Digital Storytelling to Improve English Narrative Writing Skills

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Abstract

This study investigated the impact of digital storytelling on narrative writing skills among less successful using a quasi-experimental design. Amidst the evolving educational landscape shaped by technology, digital storytelling emerges as a powerful method to address challenges faced by struggling learners. The study explored the foundational role of narrative writing in language development, recognizing the multifaceted challenges encountered by less successful young learners. These challenges, including vocabulary limitations, story structural issues, grammatical complexities, and motivation struggles, were addressed through a tailored solution—digital storytelling. The study involved two groups, one receiving a digital storytelling intervention and the other not. Pre and post-tests used standardized rubrics to identify significant differences between the two groups. Convenience sampling selected 30 participants from a Chinese primary school, focusing on less successful young learners with low to low-intermediate English proficiency. Results indicated significant improvements in mastery levels for both genders, supporting the positive impacts of digital storytelling on narrative writing skills. The study contributed insights such as recognising digital storytelling can effectively engage less successful young learners in the narrative writing process. It is beneficial for teachers to harness digital storytelling tools to improve narrative writing skills for less successful young learners.

Keywords: Digital Storytelling, Narrative Writing Skills, Education, Young Learners

Introduction

In a time when education increasingly intersects with the rapid advancement of technology, investigating innovative methods like digital storytelling is not just relevant, but critical (Chen & Chuang, 2021; Wu & Chen, 2020). This pioneering approach marks a significant shift, aiming to transform the educational scene by blending traditional storytelling with the limitless potential of digital platforms. The drive to explore this field arises from a pressing need to tackle the ongoing issues that young learners face, especially those who

struggle with English narrative writing (Tanrikulu, 2022; Beck & Neil, 2021; Churchill, 2020). This research stands at the crossroads of necessity and innovation, seeking to unlock the extensive advantages digital storytelling has to offer in transforming educational outcomes and creating a more inclusive and effective learning environment (Belda-Medina, 2022; Rodriguez et al., 2021; Di Blas, 2022). Digital storytelling, through its integration of visuals, audio, and video, goes beyond the confines of traditional text-based narratives. This approach is a deliberate shift meant to spark critical and creative thinking in young learners. The importance of this study is wide-ranging, addressing the complex issues that challenge less successful learners, such as enhancing limited vocabulary, rectifying structural inconsistencies, and overcoming motivational obstacles (Hava, 2021; Parsazadeh et al., 2021; Kristiawan et al., 2022). Digital storytelling is not just a remedy but a revolutionary power, enabling these learners to overcome difficulties and articulate their ideas with confidence. This method not only improved narrative abilities but also fostered a sense of ownership and pride in their work, critical for ongoing engagement and success (Nair & Yunus, 2021; Chen & Chuang, 2021). Moreover, this research's investigation into the gender-based differences in narrative writing skills after the intervention provides crucial insights into how digital storytelling affected learners differently (Convarrubias & Laiduc, 2022; Ozudogru & Cakir, 2021). These findings were essential for creating customized educational strategies that offered fair learning chances for all learners.

The Transformative Role of Digital Storytelling in Overcoming Narrative Writing Challenges

Digital storytelling involves the creation of stories using digital tools such as visuals, audio, and video (Miller, 2019; Nicoli et al., 2022). This method goes beyond traditional text-based narratives, opening new possibilities for young learners. The deliberate inclusion of multimedia elements is not merely a technological add-on but a strategic choice to encourage critical and creative thinking. In a world inundated with visual and auditory stimuli, young learners' minds engage more effectively when asked to create narratives extending beyond written words (Heinemeyer, 2020). Narrative writing is identified not merely as an academic exercise but as a versatile skill crucial for advancing language proficiency, communication skills, and critical thinking among young learners (Bland, 2022; Qian & Lin, 2019).. Beyond its linguistic dimensions, narrative writing serves as a vehicle for nurturing creativity and fostering a nuanced understanding of culture and history. The development of narrative writing skills is imperative for overall language growth and academic success, serving as a bridge between thoughts and effective communication (Wang, 2020; Hava, 2021). The journey of language acquisition is not universally easy, and those facing difficulties often encounter hurdles in mastering English narrative writing. A detailed understanding of these challenges is crucial for crafting interventions that genuinely assist struggling learners in overcoming diverse obstacles.

Less successful young learners often grapple with a limited vocabulary, hindering their ability to articulate ideas with diversity and nuance (Hardi et al., 2021; Moses & Mohamad, 2019). The struggle with incoherent narrative structures compounds the issue, as effective storytelling involves the use of transitional phrases, plot development, and character evolution (Mamduhan et al., 2019). These challenges may result in narratives lacking consistency and flow, making it difficult for readers to follow the story and grasp its message (Singh et al., 2023). Grammatical issues pose additional layers of complexity, as effective communication requires grammatically correct and punctuation-free narratives (Rahmawati & Latifah, 2019; Nur'ainy et al., 2023). Less successful young learners may struggle with these

aspects, potentially diminishing the quality of their writing and impeding reader comprehension. Beyond language challenges, motivation and engagement often pose significant hurdles. Difficulties in narrative writing may lead to a dislike for the subject, making it uninteresting or frustrating (Asiatidou, 2021; de Brún, 2023). Low motivation can result in underachievement and reluctance to participate, exacerbating language challenges (Hiver & Mercer, 2020; Camacho et al., 2021). Amid these challenges, digital storytelling emerges as a tailored and innovative solution to support less successful young learners in English narrative writing. Its impact extends beyond conventional methods, addressing motivation, creativity, and the structural aspects of narrative composition (Palmer, 2022). Digital storytelling provides a canvas for young learners to create narratives using various digital tools, intentionally including multimedia elements to accommodate diverse learning styles.

