

Ciencia Latina Revista Científica Multidisciplinar, Ciudad de México, México.
ISSN 2707-2207 / ISSN 2707-2215 (en línea), marzo-abril 2025,
Volumen 9, Número 2.

https://doi.org/10.37811/cl_rcm.v9i2

USING DIGITAL COMIC-BASED STORYTELLING TO ENHANCE CREATIVE WRITING IN EFL CLASSROOMS

**USO DE LA NARRACIÓN DIGITAL BASADA EN CÓMICS
PARA MEJORAR LA ESCRITURA CREATIVA EN LAS AULAS
DE INGLÉS**

Tatiana Kaptevskaia
Universidad El Bosque

Felipe Jaramillo
Universidad El Bosque

Maria José Fajardo Zorro
Universidad El Bosque

Using digital comic-based storytelling to enhance creative writing in efl classrooms

Tatiana Kaptevskaia

tkaptevskaia@unbosque.edu.co¹

<https://orcid.org/0009-0000-1800-3646>

Universidad El Bosque

Felipe Jaramillo

fjaramillo@unbosque.edu.co

<https://orcid.org/0009-0009-4153-4221>

Universidad El Bosque

Maria José Fajardo Zorro

mjfajardo@unbosque.edu.co

<https://orcid.org/0009-0003-7632-4749>

Universidad El Bosque

ABSTRACT

The purpose of this action research is to explore how digital comic-based storytelling can enhance the creative writing skills of fifth-grade students in a rural Colombian school. A qualitative approach was used, relying on non-observational methods with such instruments as writing samples, artifacts, and interview questions. The educational material was designed using Google's website to create digital comics, supported by artificial intelligence writing assistant tools and scaffolds to meet the needs of students and to develop digital literacy skills in the English classroom. Findings showed improvement in several aspects of students' creative writing. Students demonstrated enhanced creativity, coherence, and clarity in their writing, fewer spelling errors, and expanded vocabulary. However, grammatical accuracy, especially tense inconsistency, did not improve. Encouraging free expression increased student engagement, interest, and motivation. This generally promoted a positive attitude and motivation towards writing texts. With more time and focus on specific language areas, this material could also lead to stronger grammar skills and even greater creative growth.

Keywords: digital comic, storytelling, artificial intelligence writing assistant tools, creative writing, english as a foreign language (EFL)

¹ Autor principal

Correspondencia: tkaptevskaia@unbosque.edu.co¹

Uso de la narración digital basada en cómics para mejorar la escritura creativa en las aulas de inglés

RESUMEN

El propósito de esta investigación-acción es explorar cómo la narración digital basada en cómics puede mejorar las habilidades de escritura creativa de estudiantes de quinto grado en una escuela rural colombiana. Para realizar este estudio, aplicamos un enfoque de investigación cualitativa utilizando métodos no observacionales, como artefactos, muestras de escritura de estudiantes y entrevistas. El material educativo fue diseñado utilizando el sitio web de Google para crear cómics digitales, respaldado por herramientas de asistente de escritura de inteligencia artificial y andamiajes para satisfacer las necesidades de los estudiantes y desarrollar habilidades de alfabetización digital en el aula de inglés. Los hallazgos mostraron mejoras en varios aspectos de la escritura creativa de los estudiantes. Los estudiantes demostraron una mayor creatividad, coherencia y claridad en su escritura, menos errores ortográficos y vocabulario ampliado. Sin embargo, la precisión gramatical, especialmente inconsistencia en los tiempos, no mejoró. Fomentar la libre expresión aumentó la participación, el interés y la motivación de los estudiantes. Esto generalmente promovió una actitud positiva y motivación hacia la redacción de textos. Con más tiempo y enfoque en áreas específicas del idioma, este material también podría conducir a habilidades gramaticales más sólidas e incluso a un mayor crecimiento creativo.

Palabras clave: cómic digital, narración de cuentos, herramientas de asistente de escritura de inteligencia artificial, escritura creativa, inglés como lengua extranjera

*Artículo recibido 15 marzo 2025
Aceptado para publicación: 18 abril 2025*



INTRODUCTION

Colombia aims to become a bilingual country, considering the importance of English as the global lingua franca, the most widely spoken language in the world. The bilingual program in the country is largely based on the Common European Framework of Reference for Languages (CEFR), which divides language proficiency into listening, reading, speaking, and writing as key competencies. Writing is considered one of the most challenging skills for students to master, yet it is also an important communication skill. Writing requires more than just the ability to form sentences or a knowledge of grammar and vocabulary; it extends far beyond these essential competencies. As Hyland (2019) pointed out that "students obviously need an understanding of appropriate grammar and vocabulary when learning to write in English; writing is obviously not only these things" (p.6). Moreover, Hyland (2019) highlighted the complex nature of writing, pointing that such concepts as "language structures, text functions, themes or topics, creative expression, composing processes, content, and genre and contexts of writing" are essential to consider writing instruction (p.2). According to Richards and Renandya (2002), "the difficulty lies not only in generating and organizing ideas but also in translating these ideas into readable text" (p.303). Additionally, Nunan (1991) stated that "learning to write coherently, and in the way which is appropriate for ones purpose and audience, is something which many people never manage in their first language" (p.99). Unfortunately, writing cannot be quickly acquired, as the ability to write effectively requires consistent practice. According to Pawliczak (2015), the best way to develop writing skills is through creative writing. This is because creative writing is a "playful engagement with language, stretching and testing its rules to the limit in a guilt-free atmosphere, where risk is encouraged" (Maley, 2009, para. 3). Despite the complexity of writing, it is a necessary skill because, like all aspects of language, it is communicative. It plays an essential role in communication in our global community "as advances in transportation and technology allow people from nations and cultures throughout the world to interact with each other" (Weigle, 2002, p.1). Thus, English learning materials must be constantly improved to meet new challenges and opportunities in today's increasingly digital and rapidly changing world. In order to innovate in the educational sector in line with the demands of modern life and, at the same time, help students effectively develop their creative writing skills, it is proposed to implement well-designed educational



material such as Google's website for creating digital comics, supported by artificial intelligence writing assistant tools and scaffolds. According to Bitz (2008), the process of creating comics is “a means to the end of creative thinking, personal expression, literacy development, and community building” (p.4). Mulyana (n.d.) pointed out that “the implementation of AI-powered tools as writing assistant has proven to be able to improve EFL students’ writing skills, motivation, and perception” (p.10). Traditional materials, once considered effective, may no longer match the evolving skills, knowledge, and competencies required by modern learners. As educational needs grow more complex, especially in digital and multilingual contexts, conventional textbooks often fall short of meeting those demands. According to Lang (2015), “a textbook is made of material that has been altered and simplified for the learner” (p.3), which can limit the depth and authenticity of learning experiences. Furthermore, Núñez and Téllez (as cited in Ramos & Aguirre, 2014) argued that “textbooks, which are not created for a specific context, may produce a negative effect on students' motivation due to the fact that they usually provide content which tends to generalize students' needs” (p.134). This lack of contextual relevance can result in disengagement and reduced interest in learning.

In addition, the content of these materials may not be sufficient to develop essential language skills. For instance, Gómez-Rodríguez (2010) found that only 5.91% of the activities in EFL textbooks in Colombia focused on writing, indicating a serious gap in opportunities to develop this fundamental skill. This limited focus on writing underscores the need for more innovative material that better addresses the specific circumstances and interests of students.

To address these issues, this study was conducted at a rural school in La Calera where intensive English was taught for 8 hours a week. The educational institution operates according to a structured program with a textbook used as the primary educational material. In the textbook, written exercises are limited to constructing sentences, grammar practice, filling in blanks, or rewriting sentences. This prevents them from writing spontaneously and expressing their thoughts freely and creatively. In addition, it leads to a lack of self-confidence. Besides, it was difficult to attract the attention of students. Although the school had a class equipped with technology, students couldn't use it in English lessons. It caused a less engaging and helpful educational process.



Statement of the Problem

The research problem was identified a questionnaire and a pre-test writing and also observed the lessons by carrying out field notes with fifth-grade EFL students. They demonstrated challenges in writing: spelling mistakes, awkward word choices, incoherent, incomplete sentences, and incorrect use of grammar. These problems can make it difficult for them to master writing skills. It can also affect speaking, which is important for communication. Many students were afraid to practice English because they were not sure of grammar or words. It was difficult to make students interested. There was no motivation to study.

Research Questions

- How do digital comic-based storytelling and the use of artificial intelligence writing assistant tools enhance creative writing among EFL learners?
- What are the students' perceptions of using digital comic-based storytelling and the use of artificial intelligence writing assistant tools in EFL classrooms?

Research Objectives

- To analyze the impact of the use of digital comic-based storytelling and artificial intelligence writing assistant tools on EFL students' creative writing.
- To explore the students' perceptions of using digital comic-based storytelling and artificial intelligence writing assistant tools to promote creative writing in EFL classrooms.

Rationale

Our action research project aimed to help fifth-grade learners gain creative writing skills in EFL classrooms by implementing educational material like Google's website for creating digital comics, supported by artificial intelligence writing assistant tools and scaffolds. The students' writing problems were sought to be helped with. These included making correct, complete, and logical sentences, reducing spelling errors, using appropriate vocabulary, and boosting self-confidence and interest. It was focused not just on grammar and vocabulary but also on content, which helped with deeper language learning. The creation of comics and the introduction of technology into this material might reduce their problems. As Çiçolar and Bulut (2025) concluded that digital comics enhance writing skills while promoting creativity and diversity in education". Moreover, Using technology encouraged students to participate



more actively in writing activities (Williams and Beam, 2019). This research article may encourage teachers to design their teaching materials in a way that meets the needs of students and helps develop digital literacy.

