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Enhancing Creative Writing Skills through Computer-Generated Imagery: A Study on Intermediate ESL Learners in Colombo, Sri Lanka

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ABSTRACT

Recent examination reports from the Examination Department and the Ministry of Education have identified weak performance in the composition section as a key reason for low GCE Ordinary Level (O/L) English results. In response, this study explores the use of Computer-Generated Imagery (CGI) as an innovative approach to improving creative writing skills among secondary school learners. Using a pre-test–post-test experimental design, the study involved 60 Grade 10 second-language learners from a semi-government boys' school in Colombo. Students were randomly assigned to an experimental group, which completed six narrative writing tasks using CGI, and a control group, which completed the same tasks using traditional methods supported by still pictures during 2025. Convenience sampling was used based on participant accessibility. In addition to the writing tasks, student surveys and teacher interviews were conducted to gain deeper insight into learner engagement and instructional effectiveness. A paired sample t-test revealed that students who used CGI demonstrated significantly greater improvements in writing performance compared to those taught through conventional visual support. Survey responses indicated that students found CGI-based tasks engaging and helpful for generating ideas, while teacher feedback highlighted CGI's potential to encourage student-centered learning and creativity. Overall, the study suggests that computer-generated imagery is a promising tool for enhancing creative writing among intermediate-level learners. The findings highlight practical implications for educators, encouraging the integration of CGI into writing instruction to stimulate imagination, motivation, and meaningful narrative development.

Keywords: Computer-generated Imagery; Creative Writing; Intermediate Learners; Secondary Level; Still Picture Group

Background

Global education is undergoing a major transformation as technology reshapes the way students learn and teachers teach. In English language education, emerging technologies such as AI-powered language tools, virtual reality, and interactive learning platforms are creating new opportunities to develop literacy, comprehension, and communication skills. These technologies not only increase accessibility but also support diverse learning styles, making language learning more engaging and effective (Ally, 2019; Holmes, Bialik, & Fadel, 2019). As digital education becomes increasingly central worldwide, integrating technology into English language teaching plays a crucial role in building students' fluency and confidence.

In Sri Lanka, the development of English language education is closely tied to the country's historical, political, and socio-cultural background (Indrarathne & McCulloch, 2022). During the colonial period, English was promoted as the language of administration and education, mainly to produce English-speaking professionals (Jayasuriya, 1969). After independence in 1948, educational policies shifted toward promoting Sinhala and Tamil as national languages, reflecting linguistic nationalism. Despite this shift, English maintained its importance as a language of higher education, international communication, and social mobility. The growth of international schools and private institutions further strengthened its presence in academic and professional settings (Perera, 2010). In the 21st century, government initiatives such as the "English as a Life Skill" program aimed to improve English proficiency across the country and reduce disparities between urban and rural learners (Ministry of Education, 2007). These efforts align with global views that recognize English as both a global lingua franca and a tool for personal and national development (Canagarajah, 2005). However, persistent challenges remain. Examination data show consistently low pass rates for English at the GCE O/L level, with writing skills being a major area of weakness (Examination Department, 2018).

Writing requires careful control of grammar, vocabulary, spelling, and organization, making it more demanding than spoken communication. Meanwhile, rapid growth in digital technologies has influenced language learning practices, including creative writing instruction (Chapelle, 2009). One emerging tool is Computer-Generated Imagery (CGI), originally used in entertainment but now recognized for its educational value (Jenson & Konradsen, 2018). CGI's immersive and visual features support multimodal learning and can help learners overcome language barriers by stimulating imagination and creativity. Despite increasing interest in CGI, its specific impact on improving creative writing skills among ESL learners remains underexplored. Therefore, the core aim of this research is to investigate how CGI can enhance creative writing abilities in intermediate ESL learners.

Literature Review

Research The literature review section situates the current study within the broader context of what is known about the research topic. It provides a comprehensive overview of the existing literature, highlighting significant findings, methodological approaches, and theoretical perspectives that have shaped the field. By critically analyzing previous studies, this section identifies existing gaps and outlines how the current research aims to address those gaps.

