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CORRELATION BETWEEN DIGITAL STORYTELLING AND STUDENTS' NARRATIVE WRITING TEXT ABILITY

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ABSTRACT

The study explored the correlation between digital storytelling (DST) and students' narrative writing Text Ability, utilizing a quantitative correlational research design. Conducted among 34 eleventh-grade students at SMAN 1 Kramatwatu, the study employed two key instruments: a DST performance test and a narrative writing test. Statistical analyses, including normality, homogeneity, and linearity tests, confirmed the suitability of the data for correlation analysis. The Pearson Product Moment correlation revealed a strong positive relationship ($r = 0.851$, $p < 0.05$) between the two variables, indicating that students who excelled in DST also demonstrated superior narrative writing ability. The findings underscored the potential of DST as an innovative educational tool that combines visual and auditory elements to enhance creativity, coherence, and engagement in narrative writing. This study highlights the importance of integrating DST into teaching practices to foster students' writing abilities and overall language proficiency. Future research should explore the implementation of DST across diverse educational contexts to further validate its effectiveness and adaptability.

Key words: Correlation, Digital Storytelling, Narrative Writing Text Ability.

INTRODUCTION

In recent years, the integration of technology in education has significantly transformed teaching and learning processes, particularly in language instruction. The demand for innovative approaches to teaching writing skills is growing, as traditional methods often fail to engage students or address their specific challenges. Writing, especially in a second language, requires not only linguistic proficiency but also creativity, organization, and the ability to convey ideas effectively. Among various types of writing, narrative writing holds a unique position as it requires students to construct stories with a clear sequence of events, engaging characters, and meaningful resolutions, making it both a challenging and essential skill to master.

Amid these challenges, digital storytelling (DST) has emerged as a promising approach to enhance students' narrative writing skills. By combining traditional storytelling techniques with digital tools, DST provides a dynamic and interactive way for students to express their ideas, develop their writing skills, and foster creativity. This approach offers educators the opportunity to create more engaging and effective learning experiences, helping students overcome difficulties in developing coherent and compelling narratives.

Digital Story Telling

Digital storytelling (DST) is a creative technique that combines traditional narrative elements with digital media, such as voice-over narration, images, video clips, music, and text. This approach enables individuals to convey personal experiences and perspectives in an engaging manner (Gladstone & Stasiulis, 2017). Widely adopted in education, DST promotes creativity, collaboration, and self-expression while fostering

digital literacy and critical thinking (Yee & Stevens, 2019). Through the combination of technical and creative processes, DST offers students a unique opportunity to reflect, engage deeply with content, and improve their writing abilities in meaningful ways.

Research shows that DST provides opportunities for students to engage in meaningful storytelling activities, encouraging them to organize their ideas coherently and use language effectively (Zakaria & Aziz, 2019). Despite these benefits, DST remains underexplored in Indonesian high school contexts, particularly in improving EFL learners' narrative writing abilities.

Narrative Text

Narrative text is a core type of writing in English that presents a sequence of events in chronological order (Rusmilawati, 2020). Its primary purpose is to engage readers emotionally and encourage reflection on life's deeper meanings (Wulandari, 2019). Narrative texts take various forms, such as legends, fairy tales, fables, and science fiction, each with unique characteristics. For example, legends draw upon historical events, while fairy tales involve magical elements and mythical beings.

The structure of narrative text typically includes an orientation (introducing characters and setting), complication (presenting conflicts or challenges), resolution (resolving the conflict), and optionally, a reorientation (offering closure or reflection). Language features of narrative text include nouns and pronouns to identify participants, adjectives to describe characters and settings, time connectives to sequence events (e.g., "then," "suddenly"), and adverbs or adverbial phrases (e.g., "here," "at home") to provide temporal and spatial context (Nasir et al., 2021).

Narrative texts have key elements that contribute to their structure and meaning. These elements help organize the story and clarify the relationship between time, events, and characters. The topic defines the name of the story, while the characters (people or animals) perform specific roles and actions throughout the plot. The setting provides the time and place where the story occurs. The sequence of events refers to the order in which these events unfold, often connected by sequencing words like first, next, then, and last. Additionally, the problem and solution reveal the central conflict of the story and how it is resolved, and the main idea offers a deeper understanding of the narrative's central theme, with details providing further information to support the main idea (Harcourt, 2017).