Digital Storytelling: Promoting Creativity, Engagement and Ownership in Writing

Digital storytelling adds an element of fun and ownership to the writing process. By integrating graphics, audio, or videos into their narratives, less successful young learners not only enhance their stories but also gain a sense of ownership (Kim & Li, 2021). This collaborative and interactive experience fosters creative thinking, resulting in more engaging narratives. The interactive and visual nature of digital storytelling allows learners to experiment with sequencing, pacing, and multimedia elements (Miller, 2019; Symrnaiou et al., 2020). This helps them construct stories with a clear narrative arc and serves as a platform for practice and improvement in a supportive and engaging environment (Lantz et al., 2020; Palioura & Dimoulas, 2022). Digital storytelling goes beyond traditional literacy, nurturing 21st-century skills essential in today's information and technology-driven world (Yang et al., 2022; Tabieh et al., 2021). It empowers young learners to create multimedia narratives, navigate online platforms, critically evaluate media sources, and express ideas in various mediums (Djonov et al., 2021; Towndrow & Kogut, 2020). These skills extend beyond narrative writing, preparing learners for future educational and professional pursuits.

By showing the effectiveness of digital storytelling in improving narrative writing skills among young learners, particularly those who have found this part of language arts difficult, the research offered an important guide for educators, policy makers, and curriculum designers (Wu & Chen, 2020; Hwang et al., 2023). It promoted the incorporation of digital storytelling into educational plans as a way to enhance not just language and narrative skills but also digital literacy—a vital ability in the contemporary, tech-driven landscape (Wu & Chen, 2020; Nair & Yunus, 2021). In summary, this investigation into the effects of digital storytelling on enhancing narrative writing skills in less successful young learners was a powerful call for innovation in education. It highlighted the urgent necessity to leverage digital technology for education and literacy, aiming for a future where every learner can reach their full potential. This research contributed to enhancing accessibility, engagement, and impact in narrative writing education for a group often challenged in conventional learning settings. This research was carried out to find out the research questions on (1) How does the implementation of digital storytelling affect the mastery level of narrative writing skills among young learners by comparing their skills before and after the intervention and (2) What are the gender-based differences in the mastery level of narrative writing skills among young learners following the utilization of digital storytelling.

Literature Review

The literature review delves into the multifaceted role of English narrative writing and the transformative impact of digital storytelling on the learning experiences of less successful young learners.

English Narrative Writing

English narrative writing emerges as a cornerstone for young learners, playing a pivotal role in honing language skills, fostering creativity, critical thinking, and facilitating effective communication (Syarifah & Emiliasari, 2019; Liang & Fung, 2021; Yang et al., 2022). For less successful young learners grappling with language challenges, narrative writing becomes a crucial tool for language acquisition and development. This form of writing goes beyond a mere exercise in linguistic expression; it entails constructing compelling narratives with characters, settings, storylines, and resolutions (Burroway et al., 2019; Boyd et al., 2020). Through narrative writing, less successful young learners are compelled to acquire language abilities by employing descriptive language, understanding story structure, and navigating vocabulary and grammar intricacies. The engagement fostered by narrative writing transcends rote memorization, fostering critical thinking, organizational skills, and nurturing creativity (Bekar, 2019; Nair & Yunus, 2022). The analytical and critical thinking skills are further developed as less successful young learners are tasked with choosing plot elements, characters, and pacing, encouraging creativity and imagination. Moreover, narrative writing provides a platform for self-expression in a fun and secure manner, contributing to enhanced self-esteem and enthusiasm for English studies among less successful young learners (De Benetti, 2023). This process serves as a diagnostic tool for teachers, aiding in the identification of weaknesses and enabling focused support. The amalgamation of traditional storytelling with multimedia elements, encapsulated in the concept of digital storytelling, introduces an innovative and interactive dimension to language acquisition (Rong & Noor, 2019; Moradi & Chen, 2019). This synthesis of technology and storytelling presents an exciting and meaningful approach to narrative writing, promising encouraging results in improving less successful young learners' English narrative writing skills.

Application of Digital Storytelling in the Classroom

Digital storytelling emerges as a transformative force in education, utilizing narrative and digital technology to elevate learning and creativity for less successful young learners. This approach involves creating and sharing narratives through multimedia elements, including images, audio, video, and interactive features, thereby imbuing learning with dynamism and immersiveness (Rehiem, 2021; Wu & Chen, 2020). The popularity of digital storytelling in education lies in its ability to make knowledge more interesting and relatable for less successful young learners with diverse learning styles. It represents a shift from passive learning to active participation, empowering less successful young learners as content creators rather than passive recipients of knowledge. Digital storytelling not only fosters narrative writing skills but also becomes a catalyst for the development of critical thinking, communication, and problem-solving skills (Hung, 2019; Al-Shaye, 2021). The flexibility inherent in digital storytelling allows teachers to tailor assignments to the diverse needs and learning styles of less successful young learners, making it an inclusive educational technique catering to both high-achieving and struggling learners (Chen, 2023; Van Galen, 2023). Beyond narrative writing skills, digital storytelling prepares less successful young learners for a tech-driven future by imparting digital literacy, visual communication, and multimedia

production skills. The integration of technology not only enhances narrative writing proficiency but also equips less successful young learners with 21st-century skills.

