

THE IMPACT OF DIGITAL STORYTELLING ON STUDENTS' PROFICIENCY IN WRITING DESCRIPTIVE TEXT

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Abstract

This study investigates the impact of digital storytelling on students' proficiency in writing descriptive texts. This study used True experimental research. The respondents were divided into two groups: 24 students in class X-1 formed the experimental group, and 24 students in class X-2 served as the control group. The study employs a pretest/posttest control group design, with one group exposed to traditional teaching methods and another enriched with digital storytelling elements. The calculation of this research was conducted through SPSS 26. Data is collected through pre-test and post-test of students' descriptive writing. Results indicated a significant positive effect of digital storytelling on writing proficiency, with average scores rising from 65.13 in the pre-test to 83.25 in the post-test. Student scores were analyzed using Paired Samples T-Tests which showed a sig. (2-tailed) of 0.000, which is lower than 0.05 ($0.000 < 0.05$). It means that it is proven that there is a positive impact of the use of digital storytelling on students' writing proficiency. Thus, it is recommended that the impact of digital storytelling at different levels of education be investigated using a variety of research methods. In addition, it is important to conduct vocabulary enrichment before research to support learning through digital storytelling.

Keywords: Digital Storytelling, Writing Proficiency, Descriptive Text, Tenth-Grade Students, Experimental Study.

INTRODUCTION

There are four language criteria: writing, listening, reading, and speaking. These criteria are classified into two, namely productive skills involving the production of messages both orally and in writing and receptive skills of listening and reading skills. In this research, writing is an important skill. Good writing skills enable students to communicate messages clearly in written form (Alfarah et al., 2022; Meiristiani et al., 2021, 2022, 2023; Meiristiani & Agistina, 2022; Yuvita et al., 2023). Through writing, students enhance their ability to reflect their ideas, feelings, and thoughts in writing. Schools, courses, and other educational institutions teach writing skills to prepare students to be able to express their ideas in writing as well as to prepare students to be ready for the burdens of the future.

The main reason for the importance of writing in the teaching and learning process lies in its ability to facilitate students' understanding of written language (Krisnanto et al., 2023; Masykuri et al., 2022; Prihatin et al., 2021; Setiyorini et al., 2021; Wulandari et al., 2021). By writing, students can convey information, ideas, thoughts, feelings, and expressions. The second reason is that they can share their own stories and expressions through paragraphs and sentences. Writing in particular can help students concentrate on using language correctly by paying attention to punctuation, vocabulary, spelling, and language usage.

Writing is a difficult challenge for students. In writing students not only string words, sentences, and paragraphs together, but students must know how to express and organize them into correct writing. In other cases, students have difficulty when they have to write down their ideas or experiences. This is due to lack of vocabulary, fear of grammatical errors and not being able to organize sentences or paragraphs correctly (- et al., 2023; Diningrat et al., 2020; Taufiquilloh et al., 2023). So, when they have to write in English, they start to get confused.

Teachers must have a strategy to encourage students to convey their ideas through writing. Because writing is an activity that can be done by people, especially students, to learn English, not everyone has better writing skills. In addition, teachers are expected to have a fun way of teaching and use interesting media so that the material presented can be well understood by students (Mulyati & Sulistianingsih, 2020; Sulistianingsih, 2021; Sulistianingsih & Aflihatun, 2021; Sulistianingsih & Jamaludin, 2023).

The problem is related to the difficulty of finding ideas and how to put these ideas into writing by paying attention to the use of punctuation and choosing and combining words correctly. In addition, students are less interested in writing, students feel bored in writing classes because teachers still use traditional media, namely by using books during the learning process so that it is less interesting for students. In addition, students' interest in learning to write is still lacking, because students have no motivation and rarely have writing assignments for learning and students are still lacking in vocabulary mastery.

As mentioned earlier, writing seems difficult for tenth-grade students. They find it difficult to find ideas and also find it difficult to put their ideas into writing. Therefore, teachers must find a suitable medium to help students in writing. Teachers can encourage students to learn writing by utilizing technology-based learning media that can help students improve their writing ability. This Digital Storytelling media can help teachers in providing an active role to be creative so that it can increase students' learning motivation.