What is Computer-Generated Imagery (CGI)?

Computer-Generated Imagery (CGI) encompasses the production of static and dynamic visual elements such as images, animations, and special effects created through specialized software. Initially popularized in cinematic productions and the gaming industry, CGI has more recently been adapted for educational purposes. Technologies such as 3D modelling, digital rendering, and motion capture have helped CGI

gain traction in academic circles, where visual complexity and interactivity can support deep cognitive engagement (Clark & Paivio, 1991). One reason CGI is particularly effective in education is its capacity to demonstrate or abstract concepts in ways that traditional textbooks cannot (Mayer, 2001). For instance, in a science class, CGI might illustrate the internal structure of a cell or demonstrate planetary motion, thereby transforming static diagrams into immersive experiences. Similarly, in creative writing, CGI can stimulate narrative construction by allowing learners to manipulate visual prompts, characters, or settings (Jenson & Konradsen, 2018). ESL learners, who often struggle with constructing vivid mental images due to limited vocabulary or cultural references, stand to benefit significantly from these visual aids (Berk, 2015).

Historical and Conceptual Foundations of Creative Writing

Creative writing is considered a modern educational subject rooted in the late 19th and early 20th centuries (Kroll, 2003). Originally, creative writing was an activity that reconstructed and associated knowledge, concepts, events, sounds, images, and dreams. As it was revealed that, creative writing facilitates people to express themselves freely and bring out their feelings, thus promoting self-expression and personality development. According to Temizkan (2011), creative writing is the process of organizing abstract ideas into aesthetic and literary products, such as stories or poetry, which establish meaningful connections between dissimilar elements. Their point of view emphasizes how creative writing is imaginative and structured, and how it can be used to bridge different ideas through artistic expression.

Creative writing is broadly understood as the production of original, imaginative texts that express ideas, emotions, and narratives through literary techniques. It encompasses genres such as poetry, fiction, drama, and creative nonfiction (Wang, 2019). Teaching creative writing is an essential language skill, equally critical as speaking, listening, and reading. Research in primary education indicates that creative writing is often constrained by rigid teaching practices, particularly in contexts shaped by high-stakes assessment pressures (Barton *et al*., 2024). Creative writing, on the one hand, can encourage imagination, self-expression, and critical thinking, and on the other hand, support students to develop unique voices and storytelling abilities through character creation, narrative structure, and informal language use (Reach & Teach, 2023). Although creative writing is often considered an innate talent or a product of inspiration, it can be developed systematically through education and analytical strategies (Smith, 2020), Simonton (2004) defines a creative writer as someone who uses effective logical techniques to produce influential work (Simonton, 2004). This means that structured writing education is very relevant for creativity. Some research has demonstrated that creative writing activities positively affect students' attitudes, self-efficacy, and skills related to writing.

However, the conceptual basis of creative writing also extends to its role in cultural preservation and social commentary since it can create a voice for an individual's perceptions and experiences, recording historical events, norms of the social world, and personal tales. Thus, the two functions of creative writing- both as a tool of education and as a cultural artifact- make it an important means of shaping not only individual identity but collective consciousness.

Creative writing, in essence, requires the formation of novel and meaningful ideas that engage the reader through compelling narratives, character development, and thematic coherence. By introducing CGI as a source of visual stimuli, educators can activate cognitive processes tied to imagination and creativity. Paivio’s Dual Coding Theory supports the notion that the brain processes information more effectively when it is encoded in both visual and verbal forms (Clark & Paivio, 1991). Thus, when students see a CGI-generated scene, they are more likely to conceive of intricate plotlines and detailed character backstories compared to when they rely exclusively on textual prompts.

Theoretical Framework

Constructivism is a widely used learning theory that emphasizes how learners actively build knowledge rather than passively receiving information. According to Fosnot (1989), learning is shaped by what individuals already know, how they adjust existing ideas, and how they create meaning through reflection and experience. Brooks and Brooks (1993) further explain that constructivism focuses on how knowledge is formed, highlighting learning as a social and interactive process rather than a fixed method of teaching. Through discussion and collaboration, learners refine their understanding by connecting new ideas to prior knowledge (Lakha, 2025; McLeod, 2023).