Previous Studies of Using Digital Storytelling to Enhance Writing Skills

A plethora of research studies have investigated the impact of digital storytelling on writing skills, particularly for less successful young learners. These studies collectively underscore the positive effects of digital storytelling on engagement, creativity, and writing quality. Digital storytelling tools, characterized by multimedia and interactivity, have been demonstrated to engage less successful young learners effectively, inspiring them to approach writing more creatively (Addone et al., 2022; Nair & Yunus, 2021; Hamilton et al., 2019). The inclusion of visual, audio, and video elements not only enhances narrative development but also contributes to greater organization and coherence in the writing produced by less successful young learners. Research findings consistently point to the notion that digital storytelling serves as a catalyst for enhanced writing engagement, creativity, and overall writing quality. The interactive nature of multimedia elements within digital storytelling tools engages less successful young learners, making the writing process enjoyable and meaningful. This heightened engagement is associated with increased perseverance and improved writing outcomes.

Digital storytelling not only improves writing skills but also nurtures digital literacy beyond the realm of writing. Less successful young learners master digital tools, improving their digital proficiency and preparing them for a technologically driven future. The collaborative nature of digital storytelling initiatives, involving audio, video, and design components, enhances writing skills and provides a platform for peer learning (Wu & Chen, 2020). The customizable nature of digital storytelling makes it an inclusive writing tool, adaptable to the varied needs and abilities of less successful young learners. In conclusion, the cumulative evidence from prior studies underscores the transformative potential of digital storytelling in improving student writing and creativity. It serves as a powerful tool for engaging less successful young learners, making the learning process enjoyable, engaging, and accessible. The findings suggest that digital storytelling has the capacity to enhance not only writing proficiency but also other essential skills, such as critical thinking, motivation, and digital literacy, contributing to a holistic development of less successful young learners in English narrative writing.

Theoretical Framework

The research framework is constructed based on the ideas of constructivism and sociocultural theory, where learners actively create knowledge through experiences. Drawing on the work of Vygotsky, the study embraced the notion that active participation enhances learning. Digital storytelling serves as a platform for less successful young learners to construct narratives, enabling them to explore language and develop English narrative writing skills. Vygotsky's Zone of Proximal Development (ZPD) theory is employed to tailor digital storytelling to each learner's abilities (Abderrahim & Plana, 2021). This approach optimizes skill development by providing multimedia and technological support within the learner's ZPD, enhancing their narrative writing capabilities. The theoretical foundation, rooted in constructivism and ZPD, laid the groundwork for understanding how digital storytelling can enhance English narrative writing skills for underachieving young learners.
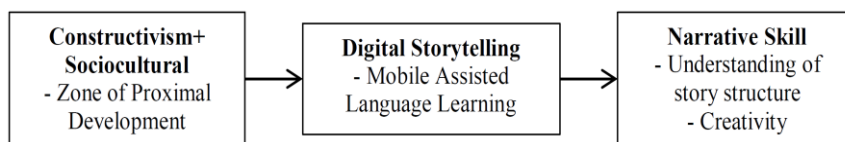
Figure 1. Theoretical framework of the study

Research Method

This study was a quantitative study. In the realm of quantitative study, Creswell and Clark (2002), as cited in Rashid et al (2021) emphasized on the importance of getting correct and reliable data in quantitative studies. Since the designed questions of this study were quantifiable, it allowed the research to establish accurate statistical analysis.

Research Design

To assess the impact of digital storytelling on less successful young learners struggling with narrative writing, a quasi-experimental study design was employed. Two groups were compared: one received a digital story intervention and the other did not. The intervention consisted of carefully selected digital storytelling activities with interactive tools, online writing platforms, and multimedia elements. The effectiveness of the intervention was measured using pre- and post-tests on narrative writing, with standardized rubrics ensuring consistency in evaluation. Quantitative data were analyzed using descriptive statistics to identify significant differences between the experimental and control groups.

Sampling

A convenience sampling approach was used to select 30 participants from a lower primary standard of a vernacular Chinese primary school in the Kepong district in Malaysia. Participants were from less successful young learners with English proficiency ranging from low to low-intermediate levels. This approach aimed to gain profound insights into the impact of digital storytelling on English narrative writing skills among struggling learners. The selection of 30 participants in the research was attributed to tight timelines.

Tests Instrument

The test was divided into two parts: the pre-test and the post-test. During the pre-test, participants responded to a writing prompt after working on a given topic. Following the intervention, the post-test was administered, requiring participants to write a narrative of 30 to 80 words based on a provided situation. Both tests were evaluated using a scoring rubric that considered various aspects, including story structure, language proficiency, content, creativity, and engagement. The rubric was adapted from a prior study Giannakou and Klonari (2019) and had a total score of 10 marks. Table 1 presented the holistic scoring writing rubric employed to assess participants' narrative writing skills.

