Jurnal Ilmiah Wahana Pendidikan, Agustus 2023, 9 (15), 694-705
DOI: https://doi.org/10.5281/zenodo.8219550.
p-ISSN: 2622-8327 e-ISSN: 2089-5364
Accredited by Directorate General of Strengthening for Research and Development
Available online at https://jurnal.peneliti.net/index.php/JIWP

Implementing Digital Storytelling to Foster Students' Writing Skill

Zikri Alwi Haetami

Madrasah Aliyah Masyariqul Anwar Caringin

Received: 14 Juli 2023
Revised: 27 Juli 2023
Accepted: 30 Juli 2023

Abstract

This study examines the effectiveness of implementing digital storytelling on students' writing skill through a quasi-experimental research design. Data was collected through observations, pre-tests, and post-tests, with a sample size of 22 students in both the experimental and control classes. The findings indicate that students in the experimental class, who were exposed to digital storytelling, achieved higher average scores compared to the control class. The average pre-test score in the experimental class was 53.18, while in the control class it was 48.55. The average post-test score in the experimental class was 72.91, while in the control class it was 61.23. The t-test analysis revealed a ($t_{observation}$) value of 2,942, with a degree of freedom (df) of 42. When comparing the calculated t-value with the critical t-value (t_{table}) at a significance level of 5% and 1%, the results indicated that the calculated t-value (2.942) was greater than both critical t-values (1.682 and 2.418) respectively. These findings suggest that the implementation of digital storytelling had a significant positive impact on students' writing skill.

Keywords: *Digital Story Telling, Writing Skill, Technological Teaching and Learning.*

(*) Corresponding Author: alwiisvel@gmail.com

How to Cite: Haetami Z A. (2023). Implementing Digital Storytelling to Foster Students' Writing Skill. https://doi.org/10.5281/zenodo.8219550.

INTRODUCTION

In an increasingly sophisticated and digital era like today, technology has become an important part of everyday life, including in education. Developments in information and communication technology have had a significant impact on the way we learn and teach. Now, students have easy access to a wide range of information resources and tools that can enhance their learning. Qureshi and Raza (2021) stated that many worlds will experience a paradigm shift in their educational systems and reforms as a result of the fourth industrial revolution (4.0 industry). Developed nations frequently adopt technological progress, close the skills gap, and unlock access to new resources. The use of technological devices such as computers, tablets and smartphones have changed the way students access information, interact with learning content, and communicate with fellow students and educators. In addition, online learning platforms, educational applications and digital tools have provided flexibility in education, enabling students to study independently and access learning materials anytime and anywhere. According to Turaeva et al. (2021), As a result of the rapid advancement of science and technology, including the internet of multimedia innovation and its application to education, the highlighting of audio, visual, and animation impacts comes into full play in English class instruction. This creates a favorable environment for change and research on an English teaching model in the new era. Additionally, this creates

a favorable environment for change and research on an English teaching model in the new era.

Technological media for an English lesson has a crucial role to teach language skills especially writing skill. According to Tarihoran (2020), the utilization of technology in English as a Foreign Language (EFL) lessons has a substantial impact on the future of educators. There are repercussions regarding the role of teachers, the educational technique, and the instructional materials. In addition, today's technologies have reached the point where they can be used effectively in the teaching of writing. This is an additional contribution made by educators apart from traditional lecturing. When it comes to instructing students how to write, teachers no longer rely on conventional methods or antiquated approaches like chalk and board instruction; rather than technological media. Traditional methods and methods like chalk and board instruction are examples of such antiquated approaches. Educators should carefully select captivating and innovative media technologies that captivate students' attention and foster their enthusiasm for writing. By choosing interactive and immersive learning tools, educators can effectively engage students in writing activities, sparking their curiosity and encouraging active participation. It is crucial to provide students with materials that are not only easily understandable but also resonate with their interests and preferences. By doing so, educators can create an optimal learning environment that maximizes students' response and facilitates their seamless absorption of writing concepts and skills being taught.