Rooted in the work of Jean Piaget and Lev Vygotsky, constructivist theory views learning as a process shaped by experience, thinking, and social interaction. This approach encourages curiosity, problem-solving, and learner autonomy (Abeywickrama, 2020). In constructivist classrooms, students engage in meaningful tasks that help them link previous knowledge with new insights, allowing learning to become deeper and more personalized (McLeod, 2023). One effective way to apply constructivism in creative writing is through Computer-Generated Imagery (CGI). CGI helps students visualize characters, settings, and events, making abstract ideas more concrete and accessible. Research shows that CGI enhances creativity, motivation, and inclusion by enabling students to combine language with visual representation. It also supports collaboration and shared storytelling, where learners reflect on ideas together and construct meaning collectively, aligning with Vygotsky's emphasis on social learning (McKinley, 2015).

Social interaction plays a key role in developing higher-order thinking skills such as reasoning and critical thinking, which later become internalized by learners (Magdalena, 2015). Constructivist teaching emerged as a response to the limitations of traditional instructional models (Dangel, Guyton, & McIntyre, 2004). Krashen's (1982) Affective Filter Hypothesis further supports the use of CGI, as emotional factors such as anxiety and motivation strongly influence language learning. CGI reduces stress and cognitive load by offering visual support, creating a relaxed and engaging learning environment (Krashen, 1982).

By encouraging playful exploration, collaboration, and differentiated instruction, CGI helps lower learners' affective filters while strengthening creative writing skills. Given its alignment with constructivist principles, CGI shows strong potential to enhance creative writing beyond conventional methods, particularly for secondary school students in Sri Lanka.

Methods

Research Design

The current study was conducted at a semi-government boys' school in Colombo, the Western Province in Sri Lanka. Established as a prominent educational institution, this school caters to approximately 3,200 students in the year 2025. The school employed a substantial teaching staff of 185 educators dedicated to fostering academic and personal growth among the students. One of the primary areas of focus within the school's curriculum was the teaching of English as a Second Language (ESL). Given Sri Lanka's multilingual context, where Sinhala and Tamil were the official languages, mastering English is an essential skill that provides significant opportunities for students, both academically and professionally. The school's English language program was designed to enhance the students' proficiency in English, enabling them to meet the linguistic demands of a globalized world.

Participants and Data Collection Methods

Although The participants in this study were 60 students aged between 14 and 15 from a semi-government school in the Colombo district. Two classes from Grade 10, each comprising 30 students, were selected:

one as the Experimental Group, and the other as the Control Group. The data indicate that Sinhala is the predominant first language among students in both Experimental and Control groups, followed by English and Tamil. The distribution of students across these languages reflects the linguistic diversity within the groups, with a higher number of Sinhala speakers and a balanced representation of English and Tamil speakers. In the instructional phase, the experimental group was taught English writing through computer-generated images, while the control group was taught using traditional methods such as still pictures. The performance of both groups was analyzed based on their scores in their post-test.

A structured survey was also conducted with 10 participants chosen for their relevance to the research focus. This phase aims to gather numerical insights into common attitudes, experiences, or knowledge about the study topic. The survey responses offered a broad overview of trends and patterns that informed us of the subsequent qualitative exploration. The survey-type design employed in this study was justified using reliable and valid measurement scales (Creswell & Creswell, 2018).

In addition, to deepen the understanding of key themes and context, 5 participants were invited for semi-structured interviews. These interviews allowed more open dialogue, enabling participants to expand their views and share personal experiences in detail. The flexible format supported the development of rich narrative data that matched the study's goals. For researchers, semi-structured interviews can be conducted with selected respondents who could offer insightful information. or experience of interest, thus producing detailed case-specific data (Silverman, 2020; Abeywickrama, 2019; Abeywickrama, 2021a; 2021b). In other words, the objective of employing semi-structured interviews was to gather comprehensive, rich data that can advance the knowledge of the field which is being researched.