Table 1
Narrative writing rubric

Categories	Descriptions
Content (4 marks)	4 - Clear prompt understanding with a well-developed plot. 3 - Prompt understanding with adequate plot development. 2 – Basic understanding with a somewhat developed plot. 1 – Lacks prompt understanding with an underdeveloped plot.
Organisation (3 marks)	3 – Logical flow. 2 - Some flow issues. 1 – Disjointed flow.
Language (2 marks)	2 – Sophisticated language. 1 - Vague language.
Mechanics (1 mark) *Standard writing instructional method	1 – Free from major errors. 0 – Significant errors.
Creativity (1 mark) *Digital storytelling intervention	1 – Creative. 0 – Poor integration of digital elements.

Adapted from: Giannakou, O., & Klonari, A. I. (2019). Digital storytelling in education using Webgis. *European Journal of Geography*, *10*(3).

Ensuring the credibility and trustworthiness of research results relied on enhancing validity. Validity pertains to how well a study measures its intended construct, while reliability concerns the consistency of results over time (Quintao et al., 2020). Content validation is a method to enhance validity, involving a meticulous examination of a survey questionnaire and test items by two field experts. These experts, including the head of the English panel with eight years of teaching experience and a specialist in designing questions for the primary school national final exam of the academic session which is also known as Ujian Akhir Sesi Akademik (UASA), reviewed items to ensure accurate representation of the measured construct. Their feedback helped identify any ambiguities or irrelevant elements that might require adjustment.

The validity analysis, presented in Table 2, indicated a total summary value averaging 80.7%, suggesting high content validity and acceptance of the items. A study from Tuckman and Waheed (1981), as cited in Ismail et al (2019) pointed out that a content validity index obtained exceeding 70% indicated a strong level of agreement among experts. Furthermore, a pilot test with a small sample was conducted to gain insights into item clarity and relevance.

Feedback from pilot participants aided in identifying potential issues and making necessary adjustments to enhance the content validity of the test instrument.

Table 2
Content validity analysis

Experts	Content Validity Level (%)	Experts View
Expert 1 (UASA specialist)	76.9%	Accepted
Expert 2 (Head of the English Panel)	84.6%	Accepted
Total summary value	80.7%	Accepted

Data Collection Methods

Quantitative data was collected using pre- and post-tests to assess narrative writing skills before and after the digital storytelling intervention. Standardized writing tasks and scoring rubrics ensured consistency in evaluation. Descriptive statistical analysis, including mean scores, was used to present numeric data and identify trends in a structured and measurable data analysis. This approach aimed to provide a comprehensive understanding of how the digital storytelling intervention influenced the English narrative writing skills of less successful young learners over time.

Results and Discussion

The research results are presented in a structured manner using tables for visual accessibility. The presentations of findings addressed the research objectives, investigating the overall impact of digital storytelling on narrative writing skills as well as examining gender-based differences in mastery levels in post digital storytelling intervention.

Gender

As shown in Table 3, this research included a total of 30 participants, providing insights into their gender distribution. Among them, 18 participants (60%) were boys. Meanwhile, 12 participants (40%) were girls.

Table 3
Gender of research participants

Gender	Frequency (n)	Percentage (%)
Boy	18	60
Girl	12	40
Total	30	100

Digital storytelling's overall impact on narrative writing through pre and post tests

The assessment of less successful young learners' mastery levels in narrative writing skills before and after interventions is summarized in Table 4. The results indicated significant improvements across various scoring ranges after the implementation of interventions. In the pre-test, a considerable number, particularly 17 participants, scored between 0 and 3, highlighting a lack of proficiency in narrative writing skills.

Table 4
Narrative writing mastery levels before and after the intervention (n=30)

Mark range	Pre-test (participants)	Post-test (participants)	Mark interpretation
0-3	17	4	Not mastered the minimum level
4-5	13	7	Mastered the minimum level
6-8	0	10	Satisfactory
9-10	0	9	Good

After interventions in the post-test, this number decreased to 4, signifying a positive impact on the participants' narrative writing abilities. In the pre-test, 13 participants fell within the 4 to 5 mark range, representing the minimum level of mastery. In the post-test, 7 participants displayed a positive trend, indicating maintenance or additional improvement within this group. No participants scored within the 6 to 8 range in the pre-test, but in the post-test, 10 participants demonstrated proficiency, showcasing successful improvement. Notably, none of the participants scored within the 9 to 10 range in the pre-test, while in the post-test, 9 participants achieved scores within this higher range, reflecting commendable competency post-intervention. In summary, the data revealed notable improvements in the narrative writing skills of less successful young learners who initially struggled, following the introduction of interventions. This is evident in the reduction of participants below the minimum level of competence and the rise in those attaining mastery and higher levels of proficiency.