Theoretical framework

The theoretical framework considers how innovative material affects students' creative writing. This need arose because the Colombian education system lacks modern English resources to help students improve their creative writing. This study integrates educational material, such as Google's website for creating digital comics, supported by artificial intelligence writing assistant tools and scaffolds, into the English learning process. Accordingly, concepts including creative writing, digital comics, and AI tools were explained to assess their impact on the English learning process, mainly creative writing skills. The criteria considered in our research as theoretical postulates are described below:

Creative Writing

Creative writing is defined in various ways in literature, but it has its own unique elements. For example, Dawson (2004) stated that “creative writing does not need to refer specifically to ‘literary’ works, but can refer to any writing which is ‘creative’, i.e. original, unconventional, expressive, etc.” (p. 21). Babaee (2015) reported that Maley said that it is “any kind of writing which has an aesthetic or affective rather than a purely pragmatic intention or purpose” (p.77). Regarding creative writing in schools, Dawson (2004) described it as “the free expression of a child’s personality, the verbal enunciation of their individual creativity” (p.21). In terms of creativity, Rosenberg (2015) explained that it involves “using one’s imagination, changing existing ideas, being unique, original and innovative, having a vision, or simply having the freedom to come up with new and unusual ways to carry out tasks” (p. 129). Based on this, creativity is a primary element of creative writing, but it is not limited only to writing. According to Wang (2019), creative writing has the following elements: “creativity, unique symbolisation, personal expression and originality” (p.114). Moreover, Babaee (2015) noted that Maley emphasized that all writing “is intended for a reader” and it should be written “in an accessible and interesting way” (p.77). Thus, when students take part in creative writing, they turn their thoughts and emotions into creative, understandable, and engaging written forms. Read (2015) noted that the inclusion of creative thinking in English lessons helps children develop cognitive skills such as



observation, questioning, imagination, and hypothesizing that benefit all subjects. While students practice creative writing, they can also improve their language skills. In particular, Babaee (2015) argued that, according to Maley, creative writing helps students expand their vocabulary, improve their word choice, understand sentence structure, and even develop a natural sense of language rhythm and pronunciation. Thus, as students develop creative and cognitive thinking and express themselves, they deepen their connection to language.

There are some reasons why creative writing can be so beneficial to academic performance. Babaee (2015) highlighted Maley's view that creative writing permits students to "play" with the language they are learning, without fear of criticism, making mistakes that help them learn. Moreover, Maley emphasized that creative writing can be so exciting, students become immersed in the experience and learn more (as cited in Babaee, 2015). Given these advantages, Kumar (2020) noted that "students are curious about writing by their own abilities, knowledge, and imagination instead of believing the instruction of the trainers and teacher" (p. 94). According to Colombia's Basic Standards of Competence in Foreign Languages, fifth-grade students are required to create short stories based on a sequence of illustrations (Ministerio de Educación Nacional, 2006). Following these standards, students wrote short stories using three provided images. These served as both pre-test writing (diagnostic test writing) and post-test writing to assess their progress.

Comic as a Tool of Storytelling

Comic book creation is an educational tool. It helps develop storytelling ability. Comics especially allow students to organize ideas, express themselves, and develop creativity.

This educational value stems from the very nature of comics as a storytelling medium. A comic, whose fundamental element is the "comic strip", is a narrative told through a sequence of pictures, often accompanied by text (Sabin, 2013). Comics use bordered panels to structure the story, breaking the action into clear segments, with narration in framed text and dialogue in speech balloons (Sabin, 2013). Thus, comics combine both text and images. A sequence of images and accompanying text, following one another, tells the story. As Klaehn (2021) noted "the requirements for a great comic book are the same as any other storytelling medium: compelling stories featuring compelling characters" (p. 2), highlighting that narrative depth and character development are just as important in comics as in



traditional writing. Consequently, during comic creation, “learners interact with the pictorial narrative and construct meaning from it, they will retell the visual story in their own written words; they will have an active part in the storytelling process and experience” (David-West, 2012, p. 153). Thanks to the arrangement of images in comics, students can develop a well-thought-out sequence of presenting their ideas, practicing storytelling skills in a structured format. In this way, students can create coherent stories with a clear beginning, middle, and ending, which are important components of effective storytelling. Moreover, comics can support not only planning and organization in writing but also creativity. As Bowkett and Hitchman (2012) stated “the structure of comic pages and panels can be exploited as a visual analogue to written narrative in helping children to generate, organise and refine their ideas” (p. 2). In turn, students often draw inspiration from their own experiences, thoughts, and personal interests, from what is really important to them, and express this in their stories. The comic-making process prompts students “to think visually and then communicate those visuals in such a way that it will spark their imagination and enhance their creativity” (Sciamarelli, 2015, p. 110). It is based on the visual thinking strategies (VTS). Listyani (2019) pointed out that according to Arnheim (1964), “VTS is a teaching strategy which is used to encourage critical and creative thinking by using visual images” (p.195). Thus, VTS is an approach to learning that uses visual imagery to develop both critical and creative thinking. Regarding this, every perceived picture and visual image is considered a statement of thought. Thus, comic images facilitate students with their expression of the creation story and creativity, especially for students with visual learning styles. Furthermore, Rayo (2015) claimed that there are many benefits of using picture stories in the area of language learning such as: “they can be useful for written tasks as well tend to quickly engage students” (p.63).

As O’Rourke (2005) noted that it is important to encourage students to be creative, using the technologies available to them to increase their involvement in learning activities. Using digital comic is an opportunity for students to bring writing, technology, creativity, innovation, and student self-expression into the classroom.

Several studies have shown that comic creation contributes to the development of students’ writing skills and enhances their creativity in EFL classrooms. Wahyudin (2019) found that using comic strips improved students' writing ability regarding organization. Likewise, comics, such as Pixton, helped



students improve their EFL writing skills by improving their ability to organize ideas, especially in terms of coherence (Cabrera-Solano et al., 2021). Widiarti and Jamilah (2024) noted that comics supported writing development by providing a clear and sequential visual representation. Additionally, Widioko (2021) highlighted that digital comics make it easier for students to develop ideas by providing visual support. Similarly, images and comic strips encourage students to form ideas, generate their creativity more deeply, and cultivate their imagination in writing (Listyani, 2019). Moreover, the students' work on creating comics has demonstrated that they are not only passionate about technology, but also deeply immersed in using a multimodal format that values their authentic voice and arouses their interest (Manning-Lewis, 2019).

To conclude, comics are a powerful tool for developing storytelling and writing skills. When comics are used in the classroom, especially in digital form, it helps students improve digital literacy, creativity, and storytelling while encouraging personal expression and interest in writing.

Technology

The need to integrate new digital technologies into everyday life directly results from the modern development of society and technology. In this context, digital literacy has become vital for people to function effectively in both personal and professional environments. According to Martin (2006), digital literacy is “the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyse and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process” (p. 155). Digital literacy is not only critical for success in the workplace and daily life but also plays a significant role in modern education.

Among the most transformative developments in educational technology are artificial intelligence tools. Tools based on artificial intelligence make learning more effective and engaging. For example, tools such as artificial intelligence for generating images help students imagine the world they are writing about. It allowed them to express abstract or complex ideas more clearly. In addition, AI-assisted writing tools like Grammarly, chatbot assistants, and online translators provide immediate feedback, help learners correct grammatical mistakes, and support vocabulary development. These tools give students



personalized support that a traditional classroom may not always offer. Several studies were conducted to support their effectiveness. In the study by Setiawan and Alkhowarizmi (2025), a descriptive qualitative method was applied, and students reported improved grammar and increased motivation. Similarly, Almashy et al. (2024) demonstrated that digital tools could target specific grammar issues, noting that using Grammarly significantly reduced spelling errors in students' post-tests compared to pre-tests. Moreover, machine translation tools like Google Translate have shown educational benefits beyond simple translation. According to Laiche and Nemouchi (2021), students who used Google Translate wrote longer and more organized sentences, used more diverse vocabulary, and made fewer spelling errors. In this regard, integrating technologies, in particular artificial intelligence tools, into education gives new ways of expressing complex ideas, provides quick grammatical feedback, and helps students understand new words, facilitating the development of writing.

However, despite these benefits, there is limited research on whether students' grammar or vocabulary improves over the long term. Although artificial intelligence tools increase accuracy and facilitate the immediate completion of tasks, their role in long-term language acquisition remains uncertain. Students may rely on external correction rather than learning grammar rules. Vocabulary acquired through tools such as Google Translate may not always be preserved or accurately applied in future contexts. With regard to effectively applying grammar rules in writing, consistent practice is important. This is supported by Merrill Swain's (1985) Comprehensible Output Hypothesis, which underscores the importance of active language production for learning. As Lightbown et al. (2006) emphasized that "the act of producing language that others can understand serves as a powerful motivator, pushing students to improve and develop their language skills" (p. 115). As for vocabulary retention, it is influenced by multiple factors, one of which is cognitive engagement. According to the Involvement Load Hypothesis, the more involved the learners are in the task, the better they will remember and be able to use the words they encountered (Hulstijn and Laufer, 2001). This suggests that passive or surface-level interaction with vocabulary, such as simply reading translations, may not be enough for long-term learning unless it is accompanied by meaningful, deeper engagement. Tools for writing texts using artificial intelligence can facilitate this process, but they should be used as part of a broader learning approach. To promote long-term grammatical and lexical development, students need not only feedback from artificial



intelligence but also clear instructions, opportunities for active use, and reflection under the guidance of a teacher.