Moreover, narrative texts are not only a form of storytelling but also serve a social function, particularly in providing cultural and moral lessons. Sudarwati and Grace (2017) explain that narrative texts entertain readers by addressing complications or conflicts that lead to a crisis, followed by a resolution. These stories offer an opportunity to engage with actual or vicarious experiences, presenting moral dilemmas and societal norms that encourage readers to reflect on their own lives. By doing so, narratives help to impart lessons about human values, societal expectations, and ethical choices, making them a powerful tool for both entertainment and education.

In conclusion, narrative texts not only serve to entertain readers but also play a crucial role in the development of students' language skills. Through narrative texts, students can learn to understand language structure, expand their vocabulary, and improve their language proficiency in a deeper context. Moreover, narrative texts provide opportunities for students to reflect on the moral and cultural values embedded in the stories, supporting their personal growth and understanding of life. Therefore, narrative texts have significant potential in fostering a more holistic approach to language learning.

The Problem and Research Focus

Writing narrative texts is a challenging task for EFL students, requiring not only linguistic proficiency but also creativity, coherence, and effective organization. Observations at SMAN 1 Kramatwatu revealed that 11th-grade students often struggled with these aspects, particularly in structuring coherent narratives, organizing ideas effectively, and using appropriate language to convey their thoughts. Traditional teaching methods, which heavily emphasize grammar drills and rote learning, have proven inadequate in addressing these challenges. Consequently, students face low motivation and lack confidence in their writing abilities.

Digital Storytelling (DST) has emerged as a promising solution to these issues, offering an interactive and creative approach to narrative writing. By integrating multimedia elements such

as images, videos, and voice-overs, DST provides students with a dynamic platform to express their ideas while enhancing their engagement and comprehension. Despite its potential, the application of DST in Indonesian high school contexts, particularly for improving EFL learners' narrative writing abilities, remains underexplored. This research aimed to investigate whether DST could effectively address these challenges and improve students' narrative writing abilities, focusing on its potential to foster creativity, idea organization, and linguistic expression.

To address these challenges, this study investigated the relationship between DST and students' narrative writing abilities. Specifically, it explored how DST enhanced students' ability to structure ideas, develop coherent narratives, and use language effectively. This research was guided by the question: Is there a relationship between digital storytelling and students' narrative writing abilities?

It is hypothesized that DST positively influences students' narrative writing abilities by fostering creativity, improving the organization of ideas, and increasing confidence in expressing themselves through writing.

Relevant Studies

Research into the effects of digital storytelling (DST) on students' writing abilities has been conducted extensively, demonstrating its potential as a powerful educational tool. Several studies provide valuable insights and form the foundation for this research. A study entitled "The Effect of Digital Storytelling in Improving the Third Graders' Writing Skills", was conducted by Yamac and Ulusoy (2016). This study explored how digital storytelling (DST) enhanced writing skills in third-grade students at rural primary schools in Turkey. The findings showed that DST enhanced students' ability to organize ideas, use appropriate vocabulary, improve sentence fluency, and increased their motivation to write.

Another study, entitled "The Impact of Digital Storytelling on ESL Narrative Writing Skill", was conducted by Zakaria and Aziz (2019). This research focused on Malaysian secondary school students and examined how DST influenced their narrative writing performance. The study concluded that DST not only enhanced students' narrative writing abilities but also increased their motivation and engagement in writing activities. The other study, entitled "Effects of Digital Storytelling-Aided Instruction on Students' Narrative Writing and Speaking Skills", was conducted by Riani, Husnawadi, and Syarifudin (2021). This study investigated the effects of DST on students' narrative writing and speaking skills in an Islamic school in Indonesia. The results demonstrated that DST significantly improved students' narrative writing abilities, although its impact on speaking skills was less pronounced.

This research holds significant implications for both teachers and students. For teachers, it offers a practical and engaging approach to teaching narrative writing, leveraging technology to create a dynamic classroom environment. For students, it provides an opportunity to develop their writing skills in a creative and enjoyable way, ultimately building their confidence and motivation to write. Previous studies have demonstrated the effectiveness of DST in enhancing students' writing performance, creativity, and motivation, particularly in EFL contexts (Riani et al., 2021). By examining its application in the specific context of SMAN 1 Kramatwatu, this research aimed to contribute valuable insights to the growing body of literature on technology-enhanced language learning.

METHODOLOGY

This study employed a quantitative approach using a correlational design to explore the relationship between digital storytelling (DST) performance and the narrative writing abilities of 11th-grade students at SMAN 1 Kramatwatu. Correlational research determines the association between two variables without manipulating them, focusing on whether higher DST scores are linked to stronger narrative writing skills (Tan, 2014). This approach provides a systematic analysis of the connection between DST and narrative writing, offering valuable insights into how digital storytelling impacted students' writing abilities.