Gender-based differences in narrative writing mastery levels before and after the intervention

Based on the analysis of pre and post-test scores in Table 5 along with gain scores for both boys and girls, in the pre-test, boys averaged a score of 3.5%, while girls achieved a slightly higher average of 3.67%. Post-test results showed significant improvement for both genders, with boys obtaining a mean score of 6.56%, surpassing girls' average of 6.5%. This positive outcome was evident in the gain scores, indicating improvement from the pre-test to the post-test. Boys exhibited a notable increase in overall performance, with a significant gain score of +3.06%, while girls also showed substantial progress with a gain score of +2.83%. These gain scores underscore the effectiveness of standard writing instruction and digital storytelling interventions during the pre and post-tests. Despite improvements in both genders, boys demonstrated a slightly higher percentage gain than girls, suggesting a positive impact on boys' learning achievements. Further investigation into the specific elements of the intervention contributing to these improvements, and whether certain teaching methods catered to each gender, would be valuable. Overall, pre- and post-test scores indicate improvement in learning achievements for both boys and girls, providing insights for future research on gender-specific effects of educational interventions and contributing to the enhancement of teaching methods and learning outcomes among less successful young learners.

Table 5

Score analysis of the pre and post tests

Gender	Average Score of Pre Test (%)	Average Score of Post Test (%)	Gain Score
Boy	3.5	6.56	+3.06
Girl	3.67	6.5	+2.83

In the gender-specific study, the results support Constructivism, emphasizing inclusivity and fairness. Both boys and girls showed significant improvements in their narrative writing skills after the digital storytelling intervention. This suggested that the benefits of digital storytelling go beyond gender differences, creating an educational environment that is fair and all-encompassing. The boys, with notable score increases, demonstrated substantial progress in their narrative writing abilities. Aligned with Vygotsky's Zone of Proximal Development (ZPD) principles, the digital and interactive elements effectively appealed to boys who prefer technology-oriented learning (Yan & Wang, 2022; Bagdi et al., 2023). Moreover, the engagement with technology and collaborative storytelling activities aligned with the sociocultural learning theory, encouraging a shared learning experience to benefit both genders. This can be seen from girls who exhibited a similar positive trend, showing a significant improvement in their narrative writing proficiency. This indicated that the benefits of digital storytelling were not influenced by gender, providing an equal opportunity for both boys and girls to learn. The absence of significant gender differences in the gain scores underscored the potential of digital storytelling to cater to diverse learning styles and preferences. By creating a dynamic and engaging learning environment, digital storytelling becomes a tool to promote an inclusive educational experience (Nair & Yunus, 2021; Chen, 2023; Van Galen, 2023).

The Overall Impact of Digital Storytelling on Narrative Writing Skills

The study investigated how digital storytelling influences the narrative writing skills of less successful young learners, aligning with Constructivist learning theory principles. Before digital storytelling implementation, these participants demonstrated a basic proficiency level, indicating moderate confidence in narrative writing. The first measurement served as a reference for understanding their starting point based on constructivist ideas that learning builds on previous experiences. Post-implementation, significant improvement in mastery levels was observed, aligning with Vygotsky's Zone of Proximal Development (ZPD). The interactive and multimedia elements in digital storytelling provided structured support, boosting confidence within the students' ZPD and aiding improvement beyond initial skill levels. Moreover, the enhanced understanding of narrative structure post-implementation resonates with the constructivist concept of making mental models. Digital storytelling improved comprehension, enabling students to create well-structured and engaging stories (Nicoli et al., 2022; Del-Moral-Perez et al., 2019). Summarily, learning theories like Constructivism and Vygotsky's ZPD emphasize the meaningful impact of digital storytelling on less successful young learner's narrative writing skills, enhancing technical writing, fostering positive self-perception and deepening comprehension holistically.

Earlier research also showed that digital storytelling helped improve how well learners could write stories. Studies discovered that digital storytelling got students more involved in narrative writing, which made them more creative and their stories more logically connected (Elizabeth et al., 2022; Tinialishel et al., 2023). This study added new information by looking at whether boys and girls benefited differently and paying attention to students who usually

didn't do as well. While some research thought digital tools might help boys more (Shin & Kim, 2022), this study found that digital storytelling helped both boys and girls equally, highlighting its importance in making sure everyone had the same opportunities. This research provided empirical evidence supporting the integration of digital storytelling in educational settings to foster an inclusive environment that catered to diverse learning preferences and needs. The improvements in narrative writing skills among both genders and less successful learners highlighted how digital storytelling could help close the gap in learning and enhance educational outcomes for all students. This research suggested several implications for educational practice and policy. It showed that digital storytelling could be a great way for teachers to reach students of all backgrounds, including those who might have struggled with or been less confident in their narrative writing skills. Schools and educational policymakers should have considered adding digital storytelling into lessons, and providing teachers with the necessary training and resources to implement it effectively.

Conclusion

The study investigated the efficacy of digital storytelling in improving narrative writing skills among less successful young learners facing challenges such as limited vocabulary, structural issues, grammatical complexities, and motivation struggles. Positioned as a tailored solution, digital storytelling demonstrated benefits beyond traditional methods by enhancing motivation, addressing structural challenges, and fostering 21st-century skills. Rooted in constructivism and Vygotsky's Zone of Proximal Development, the theoretical framework provided a basis for understanding the positive impact of digital storytelling on narrative writing skills. The research objectives, assessing overall impact and exploring gender-based differences, were achieved through a quasi-experimental design with pre- and post-tests, revealing significant improvements for both genders. The study concluded that digital storytelling positively influences narrative writing, offering promising interventions for less successful young learners and providing valuable insights for educators, policymakers, and academics. However, the research acknowledged limitations in generalizability due to the specific participant group and suggested future studies explore nuanced factors influencing gender-based variations in digital storytelling interventions across diverse educational contexts.