Quantitative and Qualitative Data Analysis

Two types of methods, quantitative and qualitative, were applied in this research study to collect data and thereby answer the research questions. Quantitative research systematically investigates social phenomena using statistical or numerical data (Watson, 2015). This means that it is a research procedure that collects, analyzes, and interprets numeric data. For example, quantitative research collects data by sending online surveys, online polls, and questionnaires to existing and potential customers using relevant sampling methods. Quantitative data were collected and analyzed using basic statistics such as mean, standard deviation and t-test analysis. Furthermore, JASP software and statistical t-tests were also used to analyze quantitative data. These tests only examined differences between the scores of the Experimental and the Control groups before and after the implementation of CGI.

On the other hand, qualitative data analysis is a systematic process of examining non-numeric data to extract meaning, patterns, and insights. Qualitative research is a methodological approach that focuses on exploring human experiences, social phenomena, and complex social issues employing non-numerical data sources (Creswell, 2013; Abeywickrama, 2019). In contrast to quantitative analysis, which focuses on numbers and statistical metrics, the qualitative study focuses on the qualitative aspects of data, such as text, images, audio, and videos. It seeks to understand every aspect of human experiences, perceptions, and behaviors by examining their richness (Denzin & Lincoln, 2018; Pabodha, & Abeywickrama, 2021). The study used Braun & Clarke's (2006) Thematic Analysis (TA) to systematically identify, organize, and offer insight into patterns of meaning (themes) across the qualitative data. Focusing on meaning across a dataset allows the researcher to examine and make sense of collective or shared meanings and experiences. Identifying unique and individual meanings and experiences found only within a single data item is not the focus of Thematic Analysis (Braun & Clarke, 2006). Given this background, the six phases of TA: Familiarizing with the data, generating initial codes, searching for themes, reviewing potential themes, defining and naming themes, and producing the report, were employed to identify recurring patterns and themes within the interview data of the ESL practitioners who observed the intervention.

The Experimental group and the Control group were pre-tested to familiarize themselves with the content

and understand the difficulty level of each group. The instructional phase of the study involved the Experimental group using computer-generated images, while the Control group adopted a conventional teaching method using still pictures. Since the effectiveness of learning, self-assessment, or final accomplishment may not sufficiently demonstrate the performance improvements, post-tests were administered.

Pre- and post-test results were used to determine the first research question, which examines whether computer-generated imagery is effective in enhancing the creative writing skills of intermediate learners. A survey with 10 participants that examines the potential connection between computer-generated imagery and creative writing skills among intermediate-level ESL learners was used to answer the second research question. On the other hand, the results of the survey were beneficial to assess learners' perceptions of CGI and their perceived usefulness. The semi-structured interviews were used to identify the effectiveness of the intervention. T-test is the statistical Test used to determine whether ESL students can improve their writing abilities in terms of content, language, format and organization and procedure of writing

Results & Discussion

The present study investigated the advantages of Computer-generated imagery-based pedagogy over conventional methods in enhancing the creative writing skills of secondary school students. According to the scores of the pretest and post-test, the results of the paired sample T-Test were obtained using JASP. Table 01 illustrates the results of the paired sample T-test conducted on the Experimental Group. The p-value indicates statistical significance.

Summary of Study Participants

Table 1. Results of the Paired Samples T-Test

Measure 1	Measure 2	t	df	p
Post Test	Pre Test	5.809	29	<0.001
Note: Student's t-test				