In this era of rapidly developing information technology, there are changes in the learning process due to advances in technology and science. Technological advances in Indonesia are currently affecting education due to the Industrial Revolution 4.0. In the context of using digital media and current technological developments, researcher is interested in using Digital Storytelling as a medium for teaching descriptive text writing (Sulistianingsih et al., 2021, 2022).

According to Haetami (2023), digital storytelling is a modified form of conventional storytelling that is effective for improving students' writing skills and has a positive impact on their writing ability. The use of digital storytelling helps students in telling a story, which can guide them in writing descriptive texts. Balaman, as cited by Rosalina & Hasan (2022), stated that pictures, music, and sound create a stronger and interconnected story, resulting in a very interesting story.

Digital storytelling can also provide a flexible learning environment for students through the active learning process and allows learners to write creatively so that they can design and create real tasks (Castillo-Cuesta et al., 2021). By doing so, students can improve their understanding by developing the relationship between the text, the storyteller, and themselves by improving their understanding. Teachers are also more responsive to students' needs.

The advent of digital technologies has significantly influenced educational approaches, providing new opportunities to improve language learning skills. This study investigates the potential benefits of integrating Digital Storytelling into the English curriculum for tenth-grade students. The purpose of this study is to find out whether Digital Storytelling can impact students' proficiency to write descriptive text at the tenth graders of SMA Ihsaniyah Tegal.

METHODOLOGY

In this study, used quantitative research to measure the effect of digital storytelling on students' proficiency in writing descriptive text. Quantitative research tested objective theories by examining how variables related to each other. The researcher examined a certain population or sample to test a hypothesis. The data collection process was conducted using thorough research instruments, followed by accurate data analysis.

To evaluate the impact of the given treatment, this study employed a true experimental design by comparing the results of an experimental group with those of a control group that did not receive the treatment. The experimental group and control group were randomly selected from the population, allowing the researcher to control all influencing variables effectively.

The population of this study were tenth-grade students from SMA Ihsaniyah Tegal during the 2023/2024 academic year. There were 117 students in total, divided into four classes. Using the cluster random sampling technique, the sample was split into two groups randomly. The entire student population was organized into several clusters, from which two classes were chosen as the sample for this study. One class was designated as the experimental group, while the other served as the control group. The experimental group received instruction through Digital Storytelling, whereas the control group continued with traditional teaching methods.

Data collection involved the use of pre-tests and post-tests. The pre-test was administered to both the experimental and control groups to assess their initial abilities. At the end of the study, the post-test was conducted to evaluate the students' achievements and to assess the impact of Digital Storytelling on writing descriptive texts. The post-test was administered to both the experimental and control groups.

Pre-test was given at the first meeting. The test was written test were asked to describe something from digital storytelling that researcher show, student create descriptive text consisting two paragraphs with at least 150 words. The test was allocated for 60 minutes. The last stage is the post-test, the researcher gave a post-test to them after being given treatment and all the material had been delivered. This post-test was given to the control group and the experimental group. This final test will show the difference in students' writing ability to write descriptive text and is used to determine whether the treatment given to the two groups can have an impact on providing significantly different results or not.

In evaluating a research instrument, two elements must be examined, namely validity and reliability. The researcher uses a written test to measure the validity of the instrument in this study. The researcher employs content validity and construct validity to determine whether the instrument is valid. Content validity relates to the topics in the tenth-grade syllabus. The research instrument is assessed by experts or validators, specifically by an English teacher of SMA Ihsaniyah Tegal and an expert lecturer in writing. Meanwhile, the researcher evaluates construct validity based on the test design used. After the test is valid, it must be measured again with reliability. Student writing is assessed periodically. In other words, the researcher must use various methods to assess the same performance. Therefore, a scoring standard will be used to evaluate the writing of the students involved in this study. In assessing students' writing ability, the researcher uses a scoring rubric adapted from Brown & Abeywinckrama (2019), which measures several elements to evaluate students' writing skills.

The researcher used SPSS version 26 to analyze the research data. The researcher performed several data analysis techniques such as descriptive statistics, normality tests, homogeneity tests, and hypothesis tests.