Acknowledgements

References

Abderrahim, L., & Plana, M. G. C. (2021). *A theoretical journey from social constructivism to digital storytelling.* The EUROCALL Review, 29(1), 38-49. https://doi.org/10.4995/eurocall.2021.12853

Addone, A., De Donato, R., Palmieri, G., Pellegrino, M. A., Petta, A., Scarano, V., & Serra, L. (2021). *Novelette, a usable visual storytelling digital learning environment.* IEEE Access, 9, 168850-168868. https://doi.org/10.1109/ACCESS.2021.3137076

Al-Shaye, S. (2021). *Digital storytelling for improving critical reading skills, critical thinking skills, and self-regulated learning skills.* Kıbrıslı Eğitim Bilimleri Dergisi, 16(4), 2049-2069. http://dx.doi.org/10.18844/cjes.v16i4.6074

Asiatidou, K. (2021). *Teaching Writing to Non-Native English Majors: A New Sophistic Approach to the Purpose and Syllabus of First-Year Writing.* Journal of Narrative and Language Studies, 9(18), 397-411.

Bagdi, H., Bulsara, H. P., Sankar, D., & Sharma, L. (2023). *The transition from traditional to digital: factors that propel Generation Z's adoption of online learning.* International Journal of Educational Management, 37(3), 695-717. http://dx.doi.org/10.1108/IJEM-01-2023-0003

Beck, M. S., & Neil, J. A. (2021). *Digital storytelling: A qualitative study exploring the benefits, challenges, and solutions.* CIN: Computers, Informatics, Nursing, 39(3), 123-128. https://doi.org/10.1097/cin.0000000000000667

Bekar, N. C. (2019). *Exploring the effects of digital storytelling on young learners'motivation, vocabulary learning and retention in foreign language teaching.* Çukurova Üniversitesi, Adana

Belda-Medina, J. (2022). *Promoting inclusiveness, creativity and critical thinking through digital storytelling among EFL teacher candidates.* International Journal of Inclusive Education, 26(2), 109-123. https://doi.org/10.1080/13603116.2021.2011440

Bland, J. (2022). *Compelling stories for English language learners: Creativity, interculturality and critical literacy.* Bloomsbury Publishing.

Boyd, R. L., Blackburn, K. G., & Pennebaker, J. W. (2020). *The narrative arc: Revealing core narrative structures through text analysis.* Science advances, 6(32), eaba2196. http://dx.doi.org/10.1126/sciadv.aba2196

Burroway, J., Stuckey-French, E., & Stuckey-French, N. (2019). *Writing fiction: A guide to narrative craft.* University of Chicago Press.

Camacho, A., Alves, R. A., & Boscolo, P. (2021). *Writing motivation in school: A systematic review of empirical research in the early twenty-first century.* Educational Psychology Review, 33(1), 213-247. https://psycnet.apa.org/doi/10.1007/s10648-020-09530-4

Chen, H. L., & Chuang, Y. C. (2021). *The effects of digital storytelling games on high school students' critical thinking skills.* Journal of computer assisted learning, 37(1), 265-274. https://doi.org/10.1111/jcal.12487

Chen, H. J. (2023). *Multimodal digital storytelling presentations in EFL contexts: learning outcomes, positive/negative affects, and perception between high-/low-achieving learners.* Innovation in Language Learning and Teaching, 1-16. https://doi.org/10.1080/17501229.2023.2255977

Chen, Hsieh-Jun. *"Multimodal digital storytelling presentations in EFL contexts: learning outcomes, positive/negative affects, and perception between high-/low-achieving learners." Innovation in Language Learning and Teaching* (2023): 1-16. https://doi.org/10.1080/17501229.2023.2255977

Churchill, N. (2020). *Development of students' digital literacy skills through digital storytelling with mobile devices.* Educational Media International, 57(3), 271-284. https://doi.org/10.1080/09523987.2020.1833680

Covarrubias, R., & Laiduc, G. (2022). *Complicating college-transition stories: Strengths and challenges of approaches to diversity in wise-story interventions.* Perspectives on Psychological Science, 17(3), 732-751. https://doi.org/10.1177/17456916211006068

De Benetti, S. (2023). *Using Storytelling in the Primary EFL Classroom: A Pilot Project to Promote Motivation.*

de Brún, C. (2023). *A Critical Approach to Overcoming Resistance to Academic Writing and Building Confidence in Third Level Students.* All Ireland Journal of Higher Education, 15(1).

Di Blas, N. (2022). *Authentic learning, creativity and collaborative digital storytelling.* Educational Technology & Society, 25(2), 80-104.

Djonov, E., Tseng, C. I., & Lim, F. V. (2021). *Children's experiences with a transmedia narrative: Insights for promoting critical multimodal literacy in the digital age.* Discourse, Context & Media, 43, 100493. https://doi.org/10.1016/j.dcm.2021.100493

Elizabeth Su Xin-Li, Hamidah Yamat, Nur Ehsan Mohd Said, Tan Kim Hua (2022). *Hots questions and narrative writing ability of lower primary pupils in a vernacular school.* World Journal of English Language, 12(5):148-15. http://dx.doi.org/10.5430/wjel.v12n5p148

Giannakou, O., & Klonari, A. I. (2019). *Digital storytelling in education using Webgis.* European Journal of Geography, 10(3).

