maycol

Source: Taken from the Pre-test Results

Table 2 shows that the overall mean of the students' total scores in their essays was 5.10 that represented 51.03%. This indicates a low level of written expression among the students, as the total mean was below 7 (70%). The average mean scores for the criteria were as follows: content 2.54, organization 2.65, and language 2.46. These averages showed that organization was slightly higher than

content and language in the stories written by the students. In terms of the median, the total score was 4.67 with a percentage of 46.67%, while the content score was 2.5, the organization score was 3, and the language score was 2.

The mode of the overall score was 4 (40%), meaning that most students obtained this score in their texts. In addition, the mode in the criteria was: content 2, organization 2, and language 2, showing that the stories had irrelevant content and misinterpretations, used few connectors and simple vocabulary, and made frequent errors in grammatical forms, meaning that the target reader was not fully informed.

Finally, the standard deviation (SD) in the total score was 1.85 which represented 18.47%, which indicated that the variability of the total scores in the students' texts in relation to the total mean was dispersed (heterogeneous). The standard deviation (SD) in the criteria was as follows: content 0.99, organization 1.09, and language 0.86, which showed some homogeneity in the scores for each criterion in terms of their mean.

Table N° 3. Post-test Results

Student	Content	Organization	Language	Total Score	Percentage (%)
1	3	3	4	6.67	66.67
2	4	4	3	7.33	73.33
3	4	3	4	7.33	73.33
4	4	3	4	7.33	73.33
5	4	4	3	7.33	73.33
6	4	4	4	8	80
7	4	4	4	8	80
8	4	4	4	8	80

9	4	4	4	8	80
10	4	4	4	8	80
11	4	4	4	8	80
12	4	4	4	8	80
13	4	4	4	8	80
14	5	4	4	8.67	86.67
15	5	4	4	8.67	86.67
16	5	4	4	8.67	86.67
17	5	4	5	9.33	93.33
18	4	5	5	9.33	93.33
19	5	5	4	9.33	93.33
20	5	5	5	10	100
21	5	5	5	10	100
22	5	5	5	10	100
23	5	5	5	10	100
24	5	5	5	10	100
25	5	5	5	10	100
26	5	5	5	10	100

Elaborated by: Balladares Caisa Luis Maycol

Source: Taken from the Post-test Results

The post-test was completed by 26 students after the intervention with the activity guide in order to analyze improvements in their writing skills. The stories written by the students were graded according to the Cambridge Assessment of Writing Scale (A2 Key) rubric, which includes criteria such as content, organization, and language, with a band score from 0 to 5. The total score was the

sum of the three criteria, which was converted to a score out of 10 using the rule of three method.

Table 3 shows that 25 of the 26 students scored above 7 that represented a percentage above 70%. However, one student scored below 7 which represented a percentage below 70%. Students (20, 21, 22, 23, 24, 25, and 26) scored the highest score of 10 (100%), demonstrating that their texts contained relevant and coherent information. However, one student (1) scored 6.67 (66.67%), indicating that they had some difficulty writing a good story.

Based on the individual scores for each criterion, it can be observed that, in terms of content, students (14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, and 26) received a score of 5, demonstrating that the content of their stories was sufficiently accurate and meaningful to keep the reader well informed. However, student (1) received a score of 3, reflecting that their text contained little relevant information, leaving the reader uninformed.

In terms of organization, students (18, 19, 20, 21, 22, 23, 24, 25, and 26) received a score of 5, demonstrating that they used linking words correctly in their stories, which made the content easy to understand. However, students (1, 3, and 4) received a score of 3, reflecting that they used common connectors in their texts and, at times, did not use any connectors at all.

Finally, in terms of language, students (17, 18, 20, 21, 22, 23, 24, 25, and 26) scored 5, demonstrating that they used correct vocabulary and effectively controlled grammatical forms in their stories, which helped the reader understand the meaning of the texts. However, students (2 and 5) scored 3, indicating that their texts contained common vocabulary and some control of grammatical forms, but that, on some occasions, errors prevented comprehension of the writing.