Learning to write in the digital and technological era has brought significant changes in teaching approaches and methods. According to Paltridge (2020), advances in technology have provided wider access to resources and tools that support learning to write. One of the main benefits of learning to write in the digital era is easy access to information and references. Through the internet, students can quickly find relevant material, conduct in-depth research, and gather multiple perspectives to support their writing. In addition, the presence of digital libraries, journal databases and online learning platforms enrich the resources available to students in developing their writing skills.

When writing creatively, students are faced with the challenge of overcoming concerns about judgment from others, finding their own voice and writing style, and dealing with the uncertainties and doubts that may arise in the creative process. Besides that, another challenge is dealing with creative blocks that can hinder the flow of ideas and reduce writing productivity. Generating novel concepts, integrating captivating narrative elements, and fostering an inspiring ambiance are additional hurdles that aspiring creative writers encounter. Nevertheless, through perseverance, patience, and continual exploration, students have the potential to surmount these obstacles and cultivate their abilities in crafting compelling and thought-provoking pieces of creative writing (Pratiwi, 2019).

Devies in Tarihoran et al. (2021) stated that in English Language Teaching (ELT) classrooms, "Realia," which refers to a variety of forms of instructional tools such as visual aids, multimedia presentations, and educational technologies, plays an important role. These diverse materials hold immense potential for effective language instruction, particularly when emphasizing the practical application of visual representations and interactive tools. Digital storytelling medium is one of

the instructional modalities that may be applied in the context of the instruction of English writing. As one of the kinds of video media, it performs a number of functions, including clearer and more interesting learning, more interactive learning, time and energy efficiency, and improving the quality of learning outcomes. Students benefit greatly from the use of media to comprehend a certain idea. The media's function can stand in for the teacher's incapacity to explain a subject, allowing the learning objectives to be met as intended (Richard & Renandya, 2002).

Digital storytelling has a strong connection to the use of realia in education. Realia refers to authentic materials or objects from the real world that are used in teaching to provide concrete examples and make learning more meaningful. In the context of digital storytelling, realia can be incorporated through the use of multimedia elements such as photographs, videos, and audio recordings that depict real-life situations, places, and experiences.

By integrating realia into digital storytelling, students can engage with authentic and relatable content, which enhances their understanding and connection to the topic. For example, in a narrative writing task, students can use real-life photographs or videos to illustrate settings, characters, or events, bringing their stories to life and making them more vivid and believable. This integration of realia helps students to bridge the gap between the classroom and the real world, making their learning experiences more authentic and relevant.

Furthermore, digital storytelling allows students to explore and interact with a wide range of realia beyond their immediate surroundings. With the internet and digital resources at their fingertips, students can access images, videos, and audio recordings from different cultures, countries, and time periods. This exposure to diverse realia expands their knowledge and broadens their perspectives, enabling them to create more culturally enriched narratives. Digital storytelling, therefore, provides a platform for students to connect with realia in a dynamic and interactive manner, fostering deeper engagement and understanding in their writing tasks.

The researcher is eager to study about teaching and learning writing by using digital storytelling. First, digital storytelling combines narrative, visual and sound elements in an attractive multimedia form, so that it can motivate students to actively participate in the writing process. Through the use of images, videos and audio, students can explore their creativity in fun and interesting ways. Second, digital storytelling can provide a clear context and audience for students. By publishing their work in digital format, students feel a sense of purpose and can see the impact their writing has on a wider audience. Third, digital storytelling provides opportunities for students to use technology in learning to write, expand their understanding of digital media, and hone important information technology skills in this digital era. By integrating technology into the writing process, students can develop digital literacy skills that are essential in their lives and careers.

The study of digital storytelling in writing skills is crucial due to several reasons. Firstly, in today's digital age, students are exposed to various forms of digital media on a daily basis. Understanding how digital storytelling can enhance writing skills allows educators to harness this familiarity and engage students in meaningful and relevant learning experiences. By integrating digital storytelling

into writing instruction, students can develop their creativity, critical thinking, and communication skills while adapting to the digital landscape of the 21st century.

Secondly, digital storytelling offers unique opportunities for students to express themselves through a multimodal approach. It combines written narratives with visual and auditory elements, allowing students to incorporate images, videos, music, and other media to enhance their storytelling. This multimedia aspect not only adds depth and richness to their writing but also enables students to convey emotions and ideas more effectively. Researching digital storytelling in writing provides insights into how students can leverage these tools to create engaging narratives and communicate their thoughts and perspectives in a more compelling manner. Understanding the benefits and challenges of incorporating digital storytelling in writing instruction is essential for educators to provide effective and relevant teaching strategies that foster students' growth in writing proficiency and digital literacy.