The research was conducted during the academic year 2024/2025 at SMAN 1 Kramatwatu, a high school located at Jl. Pancoran No.1, Pelamunan, Kec. Kramatwatu, Kabupaten Serang, Banten. The population of this study included all 11th-grade students at the school. The sample for the research comprised 34 students who were selected based on specific criteria relevant to the research objectives, ensuring the sample was both appropriate and representative of the population. This selection allowed for a thorough examination

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of the research questions within the context of the school.

Data collection involved two primary instruments: a DST assessment rubric and a narrative writing evaluation rubric. The DST rubric assessed students based on four criteria: pronunciation, intonation, expression, and gesture. Each criterion was scored to measure the students' abilities to effectively present their stories using digital tools. Meanwhile, the narrative writing rubric evaluated creativity, content, clarity of writing, and tidiness, providing a comprehensive view of students' writing abilities.

The procedures included the following steps: (1) instructing students on how to create digital storytelling projects using specified tools, (2) collecting and evaluating DST submissions, (3) assigning and assessing narrative writing tasks, and (4) analyzing the relationship between the two variables using statistical techniques. By incorporating DST into the writing curriculum, this study aims to provide factual evidence supporting its effectiveness as a pedagogical tool for improving narrative writing skills among EFL students (Yamac & Ulusoy, 2016).

RESULTS AND DISCUSSION

This section presents the findings of the research, with the primary goal of addressing the research questions. The analysis begins with descriptive statistics to provide an overview of the data. These statistics offer essential insights into the baseline characteristics of the data and establish a foundation for further inferential analysis.

Following this, four key statistical tests are conducted to evaluate the data and draw meaningful conclusions. These tests are as follows: 1) the normality test, which examines whether the data follow a normal distribution; 2) the homogeneity test, which assesses the equality of variances across groups; 3) the linearity test, which checks for a linear relationship between variables; and 4) the Pearson product-moment correlation, which measures the strength and direction of the linear relationship between two variables. Each of these tests is essential in providing a comprehensive understanding of the data and the relationships being investigated.

Descriptive Statistics

To establish a baseline understanding of the data, descriptive statistics were calculated for both Digital Storytelling and Narrative Writing scores. The results are summarized below:

Table 1. Table Descriptive Statistics

Descriptives

			Statistic	Std. Error
Digital Story Telling	Mean		82.29	.766
	95% Confidence Interval for Mean	Lower Bound	80.73	
		Upper Bound	83.85	
	5% Trimmed Mean		82.25	
	Median		81.50	
	Variance		19.971	
	Std. Deviation		4.47	
	Minimum		75	
	Maximum		90	
	Range		15	
	Interquartile Range		8	
	Skewness		.170	.403
	Kurtosis		-1.117	.788
Narrative Writing	Mean		84.18	1.047
	95% Confidence Interval for Mean	Lower Bound	82.05	
		Upper Bound	86.31	
	5% Trimmed Mean		84.17	
	Median		85.50	
	Variance		37.301	
	Std. Deviation		6.11	
	Minimum		72	
	Maximum		96	
	Range		24	
	Interquartile Range		8	
	Skewness		-.231	.403
	Kurtosis		-.298	.788

The mean score for Digital Storytelling was 82.29, with a standard deviation was 4.47, indicating a relatively consistent performance among the participants. Scores ranged from 75 to 90, with a variance was 19.97. The distribution of scores showed slight positive skewness (0.170) and mild kurtosis (-1.117), suggesting that the data was approximately normally distributed.

For Narrative Writing, the mean score was slightly higher at 84.18, with a standard deviation was 6.11, reflecting more variability compared to Digital Storytelling. Scores ranged from 72 to 96, with a variance was 37.30. The distribution of scores exhibited slight negative skewness (-0.231) and mild kurtosis (-0.298), also indicating an approximately normal distribution.

These descriptive statistics provide a foundation for understanding the overall trends in the data and help identify key patterns. This initial analysis sets the stage for further inferential analyses to explore relationships between variables and assess the significance of the results.

The Normality Test

Normality testing was performed using the Statistical Package for Social Science (SPSS) version 25, utilizing the Shapiro-Wilk Test to assess the distribution of the data. This test is commonly used to determine whether a sample comes from a normally distributed population. The results of the normality tests provide valuable insights into the data's underlying distribution and can be summarized as follows:

Table 2. Table of Shapiro-Wilk Test

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Digital Story Telling	.137	34	.104	.945	34	.087
Narrative Writing	.171	34	.013	.953	34	.153

a. Lilliefors Significance Correction

It can be seen from the table, based on the calculation using IBM Statistical Package for the Social Sciences (SPSS) 25, that the Shapiro-Wilk test results were 0.087 ($p > 0.05$) for Digital Storytelling Score and 0.153 ($p > 0.05$) for Narrative Writing Score. In other words, the data for both Digital Storytelling Score and Narrative Writing Score showed normality. These figures indicate that the data were normally distributed.