Therefore, table 3 shows that most students improved significantly in writing accurate and coherent stories. The activity guide ‘AI Writing Geniuses: Pre-Intermediate Edition’ helped students develop texts with relevant information, basic

linking words, appropriate verb tenses, and relevant vocabulary so that the target reader could be fully informed.

Table N° 4. Post-test Descriptive Statistics

Descriptive Statistics	Content	Organization	Language	Total Score	Percentage (%)
Mean	4.42	4.23	4.27	8.62	86.15
Median	4	4	4	8.33	83.33
Mode	4	4	4	8	80
SD	0.58	0.65	0.60	1.07	10.65

Elaborated by: Balladares Caisa Luis Maycol

Source: Taken from the Post-test Results

Table 4 shows that the overall mean of the students' total scores in their stories was 8.62, representing 86.15%, which reflected a significant improvement in the students' writing level, as the total mean was above 7 (70%). The mean for the criteria was as follows: content 4.42, organization 4.23, and language 4.27. These means showed that the three criteria were proportionally met in the stories written by the students. As for the median, the total score was 8.33 with a percentage of 83.33%, while the content was 4, organization was 4, and language was 4.

The mode of the overall score was 8 (80%), which means that most students obtained this score in their stories. Similarly, the mode for the criteria was: content 4, organization 4, and language 4, demonstrating that the essays had substantial and coherent content, used connectors and vocabulary appropriately, and effectively controlled grammatical forms, which helped the reader to be properly informed.

Finally, the standard deviation (SD) in the total score was 1.07, which represented 10.65%. This indicated that the variability of the total scores in the students' texts in relation to the total mean was homogeneous, i.e., almost all students obtained scores close to 8.62. The standard deviation (SD) in the criteria

was as follows: content 0.58, organization 0.65, and language 0.60, which showed homogeneity in the scores for each criterion in terms of the mean for each one.

Comparison between Pre- and Post-test Total Scores

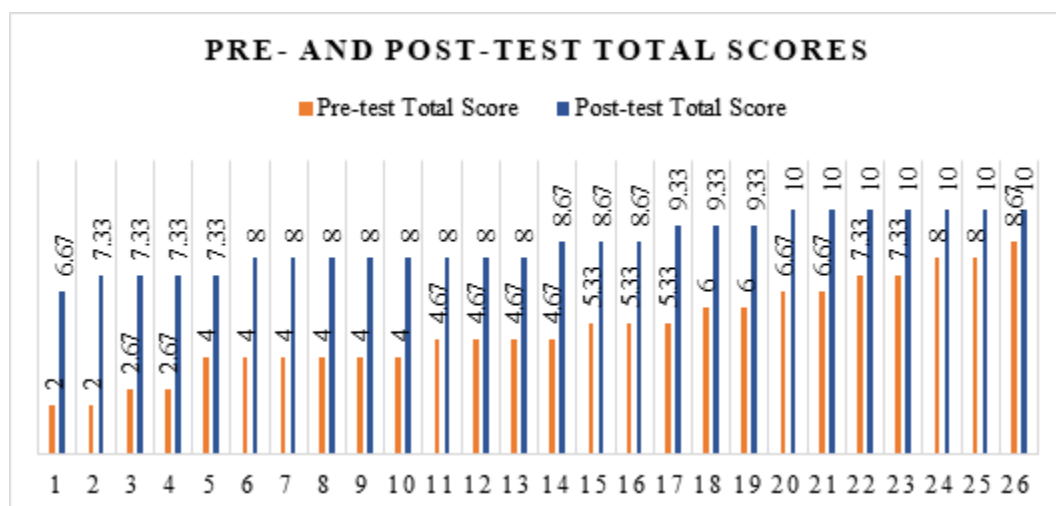


Figure N° 1. Comparison between Pre- and Post-test Total Scores

Elaborated by: Balladares Caisa Luis Maycol

Source: Taken from the Pre- and Post-test Total Scores

Figure 1 shows the comparison between the total scores obtained by 26 students in the pre-test (orange bar) and in the post-test (blue bar), bearing in mind that the maximum score for each stage was 10. There was a significant difference between the pre-test and post-test scores, which were obtained after the intervention of the activity guide “AI Writing Geniuses: Pre-Intermediate Edition”.