Teachers can use digital storytelling as a means to improve students' writing skill. Digital storytelling is a form of a narrative that uses digital technology and combines traditional narrative elements with multimedia elements such as text, images, audio and video. By using digital storytelling, students can express their ideas and stories through the use of a variety of creative and interactive media. This opens up opportunities for them to develop writing skill that are more dynamic and interesting Fitri, Husnawadi, and Ika Harianingsih (2021).

With digital storytelling, students can develop their creativity and imagination. They can create unique and engaging stories using various multimedia elements. For example, they can add relevant images or videos to reinforce the message or mood of the story (Laina & Marlina, 2018). Students are able to improve their writing skills and their ability to creatively convey their ideas as a result of this activity.

In addition, digital storytelling also helps improve the clarity and connectedness of student writing. By combining visual and audio media, students can provide a better context for their story. For example, they can use background noise or sound effects to enhance the mood or dialogue in a story. Digital storytelling presents a unique opportunity for students to communicate their ideas in a captivating and compelling manner, captivating readers with clarity and aesthetic appeal (Nuroh & Adiyawati, 2023).

Through initial observations conducted at MA Masyariqul Anwar Caringin, the researcher identified several challenges pertaining to students' writing proficiency. First, in terms of grammar, students often face challenges in using proper grammar, including the use of nouns, verbs, sentence quality, and general grammatical structure. They may have difficulty understanding complex grammatical rules and applying them consistently in their writing. Second, in creative writing, students may face difficulties in developing original and interesting ideas. They need to overcome creative blocks, find ways to spark their imagination, and express ideas creatively through words. Students also need to understand narrative elements, such as characters, plots, and themes, to create strong and compelling stories. Second, in creative writing, students may face difficulties in developing original and interesting ideas. They need to overcome creative blocks, find ways to spark their imagination, and express ideas creatively

through words. Students also need to understand narrative elements, such as characters, plots, and themes, to create strong and compelling stories.

Digital storytelling as a medium for teaching writing skill is very interesting to be studied because the content of digital storytelling in the form of videos can be authentic material for students. Therefore, the researcher is interested in researching this topic with the title "Implementing Digital Storytelling to Foster Students' Writing Skill"**.**

METHODS

The researcher opted for a quasi-experimental research design to explore the impacts of targeted interventions on individuals within a controlled setting. This approach was chosen to enable a thorough examination of the effects of specific treatments under carefully regulated conditions (Sugiyono, 2015). In addition to that, this research carried out both pre-testing and post-testing methods. Both of the classes took the pre-test first, before getting the treatment that was going to be given. One of the classes was selected as the experimental group, receiving the treatment which included digital storytelling. A post-test was administered to assess the potential impact of the treatment. On the other hand, the second group served as the control class, receiving a treatment that did not involve the digital storytelling, and also underwent a post-test assessment.

This study was carried out at MA Masyariqul Anwar Caringin with tenth-grade students during the second semester in 2023. In the class that was conducting the experiment, there were a total of 22 pupils whereas the control class had a total of 22 kids. The researcher made his decision to focus his attention on this particular institution on the basis of his observations, which uncovered a number of problems with the students' ability to write, notably in narrative writings. The English instructor and principal of MA Masyariqul Anwar Caringin gave the researcher permission to conduct the research on the use of digital storytelling on students' writing narrative text. The research will look at how students' usage of digital storytelling affects their writing.

