

Comparing the Effectiveness of Traditional Storybooks and Digital Storytelling Videos in Enhancing Literary Analysis: A Quasi-Experimental Study

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ABSTRACT

This study investigates the effectiveness of traditional storybooks and digital storytelling videos in enhancing students' literary analysis skills. The research aims to determine which instructional material better supports comprehension, engagement, and analytical thinking. Using a quasi-experimental design, the study involved three of the biggest schools. A pre-test and post-test were administered to measure the impact of each instructional approach. The findings revealed that digital storytelling videos significantly improved students' literary analysis skills, with a mean score increase of 1.25 ($p = 0.00005$), compared to a 0.43- point increase ($p = 0.04511$) for traditional storybooks. This suggests that the multimedia elements of digital storytelling such as visual and auditory stimuli—enhanced comprehension and engagement more effectively than printed text. However, traditional storybooks still demonstrated benefits, particularly in fostering deep reading and critical thinking. These results highlight the importance of integrating technology into literature instruction while maintaining the value of printed materials. A blended approach may be optimal for developing students' literary skills. The study provides educators with evidence-based insights into selecting instructional materials that best support literary comprehension and analysis.

KEYWORDS

traditional storybooks, digital storytelling videos, literary analysis, education, literature

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Ədəbi təhlilin təkmilləşdirilməsində ənənəvi hekayə kitabları və rəqəmsal hekayələrin effektivliyinin müqayisəsi: Kvazi-eksperimental tədqiqat

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XÜLASƏ

Tədqiqat işi ənənəvi hekayə kitabları və rəqəmsal hekayələrin şagirdlərin ədəbi təhlil bacarıqlarına təsirini qiymətləndirir. Tədqiqatın əsas məqsədi anlama, maraq və analitik düşüncəni daha effektiv şəkildə dəstəkləyən tədris materialını müəyyən etməkdir. Kvazi-eksperimental üsulla aparılan araşdırmada üç ən böyük məktəb iştirak etmişdir. Hər iki tədris yanaşmasının təsirini müqayisə etmək üçün tədqiqatdan əvvəl və sonra müvafiq testlər tətbiq edilmişdir. Nəticələr göstərmişdir ki, rəqəmsal hekayələr şagirdlərin ədəbi təhlil bacarıqlarını əhəmiyyətli dərəcədə artırmışdır; orta bal artımı 1,25 ($p = 0,00005$) təşkil etmişdir. Ənənəvi hekayə kitablarından istifadə zamanı isə bu artım 0,43 bal ($p = 0,04511$) olmuşdur. Bu nəticələr onu göstərir ki, rəqəmsal hekayələrdə istifadə olunan vizual və eşitmə vasitələri kimi multimedia elementləri çap mətnləri ilə müqayisədə anlama və marağı daha effektiv şəkildə artırır. Bununla belə, ənənəvi hekayə kitabları da xüsusilə dərin oxu vərdişlərinin və tənqidi düşüncənin formalaşdırılmasında müsbət nəticələr vermişdir. Əldə edilən nəticələr ədəbiyyat tədrisində texnologiyanın inteqrasiyasının vacibliyini, eyni zamanda çap materiallarının dəyərinin qorunmasının zəruriliyini vurğulayır. Şagirdlərin ədəbi bacarıqlarının inkişafı üçün qarışıq (blended) yanaşma daha optimal hesab edilə bilər. Tədqiqat müəllimlərə ədəbi anlama və təhlili ən yaxşı şəkildə dəstəkləyən tədris materiallarının seçilməsi üçün elmi əsaslandırılmış tövsiyələr təqdim edir.