So, artificial intelligence-based writing tools support students in improving grammar, spelling, and vocabulary by providing immediate, personalized feedback in real-time. While these tools boost motivation and enhance writing accuracy, their effect on long-term language retention remains uncertain. As highlighted by the Involvement Load Hypothesis (Laufer and Hulstijn, 2001) and the Comprehensible Output Hypothesis (Swain, 1985), meaningful engagement and active language production are essential for lasting learning. Thus, artificial intelligence tools should be integrated with teacher support and deep learning strategies. The introduction of digital literacy and artificial intelligence tools that provide real-time feedback is not just a reaction to technological progress but also a strategic step aimed at developing creativity, communication, and academic achievement in modern classrooms.

METHODOLOGY

The present study applied qualitative research approach. This approach was chosen since there was utilized non-observational methods such as artifacts, student writing samples, and conducting student interviews. Nassaji (2020) defined qualitative research as a naturalistic, interpretive approach that explores non-numerical data, focusing on context, patterns, and processes rather than outcomes. Within this approach, action research was used. According to Burns (2022), it combines both action and research by implementing planned interventions to address issues or questions in a social context, aiming to improve or change educational outcomes. Additionally, Burns (2022) pointed out that “action research is characterized by a spiral of cycles” and “the action research process is less predictable than in more “traditional” quantitative or qualitative approaches, as the direction and purpose of the investigation may change dramatically as it is carried out” (p.4).

The process was guided by the educational action research model proposed by Kemmis and McTaggart (1988), which involves planning, acting, observing, and reflecting.

It consisted of two cycles. The planning of our action research of the first cycle began by analyzing students' needs, observing them, and evaluating classroom teaching and practice methods that revealed difficulties in students' writing. Based on students' preferences and prior discussions, the implementation



of designed educational material, such as a Google website incorporating digital comic creation with artificial intelligence writing assistant tools and scaffolds, was decided upon to enhance creative writing and engagement. The purpose of the action research was to examine whether the implementation of digital comic-based storytelling and the integration of technology tools could be considered effective educational material for enhancing creativity and engagement in writing skills among EFL learners. During the acting stage of the research, the planned intervention was applied through developed material. After analyzing the initial results, the second cycle was started. During its implementation, data was collected to support the triangulation process, which improved the reliability of the study. The triangulation was based on three different instruments: writing samples, artifacts, and interview questions. After data analysis, the results were discussed and evaluated, which enabled a deeper understanding and provided new insights for the research.

Context and Participants

This study was conducted in a rural school where students studied English for eight hours a week. This school used various strategies and methods to teach students English language skills. However, most of these strategies followed a syllabus that used an established textbook as the primary learning material. It caused limited opportunities for students to practice their communication skills, especially writing. Additionally, even though the school was equipped with technology, students did not have the opportunity to actively use technological tools in English lessons. The study involved 14 fifth-grade students between the ages of 10 and 11 years old. Some of them lived in rural areas, while others lived in Bogotá.

Ethical Considerations

This study included work with minor students. Therefore, approval was obtained from the school's principal and parents through informed consent before implementation. Parental informed consent guaranteed that the parents or legal guardians knew the implications of their children's participation, what the research was about, and its benefits and rights to quit their participation. To protect participants' identities, Law 1581 (2012) on the proper use of personal information was followed, and as a result, students' names were not used, ensuring their anonymity.



Pedagogical Intervention

In response to the challenges in writing skills faced by fifth-grade students at a rural school, this pedagogical intervention was designed to incorporate a Google-developed website. The site included worksheets and scaffolds covering vocabulary, past simple and past continuous tenses, connectors, sequential order, narrative elements, and story-writing tips. In addition, it consisted of tools such as artificial intelligence-generated images, Grammarly, chatbot assistant, and Google Translate. Including these tools in the material made the comic creation process for students easier. The intervention lasted five, with each session lasting one hour (see the description and materials in the APPENDIX). It encouraged students to work collaboratively in groups, sharing their ideas. The pedagogical intervention was based on students' preferences, which made the process engaging. Additionally, it provided students with a new way to express themselves creatively.

The steps followed in the pedagogical intervention are described below:

Pre-Comic Preparation

During the first session, students explored the Google website. The introduction on the first page covered what a comic is and its components. The students worked collaboratively in groups with worksheets designed to support the comic book creation process, where they could receive automatic feedback.

Creating Comics Based on Images

In subsequent classes, students focused on creating comic strips using provided images. They placed each image into a comic panel in the manner they wanted. Then, they developed a creative story with a character, plot, problem, and solution. For this, they added speech bubbles to character dialogues. They also wrote short descriptions for each image to explain the actions. Overall, these sessions helped students better understand the sequence and elements of the narrative story. In addition, through the use of tools like Grammarly, chatbot assistant, and Google Translate, students could check grammar and learn new words.

Free Creating Comics

These last two sessions were similar to the previous ones, with one key difference: students created their images using an AI-generated images tool to visualize their stories, choosing the genre themselves. The purpose of these sessions was to work out the sequence and elements of the narrative, as well as to



develop a specific story genre. Ultimately, all the students' stories were compiled into one digital comic book, which was shared with their classmates and parents as a final presentation.

Data Collection

Instruments such as artifacts, student writing samples, and student interviews were used for the research. The artifacts presented the first comic strips and the second ones. Students created them through collaborative group work. The writing samples included students' pre-test creative writing before implementation and post-test creative writing after implementing educational material. The task involved describing three given pictures, and the same activity was used for both pre-test and post-test writings. The semi-structured interviews included 17 questions about how the educational material developed on Google Sites helped learners improve their creative writing skills in English and enhance their engagement. Additionally, the interview responses were transcribed.

DATA ANALYSIS AND DISCUSSION

To determine the results of the research, a thematic analysis approach was applied to qualitative data coding and analysis. In this analysis, a theme was the outcome of some sort of coding. As Boström (2019) stated that "the process of searching for themes is a central part of various qualitative methods of analysis and involves the transformation of coded raw data into a thematic structure" (p. 1001). Our research questions and the theoretical framework were instrumental in developing coding categories and themes. The following steps were used during the coding of the data. First, relevant segments of the data were assigned codes. Next, similar codes were grouped to identify patterns and relationships. From these patterns, short statements or ideas were formulated. Finally, these statements were compared with existing research and studies. For example, the theme "Developing coherence, clarity, and creativity through an easy, clear digital comic storytelling process, despite grammar challenges" was developed through the next process.

Initially, key aspects in the data, such as disorganized ideas, lack of proper punctuation, unclear vocabulary, inappropriate words, lack of unity, and illogical ideas were identified. Then, students' pre-test and post-test writings, along with their first and second artifacts, were compared, and their interview responses were examined to track changes. By grouping related elements, repeated patterns were identified by comparing the data before and after implementation, indicating improved coherence and



clarity in students' writing. This led to the appearance of the subcategory “Improvement of coherence and clarity through digital comic storytelling”. Finally, by combining the subcategories, a theme was formulated. During the analysis, triangulation was applied by comparing results from three data sources: pre-test and post-test writings, students' artifacts, and interview responses. Based on similar steps, three next themes were explained.

Table 1

Themes:	Subcategories:
Developing Coherence, Clarity, and Creativity through an Easy, Clear Digital Comic Storytelling Process	<ul style="list-style-type: none"> • Improvement of Coherence and Clarity through Digital Comic Storytelling • Creativity Growth
AI Tools for Spelling Accuracy and Vocabulary Expansion despite Ongoing Struggles with Grammar Tenses	<ul style="list-style-type: none"> • Grammar Knowledge in Using Different Tenses • Fewer Spelling Errors • Vocabulary Expansión
Free Self-Expression Enhances Interest in Writing	<ul style="list-style-type: none"> • Personal Expression

Developing Coherence, Clarity, and Creativity through an Easy, Clear Digital Comic Storytelling Process

This theme shows how digital comic storytelling, particularly due to its ease and clarity in story creation, helped students improve their writing coherence, clarity, and creativity. Students could explore new ideas, concepts, developed characters, organized their ideas, and wrote dialogues through this process. The theme consists of three subcategories.

Improvement of Coherence and Clarity through Digital Comic Storytelling. This subcategory demonstrates how coherence and clarity was enhanced throughout the process of integrating materials. It includes a comparison between pre-test and post-test writings, artifacts of the first and second comic strips, and excerpts from students' interviews.