The primary methods of data collection included observation, as well as pre- and post-testing. The researcher personally carried out direct observations at the research site in order to evaluate the settings of the classroom in which the students were learning and to determine the obstacles and difficulties the students were having when composing narrative text. After gathering data through classroom observation, the researcher then moved on to the next step of the process, which was to give the pre-test to both the experimental class and the control class. They were given an hour and a half with the directive to compose a story that was no longer than 250 words. According to Jacob (1981), there were five different aspects that made up the pre-test: the content, the organization, the vocabulary, the language use, and the mechanics. After the preliminary examination had been completed, each of the courses then proceeded through a separate course of treatment. The training for the experimental class was delivered using methods of digital storytelling, whereas the instruction for the control class did not utilize digital storytelling but rather adhered to the traditional teaching methods that had been utilized in the past. The post-test was subsequently administered to both the experimental group and the control group. The post-test was designed to evaluate

the students' ability to write narratives, comparing those in the experimental class to those in the control class, taking into account the various treatments that the students had received. The directions for the post-test were exactly the same as the instructions for the pre-test; however, the content of the test required the students to write about their own personal experience. The assignment was in line with the fundamental student competitions (KD) 3.8 and 4.8 that were defined in the "Narrative Text" lesson plan for students in the tenth grade.

The t-test was the primary way of data analysis that was utilized in this investigation for the purpose of assessing the hypothesis. According to Sudijono (2014), the t-test was applied in order to test the null hypothesis regarding the mean differences between the two samples. However, the researcher first checked for normality and homogeneity in the data before using the t-test computation. As a result of the quasi-experiment containing both a pre-test and a post-test, the researcher was able to make use of these tests to make a comparison between the experimental class and the control class on the final evaluation. The researcher utilized SPSS version 29 in order to facilitate the analysis and the calculation of results.

RESULTS & DISCUSSION

Pre-Test Result

A pre-test was given to both groups of students in order to determine their initial levels of proficiency in preparation for the treatment that was going to be implemented. Following the treatment, students were given a post-test to determine the extent to which their writing skills had improved as a result of using digital storytelling. This was done in order to evaluate the effectiveness of the treatment. The pre-test and post-test instruments that were used in this study gathered data on the students' scores in narrative writing. The criteria for evaluating students' writing skills were the narrative's content, organization, vocabulary, and language use, as well as the mechanics of their writing.

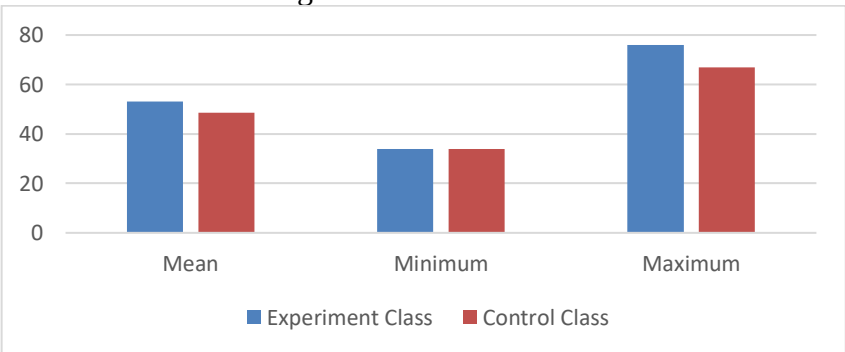

Figure 1. Pre-Test in Experiment Class and Control Class

To determine the class average score, the pre-test results of each individual student were added up, and the result was then divided by the overall number of students in each class. According to the data shown in figure 1, the experimental class's pre-test score was 53.18, whereas the control class's score was 48.55. Despite the fact that the experimental class had a much better overall score, there was only 4.63 points difference in average scores between it and the control class. The class that took part in the experiment received the highest average grade—76—while the

class that functioned as the control received the lowest average grade—34. Because of this, there was only 9 points difference between the two classes.

Treatment Implementation (Digital Storytelling)

After obtaining the findings of the pre-test in both the experimental class and the control class, the researcher next proceeded to administer separate treatments for the two groups. Both the experimental class and the control class were instructed in writing using traditional teaching and learning methods. The experimental class, however, was instructed in writing through digital storytelling. Because it was tailored to the fundamental student competencies (KD) 3.8 and 4.8 described in the "Narrative Text" lesson plan for tenth-grade students, the content that was taught in this writing skill was narrative text.

In the context of writing narrative texts, the use of digital storytelling could be seen as an effective approach in developing students' writing skills. The steps in digital storytelling, such as topic selection, story planning, material gathering, and story production, were directly related to the narrative writing process.