The pre-test scores ranged from 2 to 8.67, demonstrating that the students' writing skills were weak, while the post-test scores reflected considerable progress, with scores ranging from 6.67 to 10, which represented a significant improvement in writing skills in terms of the appropriate use of information, linking words, vocabulary, and grammatical forms in the texts. The most important improvement was that students (2 to 21) who scored below 7 on the pre-test scored above 7 on the post-test. However, one student (1) scored 6.67 on the post-test, which, in reference to Table 3, showed slight difficulties with the content and organization criteria.

In conclusion, these results show that the activity guide "AI Writing Geniuses: Pre-Intermediate Edition," which contained innovative and creative writing activities using artificial intelligence tools (QuillBot and ChatGPT), had a positive impact on the development and strengthening of the writing skills of second-year high school students, which in turn helped them improve their learning process of English as a foreign language. Thus, the hypothesis was corroborated and the research question of this study was answered.

CHAPTER III

THE PRODUCT

Innovative proposal to the problem

The chapter presents this research's innovative proposal to improve the writing skills of second-year high school students who have a pre-intermediate level of English and are enrolled in a fiscomisional school, through an activity guide called “AI Writing Geniuses: Pre-Intermediate Edition”. It integrates artificial intelligence tools (ChatGPT and QuillBot) with a pedagogical design that encourages reflective and autonomous learning. It features ten innovative activities designed on the Genially platform, which enable students to gain confidence, correct grammatical errors, acquire writing strategies, and improve the coherence and cohesion of their writing.

Proposal name

“AI Writing Geniuses: Pre-Intermediate Edition” is an activity guide that offers innovative and interactive activities to improve writing skills.

Type of product

The activity guide is an educational resource that promotes learning in an organized manner through activities that help students understand specific topics, acquire knowledge efficiently, and guide them in their learning process with methodologies adapted to their needs (Abu Al-Maali and Siddiek, 2022). Therefore, this type of educational resource is useful in English classrooms for students to develop writing skills with the guidance of the teacher and the support of technological tools, as activity guides promote more autonomous and effective learning in students, which is key to strengthening language skills.

Activity guides are composed of several elements that allow tasks to be completed efficiently and sequentially. They establish objectives, provide instructions, offer examples, provide support resources, and incorporate spaces for evaluation and feedback for each activity (Baker et al., 2014). All these elements of an activity guide allow students to participate in a reflective and conscious learning process, ensuring that they meet the learning objectives.

Objective of the proposal

To improve the writing skills of pre-intermediate students through innovative activities that motivate them to write in English with confidence and creativity.

Structure of the product

The activity guide ‘AI Writing Geniuses: Pre-Intermediate Edition’ was designed in Genially, an educational platform that offers visual, dynamic, and interactive resources to create innovative learning experiences. It features ten sequential and creative activities that help students improve their use of grammar and write coherent and cohesive texts. Each of the activities in the guide includes the following: topic, objective, instructions for teachers and students, didactic materials (tips and examples), reflection, peer and teacher assessment. The 10 activities were carried out over six weeks, either individually, in groups, in class or at home, with the support of the teacher, who guided students in the development of the activities to ensure that the learning objectives were achieved. Therefore, the guide is an educational resource that combines pedagogy and technology to strengthen students' writing skills.

