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The Impact of Digital Storytelling and Spoken Storytelling to Improve Students' Reading Comprehension Through Project Based Learning

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Abstract

Reading is one of the most significant problems facing educators today because it one of the basic ways of acquiring information in our society and in academic setting in particular. Individual who can not read well is at a serious disadvantage with respect to educational and, consequently, vocational opportunities. Using an appropriate strategy will help to solve the problem. This study aims to analyse the impact digital storytelling and spoken storytelling to improve students' reading comprehension. This study used mixed method research design, samples of this study were 72 students which divided into two group; X.2 as experiment who were taught by using digital storytelling group and X.3 as control group who were taught by spoken storytelling. Some instruments were used, such as test, interview, observation, and questionnaire. Pre-test was given before treatment then post-test was given after treatment. To measure student's perception, questionnaire was given to all participant, and interview was given as representative of each group, while observation did in teaching learning process. The result of study revealed that teaching reading using digital storytelling was more significant than spoken storytelling, it can be seen from the mean result between pre-test and post-test. Students who got treatment by using digital storytelling has significant value in passing KKM. It also can be seen from students' perception from questionnaire, the benefits using digital storytelling in reading were students contributed in teaching learning by utilising technology, improved their digital literacy, and increased their creativity. In briefly, digital storytelling can be used as alternative teaching reading in classroom, using Digital Storytelling improved not only reading comprehension but also student's creativity, critical thinking, and collaboration or communication, such as mentioning in Profil Pelajar Pancasila. Meanwhile, for students, this research assisted students to be confident in learning English, use technology in appropriate way, and they can work together, for instance, discussing, delivering ideas, having meaningful learning English

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INTRODUCTION

Reading is one of the most significant problems facing educators today because it one of the basic ways of acquiring information in our society and in academic setting in particular. Individual who can not read well is at a serious disadvantage with respect to educational and, consequently, vocational opportunities. Rashid (2017) conducted a study in Jordan found that students face several problems in the reading process, such as ambiguous words, unfamiliar vocabulary, and limited available time to cognitively process the text. Its also supported by Saraswati (2021), revealed eight grade students 72 % students got difficult in reading comprehension, such as understanding vocabularies, finding specific information, determining main idea, locating reference, and making inference. Reading comprehension in SMAN1 Blora was still lack, it was proven from educational report of SMAN 1 Blora decreased from previous year 2 percent for literacy. As a teacher considers that teaching reading must be interactive and interesting to achieve goal of study because reading is not just reading with a loud voice but reading is established to understand the meaning of words, sentences, and paragraph sense relationship among ideas. If the students just read aloud but can't understand the content of the text, it means they fail in comprehending the passage

Nowadays, both teachers and students are more interested in learning using technology; we cannot deny the digital era's influences on education also. Teachers have a role to provide a creative and innovative learning environment to motivate and stimulate students. As we know, students can be called gen-z and they prefer to exist on media social and use technology. Teaching reading short stories to make students, more understanding of the material and can analyse the contents of the story including the moral value, plot, setting, and characters in the story, the use of technology in teaching enjoys, motivates, and facilitates the students in learning English.

One of the alternative media was digital storytelling that combines with technology. On the example of technology usage in teaching is digital storytelling. Kang et al. (2003), Shin and Park (2008) define "Digital storytelling" as storytelling that is conducted using digital technology as the medium or method of expression, in particular using digital media in a computer-network environment. Additionally, Abdolmanafi-Rokni and Masoud Qarajeh (2014) stated students in an experimental group considered the digital storytelling helpful and that their reading and speaking improved a lot, and the strategy of applying digital storytelling not only enhances the speaking learners but also has a considerable effect on students' motivation toward language learning in general.

Digital storytelling and opportunities for sharing thoughts an idea as a class, group, or individually. Digital storytelling can create 21th Century Skills (Robbin, 2008). They are digital literacy, global literacy, technology literacy, visual literacy, information literacy. If the students learnt using digital storytelling can improve their literacy skills, such digital literacy which skills to communicate, discuss, and collect information properly, and global literacy means the ability to read, criticize, and respond some information properly. In addition, technology literacy means the ability to use technology or internet or computer to increase capability to support learning process. While visual literacy means ability in using pictures to visualize, interpret, create, and communicate related the pictures. Furthermore, information literacy is capability to analyse, evaluate information critically.

Learning reading can be implemented to the various teaching methods, such as project-based learning. As a mentioned in merdeka curriculum, project-based learning is mostly uses in teaching learning process. In project-based learning, students are the centre of learning who are actively to improve their competence. In addition to that, Artini (2017) who conducted research about the effect of project-based learning in English Productive Skills revealed a significant effect of PBL on students' English productive

skills. From the part of the students, PBL was found to improve enthusiasm, confidence, creativity, self-directed learning and collaborative learning skill. In project-based learning, students can use technology as a tool, such as making outline, searching information related to topic, analysing numeric data, etc.