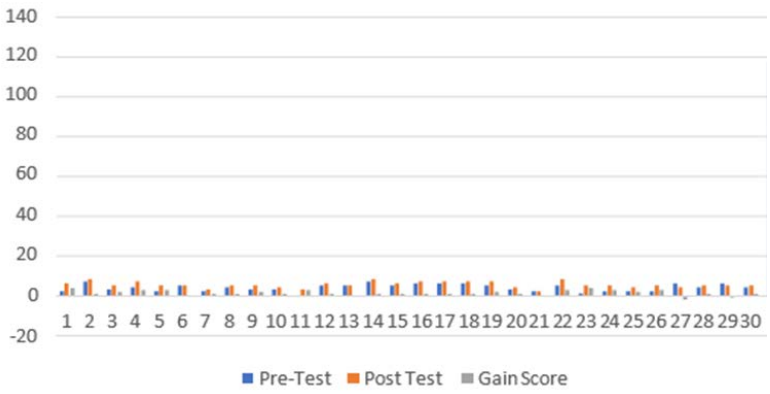


Figure 1: Analysis of Paired Samples T-Test Results of the Experimental Group

This figure illustrates the analysis of the paired samples T-test results for the Experimental group, which demonstrates changes in the key variables over time. The key findings were analyzed based on the pre-test and post-test results of the Experimental Group, as assessed through the Paired Samples T-test. The t-value 5.809 indicates a substantial difference between the pre-test and post-test scores of the Computer-Generated Imagery group. A higher t-value generally signifies a stronger effect size and a greater difference between the two measures.

The degrees of freedom (df) for this test were 29. Degrees of freedom are calculated based on the number of paired observations (n-1), where n is the number of students (30 pairs). The p-value, which is less than 0.001, is significantly lower than the common level of 0.05. The extremely low p-value suggests that the probability of the observed difference occurring due to random chance is minimal, thereby indicating a statistically significant effect. The p-value (< 0.001) confirms that the improvement from the pre-test to the post-test was statistically significant. It is noticeable that the observed difference in scores is not due to random chances, but rather a result of the intervention that was applied in the class between the two tests. The substantial improvement in post-test results indicates that the instructional techniques or approaches used during the intervention were successful in raising student achievement. This finding validates that the pupils' learning outcomes were enhanced by the intervention. It is particularly important to consider the practical significance, even though the statistical significance is evident. The significant t-value and low p-value show that the intervention's impact is both statistically significant in a real-world learning environment. The findings of the Paired Samples T-test demonstrated a statistically significant improvement in the Experimental group's pre-test and post-test scores. This confirms that improving student achievement through educational intervention was effective

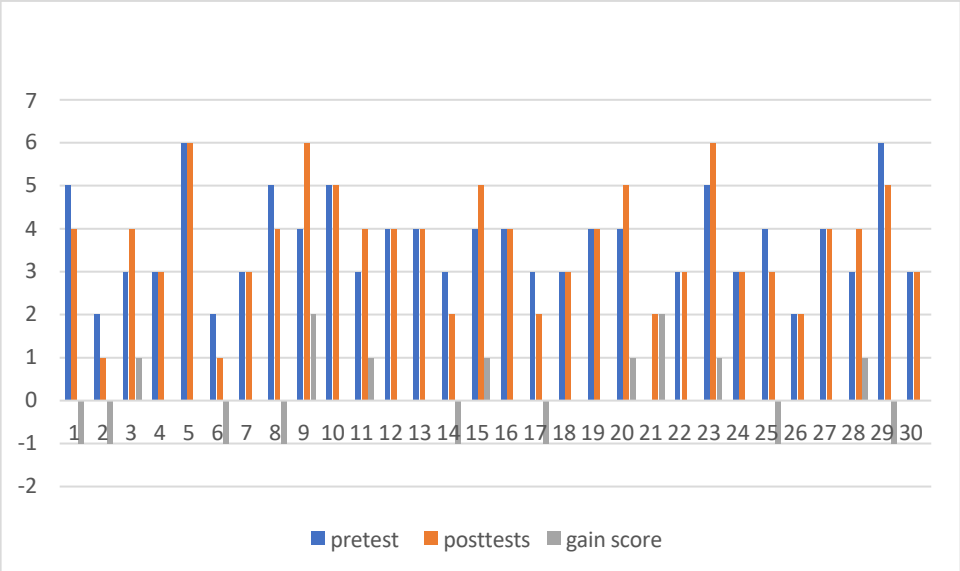
Comparison between Pre-test and Post-test Scores of the Control Group

According to the scores of the pre-test and the post-test, the results of the paired sample T-Test were obtained using JASP.