Excerpt 1. (Improvement of Coherence and Clarity through Digital Comic Storytelling)

Student 10: Once upon a time a mister from robotic and he explain to create a button the students to request the materials to create the button in groups and celebrate to hes people create the button and the



button explode because no have resort the students reparate the button and the estudents were happy for ever. (Pre-test writing. Date: 25/10/24)

Excerpt 2. (Improvement of Coherence and Clarity through Digital Comic Storytelling)

Student 10: Once upon a time a classroom The mister is Albert Einstein he explain to the students to what atoms conform next the mister said to her students that the students didn't create a button go to complementaries all the students they were able create the button and celebrate her creations (Post-test text. Date: 19/11/24)

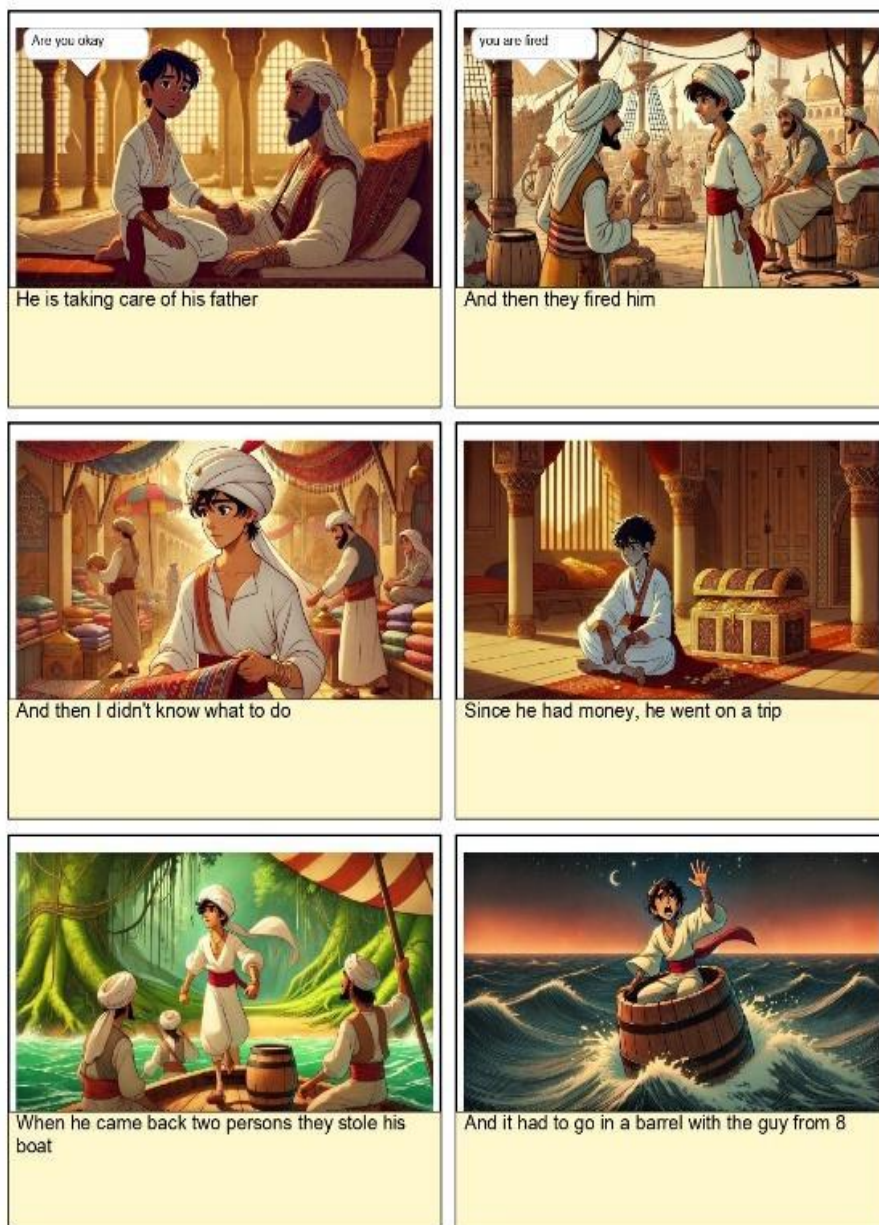
Analysis of the structure of pre-test writing shows issues in coherence and clarity. The sequence of events is confusing, and the connections between ideas are weak due to missing context. For example, the sentence “he explain to create a button the students to request the materials to create the button in groups” is unclear since it is difficult to determine whether the teacher explained how to create the button or if the students asked to create it. Similarly, the phrase “celebrate to hes people create the button” does not convey a clear idea. Furthermore, the sentence “the button explode because no have resort” does not effectively explain the cause of the explosion, making the narrative even more challenging to follow.

Analysis of the logical flow and clarity of post-test writing still presents some issues with coherence and clarity. For example, the transition from discussing atoms to mentioning a button is abrupt: “he explain to the students to what atoms conform next the mister said to her students that the students didn't create a button go to complementaries.”

Both texts contain errors that make it difficult to understand them, such as missing punctuation, grammatical errors, incorrect word order, spelling errors, and incorrect use of words. However, the second text demonstrates a more coherent and structured product. For example, it improves the order of events: Mr. Einstein assigned students a task and introduced a consequence for not completing it. According to the text, the students had difficulties at first, but in the end, they coped with them and celebrated their success. The complicating condition "if students cannot successfully create a button, they will have to go to supplementary sessions" adds tension and purposefulness to the story. Although the transition from the discussion of atoms to the button-making task is abrupt, the story is more cohesive overall.

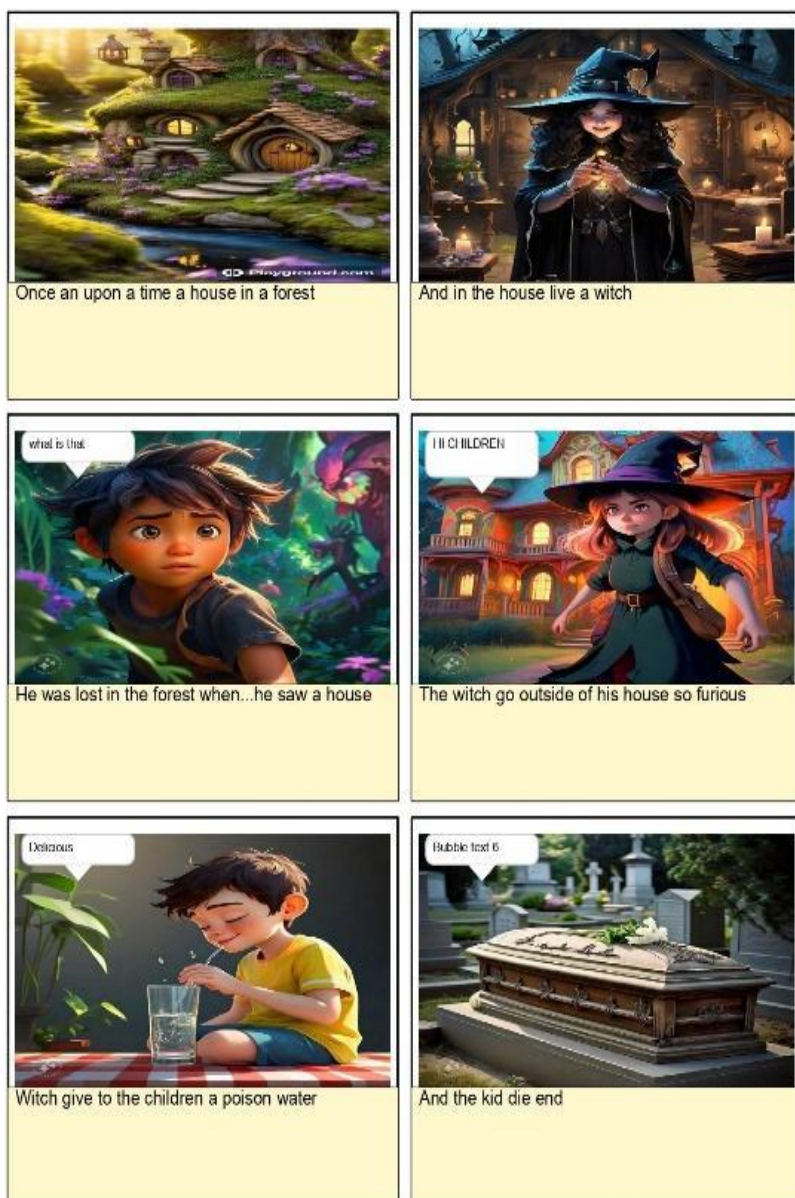


Image 1. (Improvement of Coherence and Clarity through Digital Comic Storytelling)



(Artifact: first comic strip, third group. Date: 08/11/24)

Image 2. (Improvement of Coherence and Clarity through Digital Comic Storytelling)



(Artifact: second comic strip, third group. Date: 12/11/24)The artifact of the first comic of the third group presents an unclear and unstructured story. The students placed the text under each image but did not connect them to other images and texts within the comic strip. As a result, each image and text tells a separate story. Moreover, the ideas of each sentence are unclear due to a lack of context. However, in the artifact of the second comic strip of the same group, there is an improvement in creating a coherent and clear story, as the image panels and text are interconnected.

Excerpt 3. (Improvement of Coherence and Clarity through Digital Comic Storytelling)

Researcher: What motivates you more to write—using digital comics or physical ones? And why?

Student 6: Digital comics because they help me stay organized and make my comic understandable.

(Transcription of the interview. Date: 12/11/24)

Excerpt 4. (Improvement of Coherence and Clarity through Digital Comic Storytelling)

Researcher: Did digital comics help you organize the beginning, middle, and end of your story better?

Student 3: Yes, because there were six frames, so in the first two, we could write the beginning, then the middle, and then the end. It was easier than writing it out, which is easier to do digitally.