The activity guide in Genially has the following structure to facilitate its use and achieve meaningful learning:

- Cover page
- Index
- Introduction

- General instructions
- 10 Activities (topic, objective, instructions for teachers and students, didactic materials, reflection, peer and teacher assessment).
- References

Activity Structure:

- Topic
- Objective
- Instructions for teachers
- Instructions for students
- Didactic materials
- Reflection
- Peer Assessment
- Teacher Assessment

The link to the activity guide ‘AI Writing Geniuses: Pre-Intermediate Edition’ is the following:
<https://view.genially.com/68bf0b9ca9440d2ed9e649bf/interactive-content-ai-writing-geniuses-pre-intermediate-edition>

Evaluation of the proposal

The activity guide and its effectiveness were evaluated through a post-test after completing the ten activities and achieving the learning objectives over the six weeks, during which students learned from their own mistakes while writing various types of texts in English. As a result, this process allowed us to evaluate the impact of creative activities and the use of artificial intelligence tools on the development of writing skills.

Validation of the proposal

The validation of this research proposal was carried out using method 3 of the Manual de Estilo Posgrado UTI (2020) “Validation through the practical application of the proposal” and option 1 “Verification of results demonstrating a

transformation with respect to the initial diagnosis through the implementation of the proposal, in whole or in part, to the entire study sample”, since the application of the proposal was based on the educational reality of the students and the results provided valid criteria on the improvement of writing skills compared to the baseline analysis.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The results obtained in this research made it possible to evaluate the impact of artificial intelligence tools (QuillBot and ChatGPT) on the development and strengthening of the writing skills of second-year high school students who had a pre-intermediate level (A2). First, the pre-test results revealed the students' current level of writing skills and highlighted their difficulties in writing accurate and coherent stories. The overall mean score was 5.10 (51.03%) and the mode was 4 (40%), demonstrating that most students had a low level of writing, as their texts contained irrelevant information, few linking words, simple vocabulary, and frequent errors in verb tenses.

Second, the implementation of the "AI Writing Geniuses: Pre-Intermediate Edition" activity guide for six weeks helped students improve their writing skills by developing 10 creative and innovative activities using artificial intelligence tools (QuillBot and ChatGPT), which allowed them to correct the grammar and spelling of their texts, add phrases, replace words, use new vocabulary, among other things, to create high-quality academic texts.

Finally, post-test results showed that, following the intervention with the activity guide, students significantly strengthened their writing skills to create coherent and clear texts with relevant information, basic linking words, correct grammatical forms, and appropriate vocabulary, so that the reader was fully informed. The overall mean score was 8.62 (86.15%) and the mode was 8 (80%), indicating that the stories written by the students were accurate and effective.

As a result, the hypothesis was confirmed, as artificial intelligence tools significantly improved the writing skills of second-year high school students, while innovating the process of teaching and learning English as a foreign language.

Furthermore, the results obtained in this research would allow educational units with the same problem to create study environments in which students could improve their language skills, especially writing, through the application of artificial intelligence tools, which would also help teachers to personalize activities according to the level and needs of students, provide immediate feedback, motivate students to participate actively, encourage self-learning, and analyze academic performance and the achievement of the objectives set for each class.

This research faced the following limitations: a) *the number of students*, since the sample selected corresponded to second-year high school students; however, not all students with an A2 level were considered, which would have allowed for more accurate results in relation to the problem; and b) *low commitment*, since some students did not submit the intervention activities within the established deadline, which delayed the progress of the activity guide.

Recommendations

First, it is recommended that pre-intermediate (A2) students use artificial intelligence tools ethically to avoid plagiarism and encourage originality. At the same time, they should participate in activities that use AI tools to strengthen their writing skills and create relevant texts.

Second, English teachers should create writing activities and exercises that integrate QuillBot and ChatGPT and are tailored to students' needs, in order to enable them to develop a variety of high-quality academic texts and help them achieve meaningful learning.

Third, it is recommended that educational institutions in Ecuador use artificial intelligence tools to innovate the English teaching and learning process and strengthen language skills, especially writing, considering the results obtained in this research. This would avoid the use of traditional strategies and methodologies in EFL classrooms.