Table 2. Results of the Paired Samples T-Test

Measure 1	Measure 2	t	df	p
Post Test	Pre Test	0.421	29	0.677
Note: Student's t-test				

This table illustrates the results of the paired sample T-test for the control group. The p-value indicates statistical significance



Note. This figure displays the analysis of paired samples T-test results for the still picture-led group, highlighting changes in the key variables over time.

Figure 2: Analysis of Paired Samples T-Test Results of the Control Group

The T-test indicated a statistically significant improvement in the Experimental group's pre-test and post-test scores. This confirms that improving student achievement through educational intervention was effective. The higher p-value: 0.677 indicates that the pretest-post-test difference was not statistically significant, i.e., any difference observed is likely due to chance and not an actual effect. The results indicate no significant pretest-post-test difference at standard significance levels (e.g., $p < 0.05$). This means any intervention, instructional strategy, or experimental condition applied between pre-test and post-test failed to yield a statistically significant change.

Table 3. Independent Samples T-Test

	t	df	p
Gain Score	4.696	58	<0.001

Note: Student's t-test

Note. This table presents the results of the Independent Sample T-Test comparing the Experimental Group and Control Group. The p-value indicates statistical significance

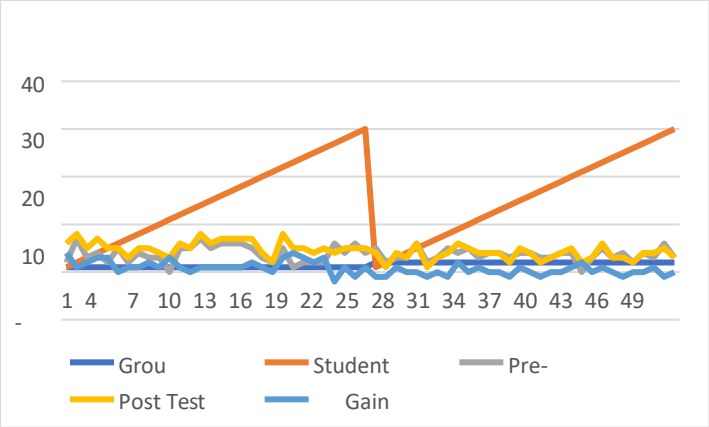


Figure 3: Comparison of the Results between the Experimental Group and the Control Group

The results of the Independent Sample T-Test, illustrated in Figure 3, indicate the following key implications. The t-value of 4.696 demonstrates a substantial difference between the mean values of the two groups being compared. A high t-value generally suggests that the observed difference was not due to random chance. As shown, the degrees of freedom for this test are 58. Degrees of freedom are derived from the number of observations and are used to interpret the significance of the t-value in the context of the t-distribution. The extremely low p-value, 0.001, which is considerably lower than the common alpha level of 0.05, shows that the probability of observing such a difference by chance is very low. Thus, it can be concluded that there is a statistically significant difference between the pre-test and post-test scores (< 0.001). This suggests that the intervention applied to the Computer-Generated Imagery group had a meaningful positive impact on the students' performance.

The Results of the Survey

The survey data collected from 10 participants provides insights into their perspectives on the use of computer-based imagery (CGI) in creative writing. The responses were rated on a Likert scale from 1 (strongly disagree) to 5 (strongly agree) (See Table 4).