The first step in writing a narrative text was choosing a topic. In digital storytelling, students would select topics that were interesting and relevant to their narrative goals. This topic selection would assist students in planning a compelling storyline, introducing main characters, and creating engaging conflicts. Story planning, similar to what was done in digital storytelling, helped students in structuring their story plots, identifying turning points, and building climaxes.

Furthermore, the process of collecting materials in digital storytelling enriched students' narrative writing. Students had the opportunity to search for and gather various relevant resources such as images, videos, and other supporting materials to enhance their stories. These collected materials served as valuable assets for conveying intricate details and building vivid imagery in their narrative compositions.

When students produced their digital stories, they actively engaged in the narrative writing process. They carefully crafted their story scripts, paid attention to sentence structure, employed appropriate vocabulary, and aimed to deliver clear and coherent narratives. Additionally, students took the time to edit their stories, rectifying grammatical errors, ensuring consistency in plotlines, and enhancing the overall fluency of their writing.

By incorporating digital storytelling into writing process, students were not only able to develop their writing skill but also utilized visual and audio elements that enhanced the allure and quality of their narratives. This approach provided an engaging and memorable writing experience for students, enabling them to actively participate in the writing process and improve their ability to produce high-quality narrative texts.

Post-Test Result

A post-test was provided to the students in order to evaluate the learning results of the students with regard to their writing ability after the researcher had given various treatments to the two classes. The students were given a post-test in which they were instructed to compose narrative stories about the folklore of their particular regions. The following is a presentation of the results of the post-test:

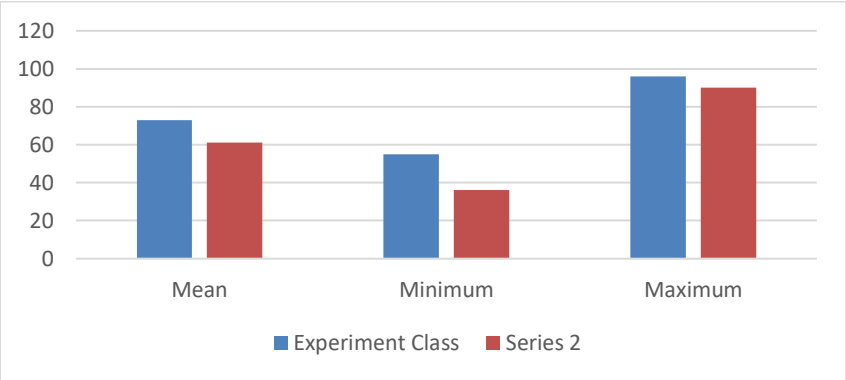

Figure 2. Post-Test in Experiment Class and Control Class

The findings that are displayed in figure 2 indicate that there was a significant difference in the students' average post-test writing scores after they were given one of the four different treatments. The experimental group, which used digital storytelling, ended up with an average grade of 72.91, whereas the control group, which did not use digital storytelling, ended up with a lower grade of 61.23 on average. As a consequence of this, there was a significant gap between the two groups, which totaled 11.68 points. The post-test score that was lowest for the control group was 36, while the post-test score that was lowest for the experimental group was 55. In addition, the maximum possible score on the post-test for the experimental group was 96, but the control group's highest score was just 90. In conclusion, the post-test scores revealed substantial differences between the experimental class and the control class, notably in terms of the average score, with the experimental class having a higher average value. These differences were particularly noticeable when comparing the experimental class to the control group.

Normality and Homogeneity Testing

A preliminary examination was carried out on the gathered data before the hypothesis was put to the test. The preliminary examination included both examinations to ensure that everything was consistent and normal. The sample of student learning outcomes that were chosen for this study were subjected to the normality test so that we could determine whether or not they followed a normal distribution. In a similar vein, the purpose of the homogeneity test was to establish whether or not the sample was homogenous. The Kolmogorov-Smirnov test was used in this investigation to determine whether or not the data were normal. The findings of the pre-test and post-test on the students' writing abilities, both from the experimental group and the control group, served as the data sources.

Table 1

Normality Test

Class	Pre-Test	Post-test	Description
Experimental Class	0.787	0.740	Normally Distributed
Control class	0.868	0.875	Normally Distributed

According to the findings presented in Table 1, the data obtained from both classes exhibited normal distribution as all values exceeded 0.05. The subsequent step involved testing for homogeneity in both classes. This homogeneity test was conducted after confirming that the pre-test and post-test results, derived from the

control group and the experimental group respectively samples, met the criteria for normal distribution.