AÇAR SÖZLƏR

ənənəvi hekayə kitabları, rəqəmsal hekayələr, ədəbi təhlil, təhsil, ədəbiyyat

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Introduction

Instructional materials are important tools in developing students' understanding of and engagement with literary texts (Lane, 2024). They serve as vital bridges between learners and content, fostering a deeper connection with the subject matter. These materials encompass a wide range of formats, including textbooks, workbooks, audio-visual aids, digital content, and all forms of interactive technology, and are designed to both assist teachers in presenting information and involve students actively in the learning process (Summer & Boettger). The method through which instruction is delivered contributes to the learning process itself and is especially significant for subjects such as literature where areas like comprehension, critical thinking, and emotional involvement are key (Understanding instructional materials in education). In early literacy, Printed Storybooks are among the first educational materials used by teachers, these are effective in promoting personal relevance and engagement through tactile interaction. However, in modern times today, the substantial contribution of digital technology to education is undeniable. It significantly benefits modern learners by incorporating technology to boost comprehension and active participation. This raises an important question: which medium—traditional or digital is more effective in fostering the skills necessary for in depth literary analysis.

Printed storybooks offer an authentic combination of text and visuals. Students' senses and emotions are stimulated to form deep connections with stories by the tactile characteristics and artistic visual art found in these materials (Noronna, 2024). Research shows that traditional storybooks help young learners form mental images of characters, storylines, and themes, promoting both cognitive development and critical thinking (Kucirkova & Ciesielska, 2024). As stated by Grolig et al. (2019), such materials, particularly for young kids, can be used in a sensory approach to enhance critical thinking and facilitate improved understanding through active engagement with the narrative.

In contrast, digital storytelling is an emerging pedagogical approach that incorporates various multimedia components, including animations, sound, and video. into the learning process (Akgun, 2020); (Rustia, 2023). This technique makes learning more interesting and immersive, by allowing multisensory learning experiences. Digital storytelling increases reading comprehension and analytical reasoning, especially for students with diverse learning needs.

These videos allow learners access to various perspectives, exploration of different cultural narratives, and collaborative learning environments that facilitate creativity and discussion (Mawasi, 2022); (OECD, 2023).

The 2022 PISA results underscore a pressing need for improved literacy instruction in the Philippines, where only 24% of students achieved minimum reading proficiency (Kukko

nen, 2020). This statistic highlights the importance of identifying effective instructional strategies that not only foster engagement but also enhance students' critical thinking and literary analysis skills. Instructional materials play a significant part in teaching as they can deepen learners' understanding. Instructional materials such as videos, and storybooks are important for the lesson to be effective; they require meticulous preparation as the rest of the lesson.

While existing research demonstrates the benefits of both traditional and digital media, few studies have directly compared their effectiveness in enhancing literary analysis. For example, conventional storybooks are particularly effective in stimulating mental imagery and fostering connections among readers by means of familiar narratives and characters (Creswell, 2014). On the other hand, digital storytelling encourages inclusive and collaborative educational environments, allowing students to explore diverse cultural narratives and artistically express their thoughts (OECD, 2023). However, fewer studies have compared these two instructional materials in methods of teaching, thus educators lack adequate direction on which instructional material best supports the development of literary analysis skills.

Methods and Methodology

This study adopts a quantitative research design, which is suitable for systematically examining numerical data and statistical relationships (Saunders, 2019). This approach enables objective measurement and analysis to test hypotheses and identify patterns within the collected data (Campbell, 1963). More specifically, the study employs a quasi-experimental pretest and posttest design to assess the impact of an intervention by comparing results before and after treatment (Zhou, 2025).

The quantitative research method was used in this study. This study should appropriately compare which is more effective, printed storybooks or digital storytelling videos, to determine which material is most effective in enhancing the literary analysis skills of learners.

The total population involved in this study is 186 eighth-grade students, sampled from two sections in each selected public school located in Santa Maria Bulacan: Parada National High School with 30 and 28 students, Pulong Buhangin National High School with 37 and 33 students, and Sta. Maria National High School with 34 and 24 students.

The researcher administered a pre-test and a post-test, each consisting of 20 questions that have been validated by professionals to ensure their accuracy and reliability. These questionnaires are composed of multiple-choice questions aimed at assessing the students' literary analysis skills. The design of the questionnaires is intended for a single cluster of students, ensuring uniformity and ease of administration. Each questionnaire is printed on a single sheet of paper per student.