Table 4- Perceptions of the Survey Participants

Question	Mean	Standard Deviation
1. Computer-based imagery enhances my creative writing.	3.4	1.1
2. Using computer-based imagery helps me visualize my story better.	4.4	0.8
3. I find it easier to develop characters with the help of imagery.	2.3	0.6
4. Computer-based imagery distracts me from focusing on my writing.	2.3	0.7
5. Imagery tools make the writing process more enjoyable.	3.6	0.6
6. I feel more confident in my writing when I use CGI.	4.2	0.9
7. Using imagery helps me overcome writer's block.	3.5	1.1
8. I prefer traditional writing methods over using CGI.	2.5	0.9
9. Imagery tools are essential for modern creative writing.	4.2	0.7
10. I would recommend using CGI to other writers.	4.1	0.7

As shown in Table 4 and Figure 4, computer-based imagery (CGI) can largely be considered beneficial in creative writing; conversely, its usefulness differs across different aspects of the writing process. Helping writers visualize their stories was reported as the strongest agreement in its role in (M = 4.4, SD = 0.8), ensuring confidence (M = 4.2, SD = 0.9), and indicating the perspective that such tools can be crucial for creative writing in the 21st century (M = 4.2, SD = 0.7). Moreover, respondents are highly likely to introduce CGI to other learners (M = 4.1, SD = 0.7), demonstrating an increasing acceptance of its effectiveness in current practice. On the contrary, the use of imagery in developing characters has received the lowest ratings (M = 2.3, SD = 0.6), suggesting an insignificant impact of CGI on in-depth narrative aspects, for instance, character complexity. Furthermore, moderately positive responses were received to questions on creativity (M = 3.4, SD = 1.1), enjoyment (M = 3.6, SD = 0.6), and resolving writer's block (M = 3.5, SD = 1.1); however, they indicated high diversity, emphasizing the impact of learners' individual differences on the way they engage with imagery. Most importantly, participants did not consider CGI a significant disturbance (M = 2.3, SD = 0.7), and they also did not strongly recommend traditional pedagogical tools over modern ones (M = 2.5, SD = 0.9). Overall, according to these findings, CGI was broadly valuable for visualization and personality development, whereas its effect on creativity and character development is limited. Hence, CGI can be perceived as a supplementary rather than a complete tool in creative writing.

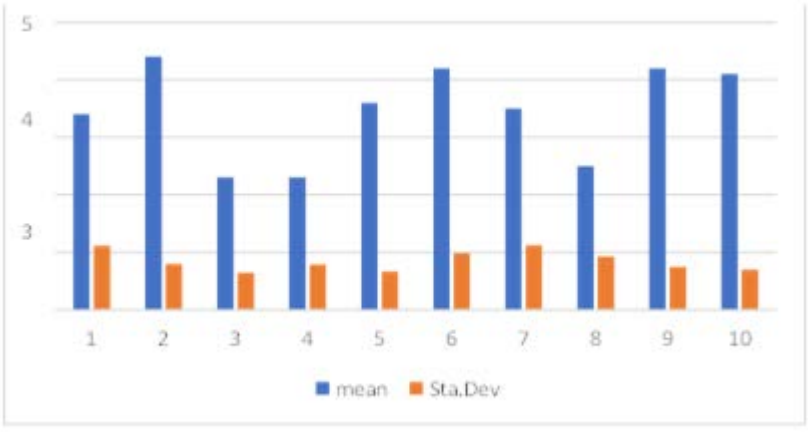


Figure 4: *Mean and the Standard Deviation of the Survey*

The participants had diverse educational backgrounds, ranging from average writing skills to advanced writing skills; however, they demonstrated a lack of motivation to write in their regular schools and home environments. The data was gathered as numerical scores and interpreted as a percentage and the overall value. Both pre-test and post-test marks were added to comparative tables and figures to reach conclusions on the impact the CGI animation had on the creative writing skills of the chosen students. The data revealed an insight into the population's writing skills in terms of structure, content, fluency, and cohesion. Consequently, feedback was generated through discussion and interviews to arrive at impactful conclusions regarding the use of CGI for enhancing creative writing. The independent samples T-test results show a statistically significant improvement in the Experimental group, which used the CGI during the intervention. This suggests that educational intervention was effective in enhancing students' writing performance. These findings support the continued use and further exploration of such strategies to improve learning outcomes across various educational contexts. The results of the Paired Samples T-Test show no statistically significant difference between the pre-test and post-test scores of the Control group, which used still pictures. This suggests that the educational intervention did not significantly impact on the students' performance.