(Transcription of the interview. Date: 12/11/24)

Excerpt 3 and excerpt 4 demonstrate that digital comics have helped make comics more understandable. Using six frames helped students organize their stories with a clear beginning, middle, and end. This made their stories more structured. As a result, the stories became easier to understand. This was reflected in the improvement of coherence and clarity in students' post-test written works and artifacts of the second comic strip.

Based on the analysis of the pre-test writing and post-test writing, comic strip artifacts, and interview excerpt, the findings demonstrate that students improved in organizing their ideas making their stories clearer and more coherent. The students' interview responses revealed that digital comics helped them manage their stories through the structured panels of the comic strip. Megawati and Anugerahwati (2012) asserted that the sequence of comic strips, which reflects the chronological order of the story and is considered a key element of narrative texts, has an impact on students' improvement on organization in writing a narrative text. Additionally, besides ordering images in a certain sequence, students "had to use specific skills to create and represent meaning through both text and images" when creating comics (EdComix Project, 2020, p. 41).

Creativity Growth. This subcategory highlights how students have the opportunity to cultivate a wide range of creative thinking by engaging in activities that encourage the development of unique and original ideas.

Excerpt 5. (Creativity growth)

Student 9: Albert Einten explain to the kids about of button. The kids don't understand and play with the button. After the mister said to the kids, "What are you doing". The kids scared said, Sorry, mister,



Sorry. don't worry said the mister and the students and the mister study the button. In this mister said "pepe you want to press the button" pepe scared answer, "okay mister". The people on the classroom look. Pipe walk to the button and press and explote scary pepe answer. "what happen". The mister said is a surprise for your birthday pepe happy said yuppie and the classroom celebrate happily (Pre-test writing. Date: 25/10/24)

Excerpt 6. (Creativity growth)

Student 9: in this class the Mr. Einstein the students said goodbye because the year is gonna be Finish. The Mr. Einstein showd to the students a surprise and said, "resolve this problem and press the button." After the kids said, "problem is impossible" and they search in google. The students, Finish the problem with the ai and press the button. The Mr Einstein get close and said "use the ai" and the button didn't work. The Mr. Einstein gift to the students other problem and the kids resolve the problem and have a surprise and the mister happy finally.(Post-test text. Date: 19/11/24)

From the point of view of creativity, the pre-test writing presents a situation in which a button caused an unexpected reaction, creating a surprise for the characters involved. The students' reaction to the button caused fear and surprise. The scenario of the story is ordinary: it talks only about the mysterious button. There are no other ideas in this story.

The idea presented in the post-test text, which shows how students solved a problem using artificial intelligence (AI), is quite original and creative. The use of artificial intelligence in the problem-solving process gives the plot a modern and creative touch.



Image 3. (Creativity Growth)



(Artifact: second comic strip, the first group. Date: 12/11/24)

The uniqueness of the characters, such as astronauts and aliens, and the storylines associated with their battles (second comic strip, the first group) demonstrates the development of students' creative thinking.

Excerpt 7. (Creativity Growth)

Researcher: Did creating a digital comic help you create a story more easily or not?

Student 12: Yes, it made it easier for me and helped me to do it, to give more, to create more and to have imagination in the comics and in the stories that I could do. (Transcription of the interview. Date: 12/11/24)

Excerpt 8. (Creativity Growth)

Researcher: What do you guys like more? Creating images using a digital tool or doing them by hand?

Student 2: I prefer to create images through a digital tool because I feel I can be more creative with them. (Transcription of the interview. Date: 12/11/24)

Excerpt 9. (Creativity Growth)

Researcher: Which motivates you more to write, creating digital comics or physical comics?

Student 7: For me it's always better in digital because I like it, because it's cooler than in physical, because I don't know how to draw. (Transcription of the interview. Date: 12/11/24)

Excerpt 7 illustrates that digital comics provided the opportunity to create more easily and encouraged imagination in both comics and stories, as seen in the response of student 12. In addition, student 2 emphasized that digital tools allowed for more creativity when creating images. Also, the answer of student 7 shows that digital tools motivated him more because he had trouble with traditional drawing. Thus, these responses demonstrate that digital comics enhance creative thinking, increase motivation, and provide an inclusive platform for story development.

After analyzing insights from three experts, it becomes clear that using digital comics fosters creativity, mainly due to their use of images. Students reported that creating stories through digital comics was easier and allowed them to express themselves more creatively. Since comics include images, they help visual learners express themselves more effectively while creating characters and plots. According to Rayo (2015), pictures is a medium for students to express their thoughts and feelings. Additionally, with the wide variety of AI-generated images available, students can create whatever image they imagine without limitations, further enhancing their creativity. Also, digital comics using AI-generated images support learners with weak drawing skills

AI Tools for Spelling Accuracy and Vocabulary Expansion despite Ongoing Struggles with Grammar Tenses

This category shows how important technology is in learning, especially AI writing tools. These tools helped students finish tasks more easily, learn new words, and improve their spelling. However, it was noted that students still had errors in tense usage even after checking with AI writing tools.



Grammar Knowledge in Using Different Tenses. This subcategory highlights common student mistakes, particularly tense inconsistency. Students often used the present simple tense instead of the past simple, even though narrative stories are usually written in the past tense as they describe past events. When students change tenses inappropriately, it can confuse the reader. As a result, the text may become less accessible, especially to readers unfamiliar with the context.

Excerpt 10. (Grammar Knowledge in Using Different Tenses)

Student 11: In a classroom Albert Einstein is mister. He is scientific and speaked a button. They students think. The mister Albert Einstein is suspicious. In the mater the quimic the mister speaking - Press, press, press, press. The mister repeton for much sometimes. The students make a circle and look the mister pressed the button and...Explosion The students is surprised.

-OMG, speaked owne. This is increible. everything flew. This is a sience? (Pre-test writing. Date: 25/10/24)

Excerpt 11. (Grammar Knowledge in Using Different Tenses)

Student 11: Once upon a time in the classroom of chemistry the mister Einstein said. - The chemistry is impresonalt and fantastic. Pay attention. The Mister Einstein take a button. Mister Einstein open the door and said. Students coming, go to classroom the chemistry (laboratory). The students happy ran with the mister. In the classroom the mister said. - Press the button, fast, fast. The students press a button and exploited. The students said. This is science? End..(Post-test text. Date: 19/11/24)

Excerpt 10 and excerpt 11 demonstrate that student 11 made mistakes with tense inconsistency in both the pre-test and post-test texts. The student was expected to write a story using the past tense. Examples of tense inconsistency in the pre-test include:

- incorrect usage of the present tense in the past narrative: “Albert Einstein is mister.”, “He is scientific...” (“is” should be “was”), “The students is surprised.” (“is” should be “were”);
- confusing past action sequence: “The students make a circle and look..” (“make” and “look” should be in the past tense: “made” and “looked”).

Examples of the same mistake in the post-test text include:

- incorrect usage of the present tense in the past narrative: “The chemistry is impresonalt and fantastic.” (“is” changed to “was”), “The Mister Einstein take a button.” (“take” should be “took”)



- confusing past action sequence: “Mister Einstein open the door and said.” (“open” is present tense, “said” is past tense), “The students press a button and exploited.” (“press” is present tense, “exploited” is past tense).

These examples show the student’s uncertainty in using consistent tense in a past narrative. Comparing the pre-test and post-test writings, we found that the issue of tense inconsistency persisted.

Image 4. (Grammar Knowledge in Using Different Tenses)



(Artifact: second comic strip, the second group. Date: 12/11/24)

Tense inconsistency was also observed in the second comic strip created by the second group (e.g., “attack” should be “attacked”). Such errors suggest that the students may not yet fully grasp the function of tense within a narrative structure, even though they used Grammarly.

Excerpt 12. (Grammar Knowledge in Using Different Tenses)

Researcher: Did you learn about the use of grammar through the review of the digital tool? Was it useful for you?

Student 8: Yes, but I didn't have much time for grammar because when there are a lot of topics in my head, it kind of gets mixed up and one gets confused. (Transcription of the interview. Date: 12/11/24)

Excerpt 13. (Grammar Knowledge in Using Different Tenses)

Researcher: Did you learn about the use of grammar through the review of the digital tool? Was it useful for you?

Student 5: A little, yes. (Transcription of the interview. Date: 12/11/24)

Student 8 explains that when “a lot of topics” are mixed up, he is confused. This suggests that applying multiple grammar rules at once can make it harder to learn grammar effectively. The response of student 5 further highlights that the digital tool wasn’t enough to significantly improve grammar knowledge.

Our findings, based on analysis of pre-test texts and post-test texts, artifacts, and students' responses, indicate persistent errors in using different tenses despite using tools like Grammarly for grammar correction. Even though Grammarly determines the most frequent errors in individual students' writing and provides focused feedback for each student, there should be additional teacher feedback and explanations about grammar rules. Additionally, students need more practice to achieve accuracy in grammar learning. That is the core idea behind Merrill Swain's Comprehensible Output Hypothesis (1985): during students' process of production, “they begin to see the limitations of their interlanguage” (Lightbown et al., 2006, p. 150). Due to this, they can improve their language acquisition.

Overall, the impact of these mistakes extends beyond grammar accuracy: they affect both the readability of the text and its engagement for the reader.