Between the pretest and posttest, various instructional materials such as storybooks and digital storytelling videos was implemented to assess their effectiveness in enhancing students' literary analysis skills. Two sections from each school were assigned to different interventions. One group used storybooks, while the other is exposed to digital storytelling videos.

The researchers began their data gathering by validating the questionnaires and materials. Following this, researchers sought permission for off-campus data gathering. They drafted letters addressed to the principal and head teachers of Parada National High School, Pulong Buhangin National High School, and Sta. Maria National High School to facilitate their research. Once approved, researchers were assigned to the advisers of each section and established communication with the respective teachers.

Afterward, the researchers distributed consent forms and oriented the students about the procedure. The next day, a pretest was administered to assess the literary analysis skills of the students before the intervention. After that, the researchers then presented the instructional materials to each section. One section from each school used storybooks, while the other section was exposed to digital storytelling videos. The collected data from the pretest and posttest is examined to assess the effectiveness of traditional storybooks and digital storytelling videos in enhancing students' literary analysis skills.

Results

Table 1. Effectiveness of Traditional Storybooks

Mean Difference	T-Statistic	P-Value	Interpretation
	-2.02930	0.04511	Probability value showing statistical significance ($p < 0.05$ means the intervention is effective)

The data shows a mean difference of 0.43 with a t-statistic of -2.03 and a p-value of 0.045, indicating that the result is statistically significant ($p < 0.05$). This suggests that the intervention had a meaningful effect.

Recent studies highlight the impact of traditional storybooks and structured educational interventions on learning outcomes. Liang, Zhang, and Sun (Kim, 2020) found that children

exposed to traditional storybooks demonstrated higher reading comprehension scores compared to those using digital-only materials. Similarly, a meta-analysis by Kim et al. (Vadasy, 2023) concluded that structured reading programs significantly improve literacy skills, emphasizing that text-based interventions enhance cognitive engagement. Research by Vadasy & Sanders (Kurnia, 2020) further supports this, showing that students who participated in guided reading strategies exhibited greater cognitive flexibility and problem-solving abilities. Additionally, Kurnia (Lazareva, 2020), explored the role of culturally relevant storybooks in learning interventions, finding that students had higher engagement and recall rates when the material was familiar and meaningful. These findings align with the results of this study, which indicate a statistically significant improvement in post-test scores following the intervention. The consistent evidence suggests that traditional storybooks serve as powerful tools for literacy development, cognitive engagement, and overall learning enhancement.

Table 2. Effectiveness of Digital Storytelling Videos

Mean Difference	T-Statistic	P-Value	Interpretation
1.24706	-4.26017	0.00005	Since the p-value is less than 0.05, the improvement is statistically significant

The statistical results indicate a significant improvement in post-test scores compared to pre-test scores, with a mean increase of 1.25 points. The p-value (0.00005) confirms that this change is unlikely to be due to chance, demonstrating the effectiveness of the intervention. This finding aligns with recent literature on digital storytelling and its impact on learning outcomes. Lazareva & Martinez (Brown, 2020) found that digital storytelling enhances student engagement and comprehension, particularly in literacy-based subjects.

Their study emphasized that interactive and multimedia-driven learning environments contribute to improved knowledge retention. Similarly, Brown et al. (Saritepeci, 2021) highlighted that digital storytelling methods support cognitive development by allowing students to visualize and contextualize information more effectively.

Moreover, Saritepeci (Sweller, 2020) conducted a meta-analysis on the use of digital storytelling in education and concluded that it positively influences not only academic performance but also motivation and creativity. Their findings resonate with this dataset's observed improvement, suggesting that the intervention—presumably digital storytelling—has educational benefits.