RESULTS

This study was carried out with tenth-grade students from SMA Ihsaniyah Tegal during the 2023/2024 academic year. A sample of 24 students was selected for the experimental group and another 24 for the control group. The research process was divided into three phases: pre-test, treatment, and post-test, encompassing a total of eight meetings, including the pre-test and post-treatment stages. The subsequent section provides an analysis of the data:

1. Descriptive Statistics

Table 1. Descriptive Statistics.

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-test Experimental Group (X-1)	24	54	76	65.13	6.490
Post-test Experimental Group (X-1)	24	71	92	83.25	6.145
Pre-test Control Group (X-2)	24	48	77	65.00	6.984
Post-test Control Group (X-2)	24	54	85	71.38	7.465
Valid N (listwise)	24				

Based on the descriptive data presented in the table above, it can be seen that the experimental group and control group each consisted of 24 samples. Before receiving digital storytelling treatment, the lowest pretest score that was noted in the experimental group was 54, while the highest score was 76, with an average value of 65.13 and a standard deviation of 6.490. After the application of digital storytelling in the learning process, the experimental group achieved post-test scores that ranged from 71 to 92. The mean post-test score for this group was 83.25, with a standard deviation of 6.145.

In the control group, before the intervention, the mean pre-test score reached 65.00, accompanied by a standard deviation of 6.984. The range of pre-test scores varied between 48 and 77. Following treatment with conventional methods involving the use of pictures, the post-test scores ranged from 54 to 85. The mean post-test score in this group was 71.38, with a standard deviation of 7.465.

2. Normality Test

The purpose of conducting the normality test is to ascertain whether the data collected from the sample adheres to a normal distribution pattern. A dataset is deemed to be normally distributed if the significance value exceeds 0.05. In this research, the Shapiro-Wilk test was employed for the normality assessment, given the sample size of 48 students.

Table 2. Tests of Normality

	Class	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	Df	Sig.
Students Writing Score	Pre-test Experimental	.117	24	.200 [*]	.957	24	.376
	Post-test Experimental	.169	24	.073	.922	24	.066
	Pre-test Control class	.137	24	.200 [*]	.960	24	.431
	Post-test Control Class	.105	24	.200 [*]	.975	24	.796

According to the Shapiro-Wilk normality test results presented in Table 2, the significance values for the pre-test data in both the experimental and control groups were 0.376 and 0.431, respectively. These values, being greater than 0.05, indicate that the pre-test data follows a normal distribution ($0.376 > 0.05$; $0.431 > 0.05$).

Similarly, for the post-test data, the significance values were 0.066 for the experimental group and 0.796 for the control group. As both values exceed 0.05, it can be inferred that the post-test data is also normally distributed in both groups ($0.066 > 0.05$; $0.796 > 0.05$).

3. Homogeneity Test

After conducting the normality test, the next step taken by the researcher is to calculate the homogeneity test. The purpose of the homogeneity test is to determine whether the two data sample groups have the same variance or not. If the significance value is greater than 0.05, then the data is considered significant. The results of the homogeneity test are shown in the table below:

Table 3. Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Students Writing Score	Based on Mean	.247	3	92	.864
	Based on Median	.214	3	92	.887
	Based on Median and with adjusted df	.214	3	89.576	.887
	Based on trimmed mean	.236	3	92	.871

The homogeneity test table showed that the significant result based on mean rows was 0.864, indicating that the significant result was more than 0.05. This indicates that the population has homogeneity or equal variance, which contributes to the observed variance in the experimental and control classes.

4. Results of Paired Sample t-test

After checking if the data follows a normal distribution and homogeneity, the researcher used a statistical test called the two-sample paired hypothesis significance test to see how digital storytelling affects students' descriptive writing skills. This test compares scores from before and after the treatment in the experimental group. It's called a paired test. With this paired test, the researcher could compare the experimental group's scores with those of the control group. The results are summarized in the table below.