Fewer Spelling Errors. This subcategory shows how important it is to minimize the number of spelling errors in writing. Frequent spelling errors can lead to confusion, misinterpretation, and difficulty reading the writing text fluently.

Excerpt 14. (Fewer Spelling Errors)

Student 12: Once upon a time the mister Albert Einsten explained at the students if they press the botton sospresous, the students got anxious to knew would happen to the press the red botton, after a week the mister Albert Einsten press to the botton, the botton would open the portal that have a thing that you dreamed, the students couldnt believe, because is imposible, but mister Albert Einsten tall to the students that imposible can be posible you can doid, and the students tell to the mister Albert Einsten, that was a good person an a good Mister. (Pre-test writing. Date: 25/10/24)

Excerpt 15. (Fewer Spelling Errors)

Student 12: Once upon a time in the chemistry class with the mister Einsten, he showed to the students a button; this button when being press, open a partal; when the partal was opened and to enter your dreams are found inside the partal. but the students wanted press the button but Einsten said that waited 1 week, when that happen the week the students were happy, then the students were press the button

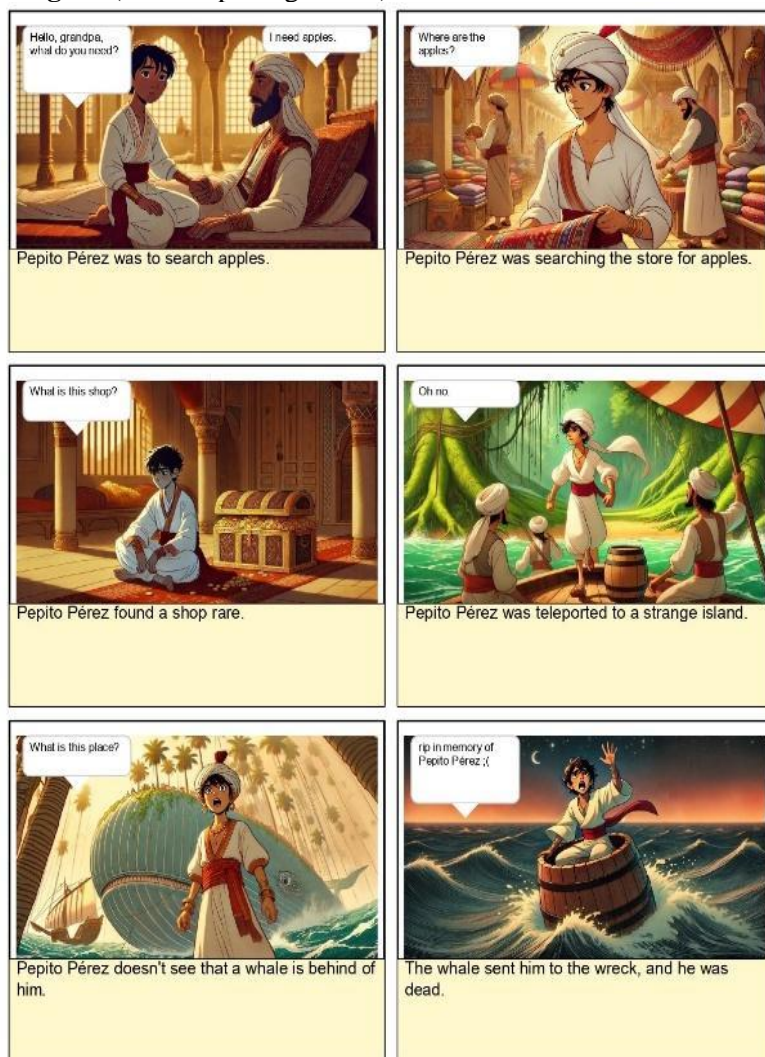


and the portal was opened the students enter and your dream become really. (Post-test text.

Date: 19/11/24)

Data analysis suggests that the pre-test and post-test texts contained significant spelling errors. However, in the second text (post-test), an improvement was noted in which the student could reduce the number of spelling errors.

Image 5. (Fewer Spelling Errors)



(Artifact: first comic strip, the second group. Date: 08/11/24)

The first comic strip of the second group shows the correct spelling. As a result, the text becomes more accessible to readers.

Excerpt 16. (Fewer Spelling Errors)

Researcher: Did you guys learn anything through the digital tool's automatic spell checking?

Student 1: Yes, because we say that you wrote a word very badly and you go to a page and you can

write the word and there they tell you how to spell it correctly. (Transcription of the interview. Date: 12/11/24)

Excerpt 17. (Fewer Spelling Errors)

Researcher: Have you learned anything through the digital tool's automatic spell-checking? Was it useful?

Student 4: Some words we don't know, and trying to write and then correct them helps you remember the correction. (Transcription of the interview. Date: 12/11/24)

Excerpt 18. (Fewer Spelling Errors)

Researcher: Did creating comics make you want to write more stories in English using digital comics?

Student 3: For me, yes. English isn't easy for me, but with this type of activity, it's more understandable. (Transcription of the interview. Date: 12/11/24)

The students' responses show that digital tools, such as spell-checkers (Grammarly), help reduce spelling errors and support them in remembering correct spelling. Overall, digital tools make understanding English easier.

After analyzing the data, it became clear that the students had improved their spelling. Artificial intelligence-based writing tools, particularly Grammarly, helped them spell words correctly. With fewer spelling mistakes, their writing became easier to understand. According to students' responses, Grammarly helped them memorize the correct spelling of words. Overall, accurate spelling is important for assisting readers to follow the story without confusion.

Vocabulary Expansion. Vocabulary expansion is vital in EFL for better understanding and communication. By expanding vocabulary, students can add detail and clarity to their texts, especially stories.

Excerpt 19. (Vocabulary Expansion)

Student 14: It was January 21st of 1920, and it was my First day of physics class in seven grade. And my teacher was Albert Einstein. First, he write all the "Relativity Theory history and equations." and he explain all about that Topic and he did an exam "an initial Físic exam" it was easy because I was listening to the explication. Then, he put all the information that was on the board on a notebook. After that he explain químic and we did an experiment "a químic experiment about the Relativity Teory and Físic



topics" we did the experiment but the teacher teach us how to put our experiment on a machine "the machine that it would change our experiment on a expirience of the real. Relitivity teory and a mystery and a new gravity for us" and he put a botton connected to the machine next to the notebook with all information, then he said I will go for security medids, DON'T TOUCH THE BOTTON and he left. Some classmates write in their notebooks the board information, but I and my friends was looking the botton, and my best friend Juaco press the botton and the teacher was right it was a new experience...(Pre-test text. Date: 25/10/24)

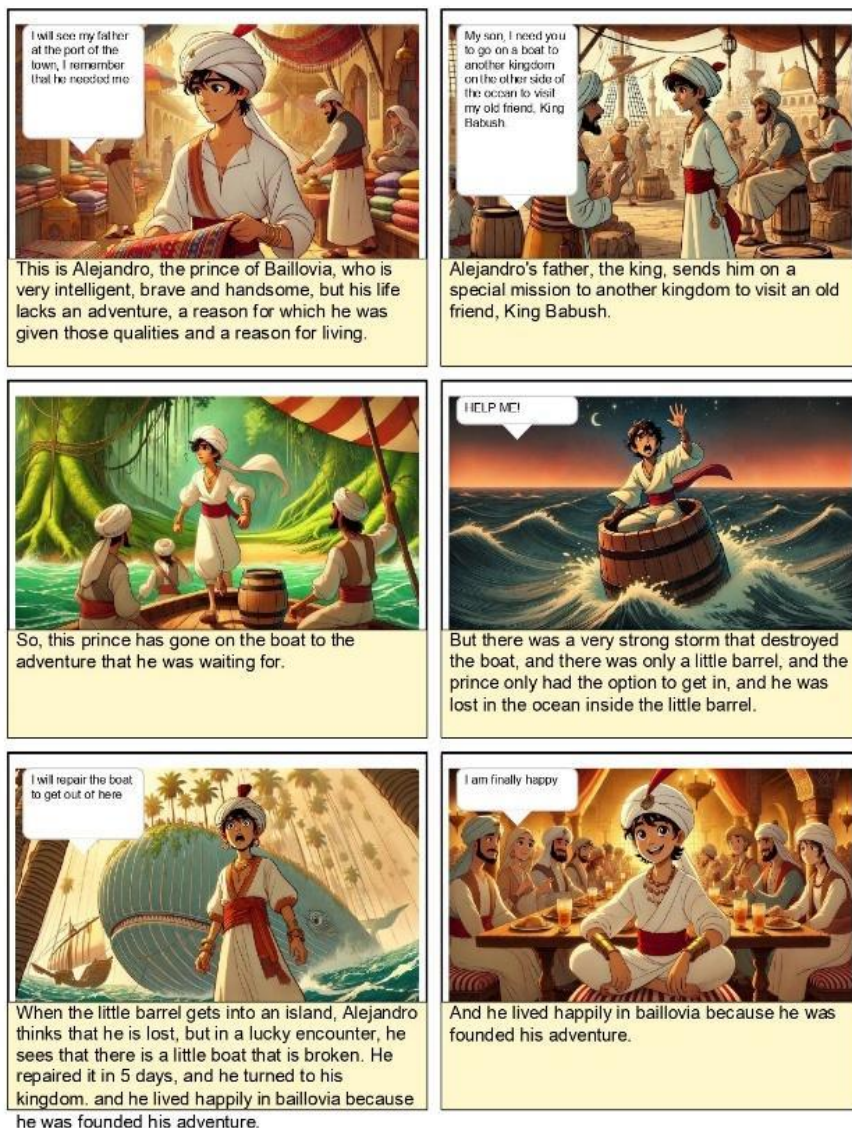
Excerpt 20. (Vocabulary Expansion)

Student 14: My Explosive Class. I'll never forget it, my chemistry and physics class in 7th grade with the teacher called "Einstein", he wasn't so famous already but he was good ripde. first we play with the experiments, it was fun, but 2 of my classmates: Arthurt and Cameloth, played with more dangerous experiments and they create an inestable chemistry reaction and the classroom explote, all because my not smart classmates press a button that was connectet with solar electricity, normal elecrecity and explosive elements all of my classmates were confused, scared and angry because all our bagpags and things were exploted with the classroom, The profesor, who was in the bathroom, see it, and Arthur was expulsed with Camelot, and becaus that accident, out teache create the famous relativity theory, The End. (Post-test text. Date: 19/11/24)

In comparison to both pre- and post-test writings, the vocabulary in the post-test text is slightly more varied, using words like "ripde", "solar electricity", "explote", "expulse", more adjectives and a little more descriptive language ("dangerous experiments", "explosive elements", "confused", "scared", and "angry").