The Homogeneity Test

Next test was homogeneity test. Homogeneity test was needed to ensure that all of the groups of samples were homogenous to each other. In homogeneity testing, the researcher needed to know the students' score in both variable. The data could be presented by using a contingency table in which the row and column table were the population and categories of the variable. According to the IBM Statistical Package for Social Science (SPSS) 25 used to test the homogeneity of variances, the researcher gained the result as follow:

Table 3. Table of Homogeneity Test

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Hasil Tes	Based on Mean	1.703	7	20	.165
	Based on Median	.592	7	20	.755
	Based on Median and with adjusted df	.592	7	11.652	.751
	Based on trimmed mean	1.544	7	20	.210

Based on the table 2. the data shows that the homogeneity is 0.165 which means that 0.165 > 0.05. The variances could be interpreted to be homogenous if the result of homogeneity was bigger than 0.05. In summary, that the data have already fulfilled the criteria in term of the

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homogeneity test and it can be concluded that the data is homogenous, and also the analysis can be continued to the next testing.

The Linearity Test

The next test was the linearity test. This test was conducted to determine whether there was a linear relationship between the two variables, Digital Storytelling and Narrative Writing text ability. A linear relationship implies that the relationship between the two variables can be represented by a straight line. To assess this, the researcher performed a linearity test using IBM Statistical Package for Social Science (SPSS) 25. The results of the test were as follows:

Table 4. Table of Linearity Test

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Narrative Writing Score * Digital Story Telling Score	Between Groups	(Combined)	1031.417	13	79.340	7.953	.000
		Linearity	890.841	1	890.841	89.297	.000
		Deviation from Linearity	140.577	12	11.715	1.174	.363
	Within Groups		199.524	20	9.976		
	Total		1230.941	33			

Based on the table, the result of the linearity test was 0.363, which is greater than the significance level of 0.05. This means that the data passed the linearity test, indicating that there was a significant linear relationship between Digital Storytelling ~~Score~~ and Narrative Writing ability. Therefore, we can conclude that the data fulfilled the criteria for linearity, and the analysis could proceed to the next stage.

The Pearson Product Moment Test

The next step was Pearson Product moment testing. In the research correlation test, this testing is very important and needed, because the coefficient of Pearson Product Moment or Pearson r is used to measure the linear relationship between two interval or ratio variables and it can have value between -1 and 1. Based on statistical calculation assisted by IBM Statistical Package for Social Science (SPSS) 25 in Pearson Product Moment test, the researcher obtained the result as follow:

Table 5. Table of The Pearson Product Moment Test

Correlations

		Digital Story Telling Score	Narrative Writing Score
Digital Story Telling Score	Pearson Correlation	1	.851**
	Sig. (2-tailed)		.000
	N	34	34
Narrative Writing Score	Pearson Correlation	.851**	1
	Sig. (2-tailed)	.000	
	N	34	34

**. Correlation is significant at the 0.01 level (2-tailed).

Based on the table, the value of the Pearson correlation was 0.851, indicating a strong positive correlation between Digital Storytelling and

Narrative Writing text ability. Additionally, the significant value of the correlation was 0.000, which is less than the significance level of 0.05. This result signified that the correlation was statistically significant.

In summary, the data indicated that there was a strong and significant positive relationship between Digital Storytelling and Narrative Writing Text Ability. This suggested that students who performed better in Digital Storytelling also tended to have higher scores in Narrative Writing.

Coefficient Determination

The Coefficient of Determination (R^2) is a critical statistical measure that indicates the proportion of variance in the dependent variable (Narrative Writing Ability) that can be explained by the independent variable (Digital Storytelling). It provides insight into the strength of the relationship between the two variables and the extent to which changes in one predict changes in the other. Based on the Pearson correlation coefficient (r = 0.851) obtained in this study, the coefficient of determination is calculated as the square of the correlation coefficient, indicating the proportion of variance shared between the two variables. This value helps to assess the strength and significance of their relationship. The coefficient of determination is calculated as:

$$R^2 = r^2 = (0.851)^2 = 0.724$$

This means that 72.4% of the variation in students' Narrative Writing Ability could be explained by their engagement with Digital Storytelling. In practical terms, this strong degree of contribution demonstrated that the implementation of Digital Storytelling in teaching significantly impacted students' performance in narrative writing.