To determine if the sample of student learning outcomes originated from a homogeneous population, a homogeneity test was performed. In this study, Fisher's homogeneity test (F-test) was employed using data on student learning outcomes related to speaking skills in both the control group and the experimental group respectively.

Table 2

Homogeneity Test

Name	Sig. Value	Description
Pre-Test both of Classes	0.987	Homogenous
Post-Test both of Classes	0.216	Homogenous

Table 2 displays the pre- and post-test results for both the experimental and control groups exceeded the significance level of α = 0.05. This suggests that the data in both classes were homogeneous, indicating that the samples originated from the same population.

The preliminary tests conducted, including the normality test and homogeneity test, yielded favorable results. The data analysis revealed that the scores of students' writing skills were normally distributed, and the homogeneity test confirmed that the data exhibited homogeneity. With these findings, the subsequent step involves conducting a parametric hypothesis test using the t-test.

T-test Result

By conducting the t-test calculation, it was found that the degrees of freedom (df) were 42, and the observed t-value t_o ($t_{observation}$) was 2.942. The critical t-values at a significance level of 5% and 1% were 1.682 and 2.418, respectively. The researcher then compared the calculated t-value with the critical t-value t_t (t_{table}) at the respective significance levels. The results indicated that $t_o : t_t$ = 2.942 > 1.682 and $t_o : t_t$ = 2.942 > 2.418, respectively. Therefore, it can be concluded that the use of digital storytelling is effective in enhancing students' writing skill based on the significance level.

Discussion

The findings presented in the aforementioned study, which highlight the positive impact of digital storytelling on students' writing skills, are further corroborated by the insightful findings of Kazazoğlu and Bilir's (2021) previous investigation. Their study revealed compelling evidence that the incorporation of digital storytelling positively influences students' attitudes and perceptions towards second language (L2) writing. Fitri, Husnawadi, and Ika Harianingsih (2021) in their research also showed that the qualitative findings of the study revealed insightful insights into students' perceptions of the utilization of digital storytelling-based tasks. It was discovered that these tasks not only fostered the improvement of students' writing abilities but also ignited their motivation to learn.

The use of digital storytelling in writing narrative texts has several advantages and disadvantages that need to be considered. The first advantage is that digital storytelling can enhance the appeal and make the story more engaging for readers. By incorporating visual, audio, and interactive elements, digital storytelling enriches the reading experience for students. Furthermore, the use of digital

storytelling facilitates creative expression. In digital storytelling, students have the flexibility to utilize various creative tools such as images, videos, and sound to depict their stories. This enables students to express their creativity more freely and produce unique narratives.

Another advantage is that digital storytelling fosters collaborative learning. Through digital storytelling, students can work together to develop story ideas, divide tasks in digital story production, and provide feedback to one another. This not only enhances student engagement in learning but also develops crucial collaborative skills for real-life situations. Additionally, the use of digital storytelling can improve students' technological skills. In the process of creating digital stories, students need to utilize various tools and software. This provides students with opportunities to develop important technological skills in today's digital age.

However, despite its numerous advantages, the use of digital storytelling also has some drawbacks. One of the limitations is its dependence on technology. The use of digital storytelling requires access to and proficiency in using digital devices and software. Accessibility constraints and technical issues can sometimes disrupt the learning process. Moreover, the use of digital storytelling can potentially limit students' freedom of expression. At times, the digital format and tool constraints may restrict students' ability to fully express their ideas and creativity.

In conclusion, the use of digital storytelling in writing narrative texts offers advantages in terms of enhancing story appeal, creative expression, collaborative learning, and technological skills. However, it is important to consider the limitations, such as technological dependence and limitations on students' expression.