Regarding background that had been mentioned above the problem of this research is whether digital storytelling and spoken story telling give impact to students' reading comprehension in SMAN 1 Blora, and also students' perception using digital storytelling. The goal of this research is to explain the impact digital storytelling and spoken storytelling to improve students' reading comprehension in SMAN 1 Blora. This research is expected significantly contribute as alternative teaching reading in classroom.

METHOD

This research used mixed methods reseach design, In the first study, the researchers formulated a hypothesis, collected quantitative data, and conducted data analysis. The findings of quantitative study determined the type of data collected in a second study that includes qualitative data collection, analysis, and interpretation. The researchers used qualitative interpretation to elaborate the quantitative results.

The population of this research was ten grade, and samples as below:

Tabel 1. Sample of study

No	Class	Number of students
1	X.2	36 students
2	X.3	36 students
Total		72 students

To collect the data, there were some instruments. Test was used to measure students' reading comprehension, while interview, observation, and questionnaire were measured students' perception. Before giving pretest and posttest, test was checked validity and reability by having tryout test. To check validity and reliability of tryout test, the Cronbach Alpha formula to determine the reliability of the instruments; if the Cronbach Alpha > to 0.6, the instruments may be regarded as reliable, and if the Cronbach Alpha < to 0.6, the instruments may be regarded as unreliable.

In collecting the data, project-based learning was implemented, seven steps of project-based learning model was designed and established by Nirwadi (2017):

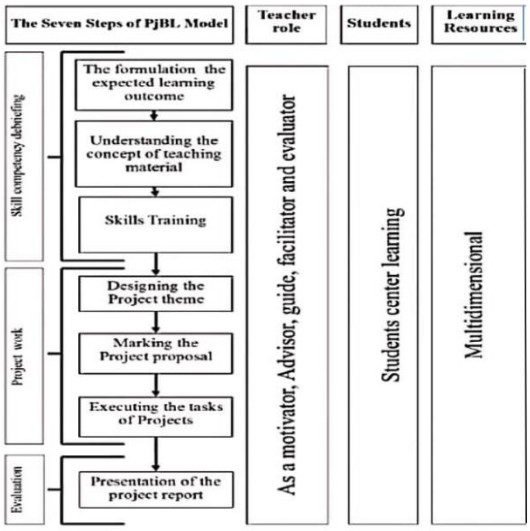

Figure 1. Steps Project based-learning

The first step, the formulation of expected learning outcomes, this period delivers information and investigation by the teacher and students' interaction about the acquiring products. Second, understanding the concept of teaching materials, in this view students, must be enthusiastically involved in discussions about their knowledge of the raw material being studied. Third, skills training, students accomplish project assignments based on learning endings and can be done through demonstration and practice. Fourth, designing project themes, the early point of devising, discuss and identify problems. Fifth, making the project proposal, students set down an activity schedule and compose a project task proposal. Sixth, completing the assignments of the project, this phase is practicable actions for students with

good collaboration to appoint the quality of performance and realize project design into a real object. Seventh, presentation of the project report, students able to performed for the effort processes and project tasks at the front of the class.

The method designates appropriately so that it can be demonstrated through questionnaires, interviews, observations, tests, documentation, and so on. Observation was conducted in teaching learning, there were two observers, both are English teachers. In addition, questionnaires were given to all participant. Interview was conducted to representative of each group, there were nine students who were interviewed. In this research used structured-interview because participants were asked same questions, interview guided as follow:

1. What do you think about learning reading through digital storytelling?
2. What are the benefits that you can get from learning reading by using digital storytelling?
3. Do you enjoy learning reading through digital storytelling? Why?
4. Do you think learning reading through storytelling is helpful? Why?
5. How does digital storytelling activities affect your reading?

Quantitatively, the data was gathered through the reading comprehension (pre-test and post-test), pretest is to measure the ability of participants before they receive treatment and post test is a measure on some attribute or characteristic that is assessed for participants in an experiment after a treatment. The test was used multiple choice, there were 25 questions in test.

In analyzing the data, this research used SPSS which consists of normality test, homogeneity test, t-test. The criteria of the normality test can be calculated as follows:

a. If the sig. value (p-value) is more than 0.05, it means the data is normally distributed
b. If the sig. value (p-value) is less than 0.05, it means the data is not normally distributed.