Table 4. Paired Samples Test

		Paired Differences					t	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre-test Experimental Group (X-1) - Post-test Experimental Group (X-1)	-18.12	5.343	1.091	-20.381	-15.869	-16.61	23	.000

Pair 2	Pre-test	-	3.334	.681	-7.783	-4.967	-	23	.000
	Control	6.375					9.368		
	Group (X-2) -								
	Post-test								
	Control								
	Group (X-2)								

In accordance with the results shown in Table 4 for pair 1, the significance level has a value of 0.000 < 0.50. The table above shows that (df), $df = N - 1$ here df is 23, and two sides $(\alpha/2) = 0.05/2 = 0.025$. Researcher compared the "t" that the researcher obtained the calculation of t is 16.618 and the value of t on the t -table is 2.064. From the above calculations, the t -count is greater than the t -table with $(t\text{-count } 16.618) > (2.064)$ at the 95% confidence level. Therefore, the paired sample test shows that there is a significant difference between the pre-test and post-test scores of the experimental group. This means that tenth-grade students of SMA Ihsaniyah Tegal experienced an improvement in their ability to write descriptive text using digital storytelling. Since the t -count is greater than the t -table, the research hypothesis (H_a) is acceptable and the null hypothesis (H_0) is rejected. In addition, the sig. $0.000 < 0.05$ indicated that the means of post-test and pre-test were different. Since the sig value. < 0.05 , the null hypothesis (H_0) is rejected and the research hypothesis (H_a) is accepted. This means that digital storytelling has an impact in improving students' writing skills.

Before receiving treatment, students encountered difficulty in developing ideas into writing. Based on the pre-test results in the experimental and control groups, the researcher identified several deficiencies in the students' writing criteria. Regarding content criteria, students were unable to develop the material appropriately and tended to imitate the examples given by only changing phrases without being creative. In terms of organization, some students showed ability but not optimally. Vocabulary criteria revealed that many students did not correctly distinguish between identification and description, resulting in poor sentence expansion and less varied vocabulary usage. In language use criteria, it was observed that students' grammar was still inappropriate, especially in distinguishing between simple present tense and simple past tense. Additionally, in mechanics criteria, the use of capitalization and writing style were still not appropriate. Based on these findings, the researcher developed a lesson plan that could help students overcome these deficiencies.

After applying different treatments in the control and experimental classes. Students in the experimental group were able to increase knowledge, deepen vocabulary, and improve writing skills after being given treatment using digital storytelling. They were able to capture the content of the digital story and were able to convey their ideas in writing. The simple present tense material provided also helped to significantly reduce students' grammatical errors. In addition, the material on descriptive text made students pay more attention to text organization and language use in their writing. Students were also able to demonstrate their understanding of the language structure of the descriptive text material through discussion and analysis in the exercises. As a result, students better understand and pay attention to tenses, organization, content, vocabulary, as well as mechanical aspects such as punctuation and correct paragraph writing.

In contrast, the control group did not receive any special treatment during the teaching and learning activities. As a result, students were less focused on the writing criteria and did not show creativity in writing. Students in the experimental group initially faced various difficulties in finding additional vocabulary, creating phrases and sentences, describing people, things, and places, and were confused about how to write correct identification and description. However, the final results showed that the descriptive texts they wrote improved.

CONCLUSIONS

The results indicate that digital storytelling significantly enhances students' descriptive writing skills. The paired sample t -test comparing pre-test and post-test scores between the experimental and control groups shows that digital storytelling positively influences students' writing abilities. The calculated sig value (2-tailed) for pair 1 is 0.00, which is less than 0.05. Additionally, the t -table value is 2.064, while the t -count is 15.869, indicating that the t -count is significantly higher than the t -table value.

There was a positive impact in writing descriptive text in class X SMA Ihsaniyah Tegal between the experimental group that used digital storytelling and the control group that was taught only using pictures. The difference can be seen from the content, in the experimental class that received treatment using digital storytelling students had many ideas for writing the content of the digital story that would be described in the text. While in the control class, students have few ideas in writing the content in the

descriptive texts. The difference was also seen in the experimental group's average which increased from 65.13 to 83.25 while the average score of the control class also increased from 65.00 to 71.38 even though they did not receive treatment with digital storytelling.

In addition, digital storytelling helps students improve their ability to describe places, things, people, and characters in a way that is interesting to readers. It also helps students to generate ideas, learn new vocabulary, and have imaginative experiences when writing descriptive texts. Therefore, the use of digital storytelling in learning can improve the quality of learning process and students' ability in writing descriptive text.

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