However, it is also important to note that the remaining 27.6% of variance in Narrative Writing Ability is influenced by other factors not addressed in this study. These could include personal factors such as individual motivation and prior language proficiency, or external factors such as teaching styles, learning environment, and access to resources.

This finding highlighted the pivotal role of Digital Storytelling in enhancing educational outcomes while reminding educators and researchers of the multifaceted nature of learning. By addressing other potential contributing factors, future studies can further improve students' narrative writing abilities and explore complementary teaching methods to maximize their effectiveness.

The present study, which employed a correlational design, was conducted to determine the relationship between Digital Storytelling and students' Narrative Writing Text Ability. The results of the data analysis confirmed a significant and strong positive correlation between the two variables. This indicated that students who scored higher in Digital Storytelling also tended to perform better in Narrative Writing.

The analysis process began with tests to ensure the suitability of the data for correlation analysis. For the normality test, the Shapiro-Wilk results were 0.087 for Digital Storytelling Score and 0.153 for Narrative Writing Score, both of which are greater than 0.05. This confirmed that the data were normally distributed. Furthermore, the homogeneity test yielded a result of 0.165, which is greater than 0.05, indicating that the variances were homogenous. The linearity test also showed a significance value of 0.363, which confirmed a linear relationship between the two variables.

The Pearson Product Moment test revealed a correlation value of 0.851, indicating a strong positive relationship between Digital Storytelling and Narrative Writing text ability. The significance value of 0.000 further confirmed that the correlation was statistically significant. According to the interpretation scale suggested by Arikunto (2010), this correlation can be classified as strong, as it falls within the range of 0.800–1.000.

In line with the findings of this study, Digital Storytelling can be an effective technique for enhancing students' ability to write narrative texts. Through Digital Storytelling, students can develop creativity, structure their ideas coherently, and engage with the narrative process in an interactive and meaningful way. By combining visual and auditory elements, Digital Storytelling not only improves students' comprehension but also fosters their ability to communicate ideas effectively in written form.

This study suggests that integrating Digital Storytelling into the classroom can provide a supportive environment for students to practice and improve their writing abilities. Teachers are encouraged to adopt this technique as it can motivate students and help them connect

their personal experiences with the writing process. Ultimately, this strategy can contribute to improved narrative writing abilities and overall language proficiency.

CONCLUSIONS AND SUGGESTIONS

Based on the data analysis, hypotheses testing, and discussion in the previous chapter, it can be concluded that this study was successfully conducted. The results revealed a significant and strong positive correlation between Digital Storytelling and students' Narrative Writing Text Ability. The correlation value of 0.851 indicates that students who performed better in Digital Storytelling also demonstrated higher proficiency in Narrative Writing. This finding suggests that Digital Storytelling, as an innovative and interactive technique, plays an important role in enhancing students' ability to write narrative texts. It emphasizes the importance of integrating creative teaching methods that engage students in both visual and auditory learning experiences to improve their writing skills.

Furthermore, this study highlights the need for educators to incorporate Digital Storytelling into their teaching practices as it fosters creativity, motivation, and better comprehension of narrative structure. By doing so, teachers can help students develop not only their writing abilities but also their overall language proficiency. In conclusion, to improve their Narrative Writing Text Ability, students are encouraged to actively participate in activities such as Digital Storytelling. Practicing more often and exploring creative methods can significantly contribute to their success in mastering narrative writing and other language skills.

Future Directions for improving the integration of Digital Storytelling into educational practices cover several key areas. First, educators should consider incorporating DST into their curriculum as a regular component of language instruction. Providing workshops and training sessions for teachers can equip them with the necessary skills to utilize digital tools effectively. Furthermore, encouraging students to present their digital storytelling projects to peers not only enhances confidence but also fosters a collaborative learning environment that benefits all participants.

Schools and educational institutions play a vital role in supporting the use of Digital Storytelling by investing in technological resources such as computers, tablets, and reliable internet access. Establishing dedicated spaces where students can work on their creative projects can further motivate them to engage deeply with the medium. Institutions should also consider partnerships with organizations or communities experienced in DST to broaden access to innovative teaching methodologies.

Future research should expand on this study by exploring the long-term effects of Digital Storytelling on other language skills, including speaking and listening. Examining its applicability across different educational contexts and age groups would provide valuable insights into its potential as a universal teaching tool. Such studies could also address the challenges and limitations of implementing DST in resource-limited environments, paving the way for more inclusive and effective educational practices.

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