Finally, future researchers are encouraged to investigate the integration of multimodal activities in EFL classrooms with the support of artificial intelligence tools to improve writing skills.

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ANNEXES

Annex 1. Pre-test.

WRITING TASK

Student's name:.....

Date:.....

Mark:..... / 10

INSTRUCTIONS:

- Read the instructions carefully.
- Look at the pictures and identify the three main events of the story.
- Think about what kind of information is needed.
- Make reference to the three pictures.
- Write a draft of the story on a piece of paper before writing your final answer on the answer sheet.

Look at the three pictures.
Write the story shown in the pictures.
Write **35 words** or more.



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Annex 2. Post-test.

WRITING TASK

Student's name:.....

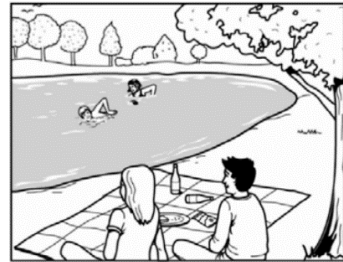
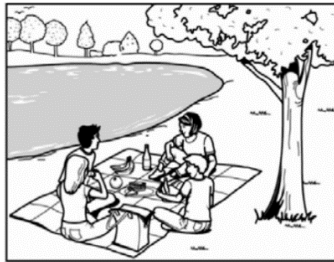
Date:.....

Mark:..... / 10

INSTRUCTIONS:

- Read the instructions carefully.
- Look at the pictures and identify the three main events of the story.
- Think about what kind of information is needed.
- Make reference to the three pictures.
- Write a draft of the story on a piece of paper before writing your final answer on the answer sheet.

Look at the three pictures.
Write the story shown in the pictures.
Write **35 words** or more.



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Annex 3. Assessment of Writing Scale (A2 Key).

Band	Content	Organisation	Language
5	All content is relevant to the task. Target reader is fully informed.	Text is connected and coherent, using basic linking words and a limited number of cohesive devices.	Uses everyday vocabulary generally appropriately, while occasionally overusing certain lexis. Uses simple grammatical forms with a good degree of control. While errors are noticeable, meaning can still be determined.
4	<i>Performance shares features of Bands 3 and 5.</i>		
3	Minor irrelevances and/or omissions may be present. Target reader is on the whole informed.	Text is connected using basic, high-frequency linking words.	Uses basic vocabulary reasonably appropriately. Uses simple grammatical forms with some degree of control. Errors may impede meaning at times.
2	<i>Performance shares features of Bands 1 and 3.</i>		
1	Irrelevances and misinterpretation of task may be present. Target reader is minimally informed.	Production unlikely to be connected, though punctuation and simple connectors (i.e. 'and') may on occasion be used.	Produces basic vocabulary of isolated words and phrases. Produces few simple grammatical forms with only limited control.
0	Content is totally irrelevant. Target reader is not informed.	<i>Performance below Band 1.</i>	

Annex 4. Example of a pre-test taken by a student.

WRITING TASK

Student's name:.....

Date:.....

Mark: 7,33 / 10

INSTRUCTIONS:

- Read the instructions carefully.
- Look at the pictures and identify the three main events of the story.
- Think about what kind of information is needed.
- Make reference to the three pictures.
- Write a draft of the story on a piece of paper before writing your final answer on the answer sheet.

Look at the three pictures.
Write the story shown in the pictures.
Write 35 words or more.



He is / is, he stand up at 7:00 am oclock, get dressed,
go to the restaurant, ask the food, later he go
to the park and gym, later to the work, later
go to the house 7:00 pm oclock, at dinner.....

Content: 3

Language: 4

Organization: 4

Total: (11x10)/15: 7,33

Annex 5. Example of a post-test taken by a student.

WRITING TASK

Student's name:.....