Table 3. Effectiveness between two interventions

Metric	Traditional Storybook	Digital Storytelling Videos
Mean Increase	0.43	1.25
T-Statistic	-2.02930	-4.26017
P-Value	0.04511	0.00005
Statistical Significance	Significant ($p < 0.05$)	Highly Significant ($p < 0.001$)

The results of this study indicate that digital storytelling videos were more effective in improving post-test scores compared to traditional storybooks. The digital storytelling videos intervention resulted in a mean score increase of 1.25, while the traditional storybook intervention only yielded a 0.43-point improvement. The p-value for digital storytelling videos (0.00005) was much lower than that of traditional storybook (0.04511), suggesting that the observed improvement was highly statistically significant of 0.82 mean difference. This corresponds with recent research that underscores the benefits of digital storytelling in education.

This aligns with recent studies highlighting the benefits of digital storytelling in education. Lazareva & Martinez (Brown, 2020) found that digital storybooks enhance engagement and comprehension by using multimedia elements such as animations and voiceovers. Similarly, Saritepeci (Sweller, 2020) concluded that digital storytelling fosters motivation and creativity, leading to better retention of information. In contrast, traditional storybooks also showed a positive impact on learning, as supported by Liang, Zhang, and Sun (Kim, 2020), who found that printed books improve reading comprehension by encouraging deep reading. Additionally, Kim et al. (Vadasy, 2023) emphasized that structured reading programs with

traditional books are effective in literacy development, particularly when combined with guided reading strategies. These findings are also supported by the Cognitive Load Theory (Mayer, 2020) and the Multimedia Learning Theory which suggest that digital storytelling helps reduce cognitive overload by integrating visual and auditory elements, making learning more efficient. Given these insights, digital storybooks appear to be a powerful educational tool that enhances student learning more effectively than traditional books.

However, traditional storybooks still have educational value, especially in promoting deep reading and critical thinking. Educators may benefit from a blended approach, combining digital storytelling for engagement with traditional reading methods to reinforce comprehension and literacy skills. Future research could explore the long-term effects of both methods on students' learning and cognitive development.

Discussion

The mean pretest score of students using traditional storybooks is 12.01 and its posttest score is 12.44, with the mean increase of 0.43. The paired t-test result indicated a significant difference, with a p-value of 0.04511. It means that traditional storybooks positively influenced students' literary analysis skills.

The mean pretest scores of the students who are exposed to digital storytelling videos is 8.74, while the posttest mean score is 9.99. The results of pretest and posttest obtain a mean increase of 1.25. The paired t-test result showed a highly statistically significant improvement, with a p-value of 0.00005, indicating that digital storytelling videos were highly effective in enhancing students' literary analysis.

Students who are exposed to digital storytelling videos showed a greater improvement with posttest mean scores of 1.25, compared to those who used traditional storybooks with posttest mean scores of 0.43, with a mean difference of 0.82. The p-value for digital storytelling videos was significantly lower (0.00005) compared to traditional storybooks (0.04511), which means that digital storytelling videos had a more significant impact on students' literary analysis skills.

Conclusion

This study examined the effectiveness of digital and traditional storybooks in supporting student learning. The results showed that both approaches led to measurable improvements, but students using digital storybooks demonstrated a greater average score increase of 1.25 ($p = 0.00005$), compared to 0.43 ($p = 0.04511$) with traditional storybooks. While the difference suggests that digital storytelling may offer certain advantages, possibly due to its multimedia elements, further research is needed to confirm long-term effects and consider other

influencing factors such as student preference, access to technology, and instructional support.

These results align with previous studies that highlight the advantages of digital storytelling in education. Digital storybooks provide interactive and visually engaging content, which helps reduce cognitive overload and improve learning outcomes. On the other hand, traditional storybooks also contribute to literacy development, particularly by promoting deep reading and comprehension skills.

Although digital storytelling appears to be more effective, traditional reading methods still have value in education. A blended approach, combining digital and traditional methods, could maximize learning benefits by integrating engagement and comprehension strategies. Future research should explore the long-term impact of these approaches on student learning and cognitive development.

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