RESULTS AND DISCUSSIONS

As stated at methodology, there were 72 participants in this research which devided into two group, X.2 as experimental group was taught by using digital storytelling, while X.3 as control group was taught by using spoken storytelling. Before testing in this investigation, the researchers begins by validating the assumptions. Those have made before verifying the hypotheses. The assumption test aims the normality test, the homogeneity test. This analysis was conducted after gaining data of pre-test and post-test.

Tests of Normality

	Class	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Score	Pre-test experiment	.131	36	.120	.958	36	.183
	Post-test experiment	.084	36	.200*	.967	36	.350
	Pre-test control	.152	36	.036	.948	36	.091
	Post-test control	.117	36	.200*	.976	36	.602

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Figure 2. Normality Test Result

According to Shapiro-Wilk, value of sig. from pre-test score of experiment group was 0.183 and post-test was 0.350. The value of sig. is more than 0.05, it meant that the data is normally distributed. While, value of sig. from pre-test score of control group was 0.91 and post-test was 0.602. The value of sig. is more than 0.05, it meant that the data is normally distributed.

The nest assumption test was homogeneity. A homogeneity test is important to make sure the data collection was homogenous. To test whether the data was homogeneous or not. I used the Levane Test of Homogeneity of Variance. The criteria of the homogeneity test can be calculated as follows:

a. If the sig. value (p-value) is more than 0.05, it means the data is homogenous
b. If the sig. value (p-value) is less than 0.05, it means the data is not homogenous

The following tables depicted the homogeneity of pre-test and post-test of both experimental classes.

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Score	Based on Mean	1.420	3	140	.239
	Based on Median	1.432	3	140	.236
	Based on Median and with adjusted df	1.432	3	134.499	.236
	Based on trimmed mean	1.406	3	140	.244

Figure 3. Homogeneity Test

From the figure above, it can be seen the sig. value 0.239. it means that the sig. value was higher than 0.05. It can be concluded that the subjects of both experimental groups were homogenous.

Based on the normality and homogeneity test. I conclude that the pretest and post-test scores of both experimental classes were normally distributed and homogenous. Then, those statistical data could be performed to analyze the means different among the research variables to test the hypotheses.

The hypothesis test is used to determine the impact of independent variables on the dependent variable. The results of research were explained as follows:

Figure 4 and 5 explained the result before being taught digital storytelling and spoken storytelling

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pretest score of experiment class	36	36	76	60.67	9.046
Valid N (listwise)	36				

Figure 4 Descriptive statistics before being taught digital storytelling

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pretest score of control class	36	44	80	60.00	9.610
Valid N (listwise)	36				

Figure 5. Descriptive statistics before being taught spoken storytelling

From Figure 3, it can be seen that the sample was 36 students with low score was 36 and high score was 76, while mean of pre-test score from experiment group was 60.67. The score minimum criteria are 70, if students got score under 70 meant they did not pass the test. From the data, there were six students who passed the test and 30 students who got score under 70. While table 4 explained 36 students with low score was 44 and high score was 80, while mean of pre-test score from control group was 60.00. The score minimum criteria are 70, if students got score under 70 meant they did not pass the test. From the data, there were six students who passed the test and 28 students who got score under 70.

Figure 6 and 7 explained the result after being taught digital storytelling and spoken storytelling.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Post-test score of experiment class	36	68	100	85.11	8.259
Valid N (listwise)	36				

Figure 6. Descriptive statistics after being taught digital storytelling

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Post test score of control class	36	56	96	76.78	9.882
Valid N (listwise)	36				

Figure 7. Descriptive statistics after being taught spoken storytelling

From the Figure 5, it can be seen that the sample was 36 students with low score was 68 and high score was 100, while mean of post-test score from experiment group was 85.11. The score minimum criteria are 70, if students got score under 70 meant they did not pass the test. From the data, there were 33 students who passed the test and 3 students who got score under 70. In addition, table 6 explained 36 students with low score was 56 and high score was Source:data processed SPPS version 27

96, while mean of post-test score from control group was 76.78. The score minimum criteria are 70, if students got score under 70 meant they did not pass the test. From the data,

there were 27 students who passed the test and 9 students who got score under 70.

The next result of research was about the significant between pre-test and post-test before and after being taught digital storytelling and spoken storytelling. The researchers used SPSS namely T test to calculate the data. According to Sugiyono (2019:315) stated if p (sig) ≥ 0.05 meant Ho is accepted and Ha is rejected, if p (sig) < 0,05 meant Ha is accepted and Ho is rejected. To know whether significant or not, if sig. <0.05 meant the result is significant.

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Pret-test experiment – Post-test experiment	-24.44	6.809	1.135	-26.693	-22.085	-21.492	35	.000

Figure 8. T-test pre-test and post-test experiment group

From the figure above, it can be seen that the mean score difference between pre-test and post-test from experimental class was 24.44, with standard deviation was 6.809, score T-test was 21.492, and score of sig. (2-tailed) was 0.000. It can be concluded that there was significant between pre-test and post-test before and after being taught by using digital storytelling to improve reading comprehension.