Image 6. (Vocabulary Expansion)



(Artifact: first comic strip, the fourth group. Date: 08/11/24)

Image 6 shows that students used adjectives like “intelligent”, “brave”, and “handsome” to describe the main character and also added more detailed descriptions of subjects such as “strong storm” and “a little barrel”.

Excerpt 21. (Vocabulary Expansion)

Researcher: Did you guys learn any English words creating this digital comic? ¿Can you tell me one?

Student 9: Forest. (Transcription of the interview. Date: 12/11/24)

Excerpt 22. (Vocabulary Expansion)

Researcher: Did you guys learn any English words creating this digital comic? ¿Can you tell me one?

Student 10: Forest and Witch. (Transcription of the interview. Date: 12/11/24)

Excerpt 23. (Vocabulary Expansion)

Researcher: Did the use of digital comics make you want to write more stories in English?

Student 8: Yes, because it helps me to develop my English vocabulary more. (Transcription of the interview. Date: 12/11/24)

Excerpt 21, excerpt 22, and excerpt 23 demonstrate that students developed their English vocabulary while creating the digital comic. When asked if they had learned any new English words, student 9 and student 10 recalled and shared specific vocabulary, such as “forest” and “witch”. Furthermore, student 8 mentioned that digital comics helped expand their vocabulary. Thus, through the process of creating digital comics, students were encouraged to find and use words that matched their ideas, settings, and characters, which in turn supported vocabulary development.

Analysis of the subcategory “Vocabulary expansion” through the data illustrates an improvement in students’ vocabulary. Students were encouraged to use new words when creating stories, which resulted in a broader range of descriptive language and more varied vocabulary. According to Craik and Lockhart (as cited in Murugiah, 2013) “as learners manipulate the language in interesting and demanding ways, attempting to express uniquely personal meanings (as they do with creative writing), they necessarily engage with the language at a deeper level of processing than with expository texts” (p.8). This shows the relation to Involvement Load Hypothesis: the deeper the processing, the better it is remembered. Tools like Google Translate helped expand their vocabulary and supported their writing. This also motivated students to write more. Overall, this process enhanced their confidence in writing.

Free Self-Expression Enhances Interest in Writing

Free self-expression in creating stories allows students to use their personal experiences, preferences, emotions, thoughts in writing texts. As students develop their own stories, they naturally become more interested.

Personal Expression. This subcategory shows that free self-expression connects to interest. When students have freedom of expression, they engage more deeply in their interests, increasing motivation.

Excerpt 24. (Personal Expression)

Student 13: The secret button



When the teacher go out, the students are behavior, the students find a button that have a paper said press, the students think that is a bad idea. In the next day again the teacher go out, a student think if he press the button the scientif are very angry with students, but an other student think that it is a good idea because he like the danger. The next day the student think again that it is a good idea, in the lunch he go to the classroom and press the button, the objects fly in the air, the books, the rulers, the pencils and the tables. When the objects fly the teacher enter to the classroom! the teacher see the situation, the student think that the teacher gonna said that go to the director office, but when the teacher see are very happy he never press the button because he felt scary. The other day the teacher don't go to the classroom because are so crazy and go to the Asylum. (Pre-test writing. Date: 25/10/24)

Excerpt 25. (Personal Expression)

Student 13: The scintist

When the scintis go to the classroom the student be sit down but one day the scintist go to a toilet and a student see a button when he see a button he said that is so strange and belive that the teacher is a alien or a robot. the student go to a toilet see a secret room, next see that the teacher enter to the room he follow him, when the teacher press the button the things float in the air. (Post-test text. Date: 19/11/24)

In both the pre-test and post-test writing tasks, students were asked to create a story based on three provided images. Some students included elements from their own lives. Excerpt 16 shows that Student 13 incorporated everyday events such as “bad behavior”, “lunch time”, and “going to the bathroom”. These personal connections brought their interests in storytelling.



Image 7. (Personal Expression)



(Artifact: second comic strip, the second group. Date: 12/11/24)

The analysis of the second comic strip of the second group shows expression of students personality through their preferences. The students chose to make the story about Iron Man, a popular superhero, which shows their personal preference and excitement. The comic also includes a YouTube link to a song where “Deadpool was dancing and singing”, which shows students' interest in music. This choice reflects that the students enjoy Marvel superheroes and music.

Excerpt 26. (Personal Expression)

Researcher: What part of making a digital comic did you like the most?

Student 13: I really enjoyed creating my own images because it was much easier to choose our images than the ones that came with the comic. (Transcription of the interview. Date: 12/11/24)

Excerpt 27. (Personal Expression)

Researcher: Did the use of digital comics make you want to write more stories in English?

Student 11: Yes, because it is a very cool and fun way to create comics more easily. (Transcription of the interview. Date: 12/11/24)

Excerpt 26 and excerpt 27 show that making their own images for comics was more enjoyable for students than using ready-made ones. So, they chose images and created stories based on their own thoughts, ideas, experiences, and preferences. The fun and interactive nature of digital comics also helped students get more involved in making stories.

After analyzing this subcategory using three data sources, it was found that free self-expression can help students become more interested in storytelling. While working on their comics, students could share their thoughts and express themselves through everyday experiences, character choices, and even songs. This made them more engaged with the task. Moreover, students explained that using their images made it easier for them to create stories, and they showed a desire to write more using digital comics. As Brown (2023) explained “creative writing through creating comics can be a big motivation when it comes to writing assignments because of how freely students can express themselves” (p. 7).

To answer our research question, digital comic-based storytelling enhanced creative writing among EFL learners by improving their ability to produce coherent and clear texts and develop creativity.

Students showed significant improvement in how logically they structured their stories and how clearly they expressed their ideas. The sequence of posted images allowed students to structure their narratives with a clear beginning, middle, and end. This helped them express their ideas in a more organized manner. Since comics rely on meaningful connections between pictures and text to convey information, students naturally developed stronger storytelling skills, which were transferred into their creative writing, producing complete and well-structured stories.

Moreover, it was identified that images created through an artificial intelligence tool enhanced students' creative thinking. Since storytelling started with the creation of images, it helped students to create



creative content and visualize their ideas more effectively. This was especially useful for visual learners and students with limited drawing skills.

To answer our research question, artificial intelligence writing assistant tools improved creative writing by reducing spelling errors in post-tests and expanding students' vocabulary. While grammar accuracy remained a challenge, in particular tense inconsistency, students demonstrated better spelling and richer vocabulary. Tools like Google Translate supported vocabulary expansion, as students actively searched for appropriate words during their writing process. This supports with Involvement Load Hypothesis that deeper engagement leads to better retention. Reduction in spelling errors was achieved by memorizing correct spellings through Grammarly. However, despite Grammarly's real-time feedback, persistent grammar mistakes suggest that students need more writing practice and explicit instruction to achieve lasting grammatical accuracy.

To answer the second research question, students showed positive attitudes and increased motivation to write, supported by the using digital comic-based storytelling and artificial intelligence writing assistant tools. Incorporating personal thoughts, ideas, and preferences in their writings, students increased engagement and made the writing process more enjoyable.

To conclude, combining digital comic-based storytelling with AI writing tools can effectively enhance EFL learners' creative writing, particularly coherence, clarity, and creativity. While long-term grammar accuracy may require continued teacher support and students practice, students displayed greater motivation and willingness to write and create more stories.

CONCLUSIONS

Using such material as the Google website with incorporated digital comic-based storytelling and artificial intelligence writing assistant tools enhanced creative writing among fifth-grade EFL learners. Implementing this innovative material led to improvements in several aspects of writing. Students demonstrated increased creativity, an essential component of creative writing, and greater text coherence and clarity. Minor gains were observed in spelling and vocabulary, particularly through tools like Grammarly and Google Translate. There was no improvement in grammar accuracy, especially tense inconsistency. Free students' expressions promoted engagement, positive attitudes, and motivation toward writing.