Teachers' Perceptions of CGI and Creative Writing

Qualitative To support and validate the research findings, qualitative data were collected through unstructured interviews with five ESL practitioners. Overall, the teachers agreed that computer-generated imagery (CGI) plays a positive role in enhancing students' creative writing skills. According to the participants, CGI helps learners expand their vocabulary through digital resources and activates their prior knowledge by exposing them to rich and varied language contexts. For example, Participant 3 explained that detailed and interactive CGI visuals allow students to connect new ideas with existing cognitive frameworks, making the creative writing process more accessible and engaging. Similarly, Participant 4 emphasized that CGI significantly increases student motivation by offering visually stimulating prompts. These prompts encourage imaginative thinking, story development, and character creation, while supporting different learning styles—particularly for intermediate ESL learners. Teachers also highlighted the effectiveness of activities such as storyboarding and visual mapping, where students visually organize their ideas before writing. Using tools like Canva, Lucid Chart, and Miro, learners can structure their narratives, develop complex plots, and plan characters and themes more thoughtfully.

CGI was also perceived as a strong facilitator of collaborative learning. Group-based storytelling activities and shared digital documents encouraged teamwork, communication, and creativity. Role-playing tasks, in which students acted as characters from their stories, helped them explore multiple perspectives. As Participant 2 noted, such approaches foster cooperation and curiosity within the classroom, while Participant 1 highlighted that a supportive environment lowers students' affective filter, allowing them to take creative risks. However, Participant 3 raised a concern, noting that reliance on CGI may sometimes limit originality by reinforcing familiar visual stereotypes. Peer review emerged as another valuable collaborative strategy. Participant 5 explained that CGI-supported group writing aligns with Vygotsky's social learning principles, promoting discussion and shared meaning-making. This view is supported by previous research showing that collaborative writing can be more innovative and accurate than individual work (Storch, 2019).

In addition, teachers reported that CGI-based tasks simulating real-world writing—such as advertisements, video scripts, and blog posts—help students develop practical and career-related skills. Writing prompts linked to social justice, environmental issues, culture, or real-world events were found to deepen engagement. These findings align with Baresh (2024) and with Yuliantari and Huda (2023), who stress the importance of culture-responsive teaching in improving motivation and writing performance.

Finally, teachers observed that digital platforms, including CGI, blogging tools, AR/VR, and online publishing, significantly increased student enthusiasm and creativity. Tools such as digital portfolios and online publishing platforms further boosted students' confidence and sense of achievement. Overall, the integration of CGI helps create an interactive, imaginative learning environment that supports students' academic, creative, and professional development.

Conclusion

This study examines how using computer-generated imagery (CGI) in English language classrooms can enhance students' creative writing skills. The findings suggest that integrating CGI into the curriculum creates a more engaging and motivating environment for writing. Statistical results from the T-test show that students demonstrated clear improvement in their writing abilities after the intervention. Teachers also reported that CGI offers colorful and dynamic visuals that effectively spark students' imagination. When learners are presented with digitally created images—such as a mysterious forest or a futuristic city—they naturally begin to imagine stories based on what they see. This approach helps students move beyond traditional writing prompts and encourages them to explore richer, more imaginative ideas. In doing so, CGI supports creative storytelling and confirms a strong link between visual imagery and creative writing development. These outcomes align with constructivist learning theory, which emphasizes that students construct meaning through personal interpretation and experience. While CGI clearly enhances visualization and learner confidence, its impact on other aspects of creative writing may require more thoughtful and individualized implementation. Ongoing research and refinement can help educators use these tools more effectively.

Overall, the study concludes that CGI allows writers to visualize and explore narratives in ways that traditional methods cannot. Its vivid visuals stimulate imagination and support multisensory learning, leading to deeper engagement, greater creativity, and more innovative writing experiences.

Declarations

Ethics Approval and Consent to Participate: All participants provided informed consent before data collection. Their participation was entirely voluntary, and their responses were kept strictly confidential throughout the study.

Conflicts of Interest: Not Applicable.

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