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Post-test control – Pret-test control	16.78	7.029	1.171	14.344	19.100	14.274	35	.000

Figure 9 T-test pre-test and post-test control group

From the table above, it can be seen that the mean score difference between pre-test and post-test from experimental class was 16.78, with standard deviation was 7.029, score T-test was 14.274, and score of sig. (2-tailed) was 0.000. It can be concluded that there was significant between pre-test and post-test before and after being taught by using spoken storytelling to improve reading comprehension.

To get data qualitative to measure students' perception, questionnaire, interview, and observation were used. The next result of research to measure correlation between using digital storytelling and students' perception. The researchers used likert scale.

Class	Score	Criteria
Control class	29,4	Undecided
Experiment class	40,39	Strongly agree

Figure 10. Result of students' perception

From the students' questionnaire control class got 29.4 or undecided criteria and experiment class got 40.39 or strongly agree criteria. It can be concluded that correlation between digital storytelling and students' perception is strongly agree, they prefer learning by using digital storytelling.

In addition, the next result of this research was about students' perception using digital storytelling to improve reading comprehension. According to the result of interview about students' perception using digital storytelling to improve reading comprehension as follow:

a) Reading by using digital storytelling helped students to understand story detail.
b) The benefits using digital storytelling in reading were students contributed in teaching learning by utilising technology, improved their digital literacy, and increased their creativity.
c) Using digital storytelling made students more understand the story, could explore some features, such as editing video and inserting pictures, collaborated with their classmates to share ideas and creativity.
d) Reading using digital storytelling also helped to increase students' reading comprehension because they memorized easily and text was more creative and interactive.
e) Digital storytelling also influenced students' reading comprehension because students understood text easily, story more detail in order to they could comprehend story in text.

Reading comprehension is basic way for students to understand lesson, by having good

reading comprehension help students to understand some information, analyse text, and produce papers. Reading consists of two related processes:word recognition and comprehension. Word recognition refers to the process of perceiving how written symbols correspond to one's spoken language. Comprehension is the process of making sense of words, sentences and connected text. In addition, according to Ruddell, et.al (1994, p. 112) reading is not simply knowing sounds, words, sentences, and the abstract part of language, it is like listening consists of processsing language and constructing meaning. The reader brings a great deal of information to this complex and active process.

Teaching using digital storytelling can improve students' reading skills as seen from the results of the pre-test and post-test. The application of reading teaching with digital storytelling makes students more interested and easier to understand the contents of the text. Teaching using digital storytelling also shows the use of technology and the process of students in understanding a text. There were 30 students who passed criteria minimum when they were taught by using digital storytelling, and mean score increased from 60.67 to 85.11.

According to the result of interview, all students felt satisfied using digital storytelling because it can increase their digital literacy, help them to understand text, build confidence in classroom.

Teaching learning process by utilising digital storytelling also introduce technology, practice new things, understand story, find some new ideas, and also collaborate each other's.

Students' perceptions of reading learning using digital storytelling are that it can help students understand more deeply about reading learning (which only uses long text) because the use of digital makes it easier for students to understand the storyline. In addition, the benefits obtained by students when learning reading with digital storytelling are that students can directly contribute to learning by utilizing technology, improving students' literacy skills and of course increasing students' creativity.

Moreover, reading learning with digital storytelling makes students better understand the stories they read or create by utilizing the available features, encouraging collaboration between friends to express ideas in stories so that students are free to be creative. Reading learning using digital storytelling also helps improve students' reading skills because with this method students find it easier to remember reading texts because they are presented differently and more creatively. Therefore, the use of digital storytelling also has an influence on students' reading skills because students find it easier to understand the storyline and questions related to the reading text. This study is in line with research from Paramita & Utami, (2021) which states that students' perceptions or feelings in using digital storytelling media to learn English. Some of them find it easy or difficult to learn to speak with digital storytelling media. Although many students feel helped in learning to speak.

CONCLUSION

After several analyses and discussion of findings, this study finally reaches the end to report some conclusions. Based on the finding and discussion in the previous chapter, it is clear that digital story gave impact to the students' reading comprehension, it was showed from the mean score of digital storytelling was higher than spoken storytelling. These findings provide strong evidence of a statistically significant difference between pre-test and post-test scores. As a result, the null hypothesis can be rejected. Therefore, for futher researchers needs to conduct factor that influenced reading skill using technology because reading is one of the most significant problems facing educators today because it one of the basic ways of acquiring information in our society and in academic setting in particular.

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