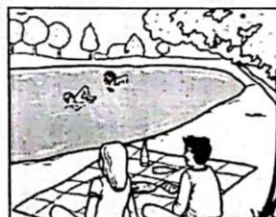
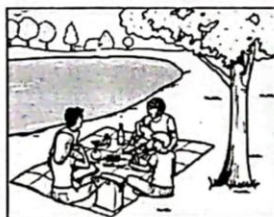
Date:.....

Mark: ...12... / 10

INSTRUCTIONS:

- Read the instructions carefully.
- Look at the pictures and identify the three main events of the story.
- Think about what kind of information is needed.
- Make reference to the three pictures.
- Write a draft of the story on a piece of paper before writing your final answer on the answer sheet.

Look at the three pictures.
Write the story shown in the pictures.
Write 35 words or more.



..last.. Sunday.. my.. Family.. and.. I.. had.. lunch.. together
..at.. home.. The.. Food.. was.. delicious.. and..
..we.. talked.. a.. lot.. Later.. we.. went.. to.. the
..park.. to.. enjoy.. the.. afternoon.. We.. sat.. on.. the
..grass.. ate.. some.. snacks.. and.. watched.. the..
..birds.. My.. sister.. and.. I.. played.. with.. a.. ball..
..We.. laughed.. and.. had.. a.. wonderful.. day..
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Content: 5

Organization: 5

Language: 5

Total: (5 x 10) / 5 : 10

Annex 6. Sample lesson plan for an activity from the activity guide.

LESSON PLAN					
ACTIVITY GUIDE 'AI WRITING GENIUSES: PRE-INTERMEDIATE EDITION'					
Area:	English as a Foreign Language		Subject:	English	
Teacher:	Lic. Luis Maycol Balladares Caisa				
Course:	2 BGU "A"	Date:	28/10/2025	Time:	40 minutes
Topic:	Posting on social media				
Objective:	By the end of the activity, students will be able to write and comment on social media posts.				

Stage	Time	Objective	Teacher Activities	Student Activities	Resources
1. Warm-up	5 min.	Activate prior knowledge about social media and build interest.	- Briefly introduce social media writing and expressions (OMG, TBH, emojis, xxx, etc.). - Ask: "What social media apps do you use?"	- Answer simple questions about your favorite social media apps. - Share short examples of posts they have seen.	Board, markers.
2. Pre-writing	5 min.	Prepare students for the writing task by clarifying instructions.	- Explain the task: writing a 60-word paragraph about your favorite soccer player. - Show the example paragraph. - Review required elements: OMG, TBH, xxx, emojis, extra exclamation marks, one extra expression, etc. - Provide tips for choosing a player.	- Choose a soccer player. - Ask questions if they need clarification.	Example paragraph, tips on board.
3. While-writing	8 min.	Students write a paragraph using social media features.	- Assist students as they write their 60-word paragraph. - Encourage them to include OMG, TBH, emojis, xxx, and clear, short sentences. - Monitor and support.	Write your first draft in your notebooks following all instructions.	Notebooks, pens.

4. Post-writing	8 min.	Improve writing using QuillBot and ChatGPT.	- Explain how to use QuillBot. - Explain the ChatGPT prompt and model how to add a new social media expression without changing meaning.	- Open QuillBot and check grammar. - Copy corrected text into ChatGPT. - Use the given prompt to add one extra social media expression. - Rewrite the improved paragraph in your notebooks.	Computers/tablets/phones, Wi-Fi.
5. Sharing & Interaction	7 min.	Practice communication by posting and commenting online.	- Encourage students to share their paragraphs on their favorite social media platform. - Remind them to comment respectfully on classmates' posts.	- Publish your paragraph online. - Comment on at least one classmate's post.	Devices with internet access.
6. Reflection	3 min.	Reflect on the learning experience.	Ask reflection questions.	Answer the reflection questions and share your answers in class.	Devices with internet access/markers/board.
7. Peer & Teacher Assessment	4 min.	Evaluate writing quality and use of expressions.	- Use teacher assessment checklist. - Facilitate peer assessment.	Peer-assess classmates using criteria.	Assessment checklist.