CONCLUSION

The researcher first gathered the experimental group's and the control group's average pre-test scores before moving on to the next step of the study, which was to administer the treatments. The experimental class had a pre-test score of 53.18 on average, while the control class had a pre-test score of 48.55 on average. The score of 34 on the pre-test was the lowest for both of the courses. In addition, the class that participated in the experiment had a pre-test score that was as high as 76, whereas the class that served as the control had a pre-test score that was as high as 67. After having the treatment, which consisted of utilizing digital storytelling for the experimental class while ignoring it for the control class, the researcher then got the average post-test scores to evaluate the effectiveness of the treatment. The experimental group had a post-test score that was 72.91 on average, while the control group had a score that was 61.23 on average. The lowest possible post-test score in the experimental group was 55, whereas the control group's lowest possible score was 36. In addition to this, the greatest possible post-test score in the experimental group was 96, whereas the control group's highest possible score was 90.

Students' writing ability can be improved by using digital storytelling as an instructional tool. According to the results of the t-test, the value of t_o, was 2.942. The critical t-values at a significance level of 5% were 1.682, while the critical t-values at a significance level of 1% were 2.418. The researcher proceeded to

compare the t-value that they had just obtained with the essential t-value that was provided in the ttable for each significance level. According to the findings, t_o: t_t = 2.942 was greater than 1.682, and t_o: t_t = 2.942 was greater than 2.418, respectively.

REFERENCES

Fitri, H. A., Husnawadi, & Harianingsih, I. (2021). Implementing Digital Storytelling-Based Tasks for The Teaching of Narrative Writing Skills. *Journal of English Language Education*, 4(2), 168-190. https://doi.org/10.20414/edulangue.v4i2.3980

Jacob, H. L., et al. (1981). *Testing ESL Composition: A Practical Approach*. Massachuset: Newbury House.

Kazazoğlu, S., & Bilir, S. (2021). Digital Storytelling in L2 Writing: The Effectiveness of Storybird Web 2.0 Tool. *TOJET: The Turkish Online Journal of Educational Technology*, 20(2), 44-50.

Laina, P. N., & Marlina, L. (2018). Creating Digital Storytelling to Improve EFL Students' Narrative Writing at Senior High School. *Journal of English Language Teaching*, 7(1), 263-278. https://doi.org/10.24036/jelt.v7i1.9761

Nuroh, E. Z., & Adiyawati, F. F. (2023). The influence of digital storytelling on story writing skills of class II elementary school students. *Jurnal Pendidikan Dasar Nusantara*, 8(2), 357-369. https://doi.org/10.29407/jpdn.v8i2.18582

Paltridge, B. (2020). Writing for Academic Journals in the Digital Era. *RELC Journal*, 51(1), 147-157. https://doi.org/10.1177/0033688219890359

Pratiwi, N. Y. (2019). The Analysis of Problems Encountered by Beginner Writer in Writing A Short Story: A Case Study in Creative Writing Class. *Indonesian Journal of Educational Research and Review*, 2(3), 402-405. https://doi.org/10.23887/ijerr.v2i3.22691

Quershi, M. I., & Raza, H. (2021). Digital Technologies in Education 4.0. Does it Enhance the Effectiveness of Learning? *International Journal of Interactive Mobile Technologies (iJIM)*, 15(4), 31-47. https://doi.org/10.3991/ijim.v15i04.20291

Richard, J. C., & Renandya, W. A. (Eds.). (2002). *Methodology in Language Teaching: An Anthology of Current Practice*. Cambridge: Cambridge University Press.

Sudijono, A. (2014). *Pengantar Statistik Pendidikan*. Jakarta: PT Raja Grafindo.

Sugiyono. (2015). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D.* Bandung: Alfabeta.

Tarihoran, N. (2020). Teacher Candidates' View on Using Technology in Developing English Language Teaching Materials. *International Journal of Psychosocial Rehabilitation*, 24(8), 3005-3013. https://doi.org/10.37200/V24I8/21154

Tarihoran, N., et al. (2021). Pre-Service Teachers' Perception of Online Learning in Islamic University during a Coronavirus (Covic-19) Pandemic. *Turkish Journal of Computer and Mathematics Education*, 12(3), 4181-4189. https://doi.org/10.37200/IJPR/V24I8/PR280319

Turaeva, G. X., et al. (2021). Use of Information Technology in Teaching English. *International Journal on Orange Technologies*, 3(4), 132-136. https://doi.org/10.31149/ijot.v3i4.1680