Hadi, M. S., Izzah, L., & Paulia, Q. (2021). *Teaching writing through Canva application.* Journal of Languages and Language Teaching, 9(2), 228-235.

Hamilton, A., Rubin, D., Tarrant, M. A., & Gleason, M. (2019). *Digital storytelling as a tool for fostering reflection.* Frontiers: The Interdisciplinary Journal of Study Abroad, 31(1), 59-73. https://doi.org/10.36366/frontiers.v31i1.443

Hava, K. (2021). Exploring the role of digital storytelling in student motivation and satisfaction in EFL education. Computer Assisted Language Learning, 34(7), 958-978. http://dx.doi.org/10.1080/09588221.2019.1650071

Heinemeyer, C. (2020). *Storytelling in participatory arts with young people: the gaps in the story.* Springer Nature.

Hiver, P., Al-Hoorie, A. H., & Mercer, S. (Eds.). (2020). *Student engagement in the language classroom (Vol. 11).* Multilingual Matters. https://doi.org/10.21832/9781788923613

Hung, S. T. A. (2019). *Creating digital stories*. Journal of Educational Technology & Society, 22(2), 26-37.

Hwang, G. J., Zou, D., & Wu, Y. X. (2023). *Learning by storytelling and critiquing: a peer assessment-enhanced digital storytelling approach to promoting young students' information literacy, self-efficacy, and critical thinking awareness.* Educational technology research and development, 71(3), 1079-1103. http://dx.doi.org/10.1007/s11423-022-10184-y

Ismail, M. E., Zakaria, A. F., Ismail, I. M., Othman, H., Samsudin, M. A., & Utami, P. (2019). *Design and development of augmented reality teaching kit: in TVET learning context.* International Journal of Engineering & Technology, 8(1), 129-34. http://dx.doi.org/10.14419/ijet.v8i1.1.24792

Kim, D., & Li, M. (2021). *Digital storytelling: Facilitating learning and identity development.* Journal of Computers in Education, 8, 33-61. https://doi.org/10.1016/j.compedu.2020.104040

Kristiawan, D., Ferdiansyah, S., & Picard, M. (2022). *Promoting Vocabulary Building, Learning Motivation, and Cultural Identity Representation through Digital Storytelling for Young Indonesian Learners of English as a Foreign Language.* Iranian Journal of Language Teaching Research, 10(1), 19-36. http://dx.doi.org/10.30466/ijltr.2022.121120

Lantz, J. L., Myers, J., & Wilson, R. (2020). *Digital storytelling and young children: Transforming learning through creative use of technology.* In Handbook of research on integrating digital technology with literacy pedagogies (pp. 212-231). IGI Global.

Liang, W., & Fung, D. (2021). *Fostering critical thinking in English-as-a-second-language classrooms: Challenges and opportunities*. Thinking Skills and Creativity, 39, 100769. https://doi.org/10.1016/j.tsc.2020.100769

Mamduhan, R. H., Fitriati, S. W., & Sutopo, D. (2019). *Coherence in the narrative texts of Eastvaganza story writing contest for senior high-school students*. English Education Journal, 9(1), 84-32. https://doi.org/10.15294/eej.v9i1.25900

Miller, C. H. (2019). *Digital Storytelling 4e: A creator's guide to interactive entertainment.* CRC Press.

Moradi, H., & Chen, H. (2019). *Digital storytelling in language education.* Behavioral Sciences, 9(12), 147. https://doi.org/10.3390%2Fbs9120147

Moses, R. N., & Mohamad, M. (2019). *Challenges faced by students and teachers on writing skills in ESL Contexts: A literature review.* Creative Education, 10(13), 3385-3391. https://doi.org/10.4236/ce.2019.1013260

Nair, V., & Yunus, M. M. (2021). *A systematic review of digital storytelling in improving speaking skills.* Sustainability, 13(17), 9829. https://doi.org/10.3390/su13179829

Nicoli, N., Henriksen, K., Komodromos, M., & Tsagalas, D. (2022). Investigating digital storytelling for the creation of positively engaging digital content. EuroMed Journal of Business, 17(2), 157-173. http://dx.doi.org/10.1108/EMJB-03-2021-0036

Nur'ainy, S. A., Johan, A. N., Masykuri, E. S., Dewi, P., & Tusino, T. (2023). *Capitalization and Punctuation Used in Writing Narrative Text.* Scripta: English Department Journal, 10(1), 59-66. https://doi.org/10.37729/scripta.v10i1.2396

Özüdoğru, G., & Çakır, H. (2021). *Non-linear digital storytelling: Effect on technology utilization and writing self-efficacy.* Technology in Society, 67, 101798. https://doi.org/10.1016/j.techsoc.2021.101798

Palioura, M., & Dimoulas, C. (2022). *Digital Storytelling in Education: A Transmedia Integration Approach for the Non-Developers.* Education Sciences, 12(8), 559. https://doi.org/10.3390/educsci12080559

Palmer, J. (2022). *Underachievement in story writing: Using psychological theories to investigate boys' perceptions and experiences.*

Parsazadeh, N., Cheng, P. Y., Wu, T. T., & Huang, Y. M. (2021). *Integrating computational thinking concept into digital storytelling to improve learners' motivation and performance.* Journal of Educational Computing Research, 59(3), 470-495. http://dx.doi.org/10.1177/0735633120967315

Qian, D. D., & Lin, L. H. (2019). *The relationship between vocabulary knowledge and language proficiency.* The Routledge handbook of vocabulary studies, 66-80.