There were some limitations in our research, primarily related to time. With more time, we might have seen greater progress in grammar development. Technical issues, such as restrictions on free image generation tools and login challenges due to students' email limitations, led to delays. In addition, students were limited to three pre-selected images, which may have constrained their creative expression. Nevertheless, many were able to craft original and engaging stories within these boundaries. Educators should incorporate digital storytelling and AI tools in their English language classrooms. This material attracts young students and develops creative abilities and writing skills in accordance with modern educational standards. We offer the following recommendations. First, it is necessary to provide students with the scaffolds for writing texts. Secondly, students should be able to choose topics that they are interested in. Third, additional feedback and explanations should be provided regarding grammatical errors when using Grammarly. By applying these strategies, teachers can create a more attractive and supportive environment favorable to developing creative abilities and writing skills among EFL students. Future studies could explore the influence of stories with different genres on creative writing to further develop the imagination and encourage students to write more.

BIBLIOGRAPHIC REFERENCES

- Almashy, A., Ahmed, A. S. M. M., Jamshed, M., Ansari, M. S., Banu, S., & Warda, W. U. (2024). Analyzing the Impact of CALL Tools on English Learners' Writing Skills: A Comparative Study of Errors Correction. *World Journal of English Language*, 14(6).
- Babaei, R. (2015). Interview with Alan Maley on teaching and learning creative writing. *International Journal of Comparative Literature and Translation Studies*, 3(3), 77–81.
- Bitz, M. (2008). A rare bridge: The Comic Book Project connects learning with life. *Teachers & Writers*, 39(4), 3–10.
<https://teachersandwritersmagazine.org/wp-content/uploads/2023/02/A-Rare-Bridge.pdf>
- Boström, P. K. (2019). In search of themes—keys to teaching qualitative analysis in higher education. *The Qualitative Report*, 24(5), 1001-1011.
- Bowkett, S., & Hitchman, T. (2012). *Using comic art to improve speaking, reading and writing*. Routledge.
- Brown, C. (2023). The Benefits of Using Comics in the Classroom.



- Burns, A. (2019). Action research in English language teaching: Contributions and recent developments. *Second handbook of English language teaching*, 991–1005.
- Cabrera-Solano, P., Gonzalez-Torres, P., & Ochoa-Cueva, C. (2021). Using Pixton for teaching EFL writing in higher education during the COVID-19 pandemic. *International Journal of Learning, Teaching and Educational Research*, 20(9), 102-115.
- Çiçolar, R., & Bulut, B. (2025). The Effect of the use of Educational Digital Comics in Primary School Fourth Grade Turkish Course on Students' Writing Skills and Self-Efficiency. *Türk Akademik Yayınlar Dergisi (TAY Journal)*, 9(1), 68–96.
- Dawson, P. (2004). *Creative writing and the new humanities*. Routledge.
- David-West, A. (2012). Sequential Art and Sentence Construction: Wordless Comics in an EFL Context. *Mulberry/愛知県立大学外国語学部英米学科 編*, (61), 141–158.
- Gómez-Rodríguez, L. F. (2010). English textbooks for teaching and learning English as a foreign language: do they really help to develop communicative competence?. *Educación y Educadores*, 13(3), 327–346.
- EdComix Project. (2020). *EdComix: Comics as a pedagogical tool*. Erasmus+. https://ec.europa.eu/programmes/erasmus-plus/project-result-content/cdc03056-7734-4591-ada9-ce9908e3cd0e/Guide_EN.pdf
- Hulstijn, J. H., & Laufer, B. (2001). Some empirical evidence for the involvement load hypothesis in vocabulary acquisition. *Language learning*, 51(3), 539-558.
- Hyland, K. (2019). *Second language writing*. Cambridge University Press.
- Klaehn, J. (2021). Mike Richardson Interview. *Journal of Graphic Novels and Comics*, 12(5), 1207–1211.
- Kumar, T. (2020). Approaches in Teaching Writing Skills with Creative Writing: A TESOL Study for Indian Learners. *TESOL International Journal*, 15(5), 78–98.
- Laiche, S., & Nemouchi, A. (2021). The Impact of Google Translate on EFL Learners' Writing Performance. *في الترجمة*, 8(1), 412-429.
- Lang, A. (2015). Comic strips in the English classroom.
- Lightbown, Patsy M., and Nina Spada. *How languages are learned 5th Edition*. Oxford university press, 2006.



- Listyani, L. (2019). The Use of a Visual Image to Promote Narrative Writing Ability and Creativity. *Eurasian Journal of Educational Research*, 80, 193-223.
- Maley, A. (2009). Creative writing for language learners (and teachers). Teaching English—British Council & BBC.
- <https://www.teachingenglish.org.uk/professional-development/teachers/understanding-learners/articles/creative-writing-language>
- Manning-Lewis, T. (2019). I hate writing: Making a case for the creation of graphic novels in the Caribbean English classroom to develop students' creative writing skills. *Changing English*, 26(4), 392-404.
- Martin, A. (2006). A European framework for digital literacy. *Nordic Journal of Digital Literacy*, 1, 151-161.
- Megawati, F., & Anugerahwati, M. (2012). Comic strips: A study on the teaching of writing narrative texts to Indonesian EFL students. *Teflin Journal*, 23(2), 183.
- Ministerio de Educación Nacional. ((2006). Estándares básicos de competencias.
- https://www.mineduacion.gov.co/1621/articles-340021_recurso_1.pdf
- Mulyana, N. Exploring the Use of Artificial Intelligence as Writing Assistant in EFL Classroom: A Systematic Literature Review.
- Murugiah, Mohana Ram. "Improving the 5th formers' continuous writing skills through the creative writing module." *Advances in Language and Literary Studies* 4.2 (2013): 7-12
- Nassaji, H. (2020). Good qualitative research. *Language Teaching Research*, 24(4), 427–431.
- Nunan, D. (1991). *Language teaching methodology: A textbook for teachers*. Pretence Hall International.
- O'Rourke, M. 2005. "Multiliteracies for 21st Century Schools." ANSN 2: 1–12
- Pawliczak, J. (2015). Creative writing as a best way to improve writing skills of students. *Sino-US English Teaching*, 12(5), 347–352.
- Ramos Holguín, B., & Aguirre Morales, J. (2014). Materials Development in the Colombian Context: Some Considerations about Its Benefits and Challenges. *How*, 21(2), 134–150.



- Rayo, D. S. (2015). *Writing Narratives with the Aid of Picture Stories*. The University of Western Ontario (Canada).
- Read, C. (2015). Seven pillars of creativity in primary ELT. *Creativity in the English language classroom*, 29-36.
- Richards, J. C., & Renandya, W. A. (Eds.). (2002). *Methodology in language teaching: An anthology of current practice*. Cambridge University Press.
- Rosenberg, M. (2015). The learner as a creativity resource. *Creativity in the English Language Classroom*, 123.
- Sabin, R. (2013). *Adult comics*. Routledge.
- Sciamarelli, M. (2015). Teaching children with mascot-inspired projects. *Creativity in the English language classroom*, 104.
- Setiawan, F., & Alkhowarizmi, A. (2025). Exploring an Artificial Intelligence as Automated Feedback Program in EFL Writing. *ETERNAL (English Teaching Journal)*, 16(1), 202-224.
- Wang, L. (2019). Rethinking the significance of creative writing: A neglected art form behind the language learning curriculum.
- Wahyudin, A. Y. (2019). E-COMICS IN TEACHING: USING COMIC STRIP CREATORS TO ENHANCE JUNIOR HIGH SCHOOL STUDENTS' WRITING ABILITY. *16 November 2019, Bandar Lampung, Indonesia i*.
- Weigle, S. C. (2002). *Assessing writing*. Cambridge University Press.
- Widiarti, Y. (2024). Canva and Comic Strips: Facilitate on Teaching Writing Instruction. *International Journal of Contemporary Studies in Education (IJ-CSE)*, 3(3), 245-255.
- Widioko, T. (2021). Modified digital comics: an alternative way for enhancing students narrative text writing ability. *International Journal of Research and Review*, 8(12), 344–355.
- Williams, C., & Beam, S. (2019). Technology and writing: Review of research. *Computers & Education*, 128, 227–242.



APPENDIX

Description of the pedagogical intervention

Session	Procedure	Material
information		
Pre-test	Students took a pre-test that assessed their creative writing skills by having them create a story based on three images	https://tinyurl.com/njahpn7w
Session 2	Students explored a Google Site presentation on comics, covering key elements like panels, speech bubbles, captions, and narrative components such as characters, setting, plot, conflict, and resolution. In groups, they matched adventure-related vocabulary to meanings and completed gap-fill exercises using past simple, discussing verb forms based on context. They practiced choosing between past simple and past continuous and applied connectors to complete an adventure text. Students also read a short adventure story, arranged sentences, and identified narrative elements. Finally, they reviewed instructions on writing a creative adventure story and explored different genres.	https://sites.google.com/unbosque.edu.co/adventures/eighth-unit
Session 2, 3, 4, 5	Students created comics using preset and new images through a Google website. They planned the beginning, middle, and end of their stories, considering characters, setting, conflict, and resolution. Speech bubbles were used for dialogues, and short captions described each scene. To generate new stories, students used a tool that generates AI images.	https://sites.google.com/unbosque.edu.co/adventures/eighth-unit
Post-test	Students took a post-test that assessed their creative writing skills by creating a story based on three images.	https://tinyurl.com/njahpn7w