Quintão, C., Andrade, P., & Almeida, F. (2020). *How to Improve the Validity and Reliability of a Case Study Approach?.* Journal of Interdisciplinary Studies in Education, 9(2), 264-275. https://doi.org/10.32674/jise.v9i2.2026

Rahiem, M. D. (2021). *Storytelling in early childhood education: Time to go digital.* International Journal of Child Care and Education Policy, 15(1), 1-20. http://dx.doi.org/10.1186/s40723-021-00081-x

Rahmawati, I. N., & Latifah, N. (2019). *Teaching and learning narrative text writing through story mapping.* English Education: Jurnal Tadris Bahasa Inggris, 12(1), 78-96. http://dx.doi.org/10.24042/ee-jtbi.v12i1.4428

Rashid, A., Rasheed, R., Amirah, N. A., Yusof, Y., Khan, S., & Agha, A. A. (2021). A Quantitative Perspective of Systematic Research: Easy and Step-by-Step Initial Guidelines. Turkish Online Journal of Qualitative Inquiry, 12(9).

Rodríguez, C. L., García-Jiménez, M., Massó-Guijarro, B., & Cruz-González, C. (2021). *Digital storytelling in education: A systematic review of the literature.* Rev. Eur. Stud., 13, 13. http://dx.doi.org/10.5539/res.v13n2p13

Rong, L. P., & Noor, N. M. (2019). *Digital storytelling as a creative teaching method in promoting secondary school students' writing skills.* International Journal of Interactive Mobile Technologies, 13(7), 117-128. https://doi.org/10.3991/ijim.v13i07.10798

Shin Yee Lim & Kim Hua Tan. (2022). *Teaching Descriptive Writing Via Google Classroom Stream: Perception among Year 6 Primary Students.* Theory and Practice in Language Studies, 12 (4), 647-65. DOI: https://doi.org/10.17507/tpls.1204.04

Singh, N., Bernal, G., Savchenko, D., & Glassman, E. L. (2023). *Where to hide a stolen elephant: Leaps in creative writing with multimodal machine intelligence.* ACM Transactions on Computer-Human Interaction, 30(5), 1-57. https://doi.org/10.1145/3511599

Smyrnaiou, Z., Georgakopoulou, E., & Sotiriou, S. (2020). *Promoting a mixed-design model of scientific creativity through digital storytelling—the CCQ model for creativity.* International Journal of STEM Education, 7, 1-22. http://dx.doi.org/10.1186/s40594-020-00223-6

Syarifah, E. F., & Emiliasari, R. N. (2019). *Project-based learning to develop students'ability and creativity in writing narrative story.* Indonesian EFL Journal, 5(1), 85-94. http://dx.doi.org/10.25134/ieflj.v5i1.1627

Tabieh, A. A., Al-Hileh, M. M., Abu Afifa, H. M., & Abuzagha, H. Y. (2021). *The Effect of Using Digital Storytelling on Developing Active Listening and Creative Thinking Skills.* European Journal of Educational Research, 10(1), 13-21. https://doi.org/10.12973/eu-jer.10.1.13

Tinialishel Laie Gostine Tinggie, Kim Hua Tan, Nazri Muslim, Lim Kar Keng (2023). *Peer Scaffolding among Primary ESL Learners' Writing Task: Learners' Behaviors and Triggering Factors.* International Journal of Learning, Teaching and Educational Research, 22(3), 191-208. https://doi.org/10.26803/ijlter.22.3.12

Towndrow, P. A., & Kogut, G. (2020). *Digital Storytelling for Educative Purposes.* Springer Singapore.

Van Galen, J. A. (2023). *Power and Precarity: First Generation Students Compose Digital Stories of Class Mobility.* Social Sciences, 12(11), 593. https://doi.org/10.3390/socsci12110593

Wang, Y. (2020). *Developing advanced CFL learners' academic writing skills: Theory and practice.* The Palgrave Handbook of Chinese Language Studies, 1-38. http://dx.doi.org/10.1007/978-981-13-6844-8_57-1

Wu, J., & Chen, D. T. V. (2020). *A systematic review of educational digital storytelling.* Computers & Education, 147, 103786. https://doi.org/10.1016/j.compedu.2019.103786

Yan, D., & Wang, J. (2022). *Teaching data science to undergraduate translation trainees: Pilot evaluation of a task-based course.* Frontiers in Psychology, 13, 939689. https://doi.org/10.3389/fpsyg.2022.939689

Yang, Y. T. C., Chen, Y. C., & Hung, H. T. (2022). *Digital storytelling as an interdisciplinary project to improve students' English speaking and creative thinking.* Computer Assisted Language Learning, 35(4), 840-862. https://doi.org/10.1080/09588221.2020.1750431