

## THE EFFECT OF THE USE OF DIGITAL STORYTELLING ON BASIC LEARNING RESULTS OF GRAPHIC DESIGN BASIC

Dyan Yuliana<sup>1</sup>, Okta Ayu Wulandari Putri<sup>2</sup>

<sup>1,2</sup> Study Program of Information Technology Education, STKIP PGRI Situbondo,  
Situbondo, 68323, Indonesia

E-mail : [pitikpitik23@gmail.com](mailto:pitikpitik23@gmail.com), [oktaputri079@gmail.com](mailto:oktaputri079@gmail.com)

### Abstract

*The development of Information and Communication Technology today has grown very rapidly, this is evidenced by the emergence of sophisticated technological equipment that has changed the lifestyle of humans at this time. As a teacher, of course we must be able to adjust the way of educating them according to their way of life in the digital era. Teachers are required to carry out an innovation in the learning process in the classroom, to support the needs needed in implementing active learning in the classroom, there is a need for media that can support the implementation of learning optimally to spur effective communication skills through active learning that integrates information and communication technology. namely Digital Storytelling (digital storytelling) which is a strategy to use a computer application program that combines audio and visual media. This study used a quantitative research approach with the type of pre-experimental designs with the form of one group pretest posttest design. The decision making of hypothesis testing uses the help of the SPSS version 25 program. The hypothesis testing technique uses the paired sample t-test and simple linear regression. The results obtained through the paired sample t-test in SPSS version 25, namely the sig value. (2-tailed) of 0.001. In accordance with the basis of decision making in the paired sample T-test that the sig. (2-tailed) <0.05 or 0.001 <0.05, then H<sub>0</sub> is rejected and H<sub>a</sub> is accepted. This means that there is a significant difference between the pretest and posttest results. To find out what percentage of this influence is, it is necessary to look for the coefficient of determination (R Square) with a simple linear regression test in SPSS version 25 and it was found that the effect of Digital Storytelling on student learning outcomes is 0.142 or 14.2% which can be concluded that Digital Storytelling has an effect. which is very low on student learning outcomes at SMKN 1 Kendit.*

**Keywords :** Digital Storytelling learning, learning outcomes.

### Abstrak

Perkembangan Teknologi Informasi dan Komunikasi saat ini telah berkembang sangat pesat, hal ini dibuktikan dengan bermunculan peralatan teknologi canggih yang telah mengubah gaya hidup manusia pada saat ini. Sebagai seorang guru tentunya kita harus dapat menyesuaikan cara mendidik mereka sesuai dengan cara hidup mereka di era digital. Guru dituntut untuk melakukan sebuah inovasi dalam proses pembelajaran di dalam kelas, untuk mendukung kebutuhan yang diperlukan dalam menerapkan pembelajaran aktif di kelas perlu adanya media yang dapat menunjang dalam pelaksanaan pembelajaran tersebut secara maksimal untuk memacu kemampuan komunikasi efektif melalui pembelajaran aktif yang mengintegrasikan teknologi informasi dan komunikasi yaitu *Digital Storytelling* (bercerita digital) yang merupakan

suatu strategi penggunaan program aplikasi komputer yang menggabungkan antara media audio dan visual. Penelitian ini menggunakan pendekatan penelitian kuantitatif dengan jenis *pre experimental designs* dengan bentuk penelitian *one group pretest posttest design*. Pengambilan keputusan uji hipotesis menggunakan bantuan program SPSS versi 25. Teknik pengujian hipotesis menggunakan uji *paired sampel t-test* dan uji regresi linier sederhana. Hasil yang diperoleh melalui uji *paired sampel t-test* di SPSS versi 25 yaitu diketahui nilai sig. (2-tailed) sebesar 0,001. Sesuai dengan dasar pengambilan keputusan dalam uji *paired sampel T-test* bahwa nilai sig. (2-tailed) < 0,05 atau  $0,001 < 0,05$ , maka  $H_0$  ditolak dan  $H_a$  diterima. Artinya terdapat perbedaan yang signifikan antara hasil *pretest* dan *posttest*. Untuk mengetahui berapa persen pengaruh tersebut, maka perlu dicari koefisien determinasi (R Square) dengan uji regresi linier sederhana di SPSS versi 25 dan ditemukan bahwa pengaruh *Digital Storytelling* terhadap hasil belajar siswa sebesar 0,142 atau 14,2% yang dapat disimpulkan bahwa *Digital Storytelling* memberikan pengaruh yang sangat rendah terhadap hasil belajar siswa di SMKN 1 Kendit.

**Kata Kunci :** Pembelajaran *Digital Storytelling*, hasil belajar.

## 1. Introduction

The development of Information and Communication Technology nowadays has grown very rapidly, this is evidenced by the emergence of sophisticated technological equipment that has changed the lifestyle of humans at this time. On the other hand, the development of information and communication technology, which offers convenience and a strong appeal, keeps children away from their social environment, they prefer to interact with this technology compared to other people around them. As a teacher, of course we must be able to adjust the way of educating them according to their way of life in the digital era, and prepare them to face the challenges of the future.

Although teachers are not the only determinant of educational success, the learning process is a qualification and a central point of education, as a reflection of quality. Learning media is one of the things that can be designed, made, used, and developed in an effort to support increased student acceptance of the information to be provided. Media that is integrated in educational technology, if designed and used properly, can be utilized to achieve the effectiveness and efficiency of teaching and learning activities, especially with subjects that require more practical activities.

However, so far there are several obstacles that are still felt, one of which is that students find it difficult to express opinions due to the lack of support from their learning environment, thereby reducing the involvement of interactions in the real environment and their communication. In addition, in the cognitive aspects of students, the use of learning media has not been maximized, especially in the subject matter of historical events in the past which in its presentation is still dominated by verbal messages or explanations in words and is only supported by source books so that it is considered less attractive. and sometimes students do not understand it.

A teacher is required to make an innovation in the learning process, how to teach by relying solely on the lecture method or students must memorize lessons only from source books without being balanced with other practical activities, it will only burden students, their learning motivation is very low and goals learning will not be achieved. Therefore, it is the teacher's job to find ways to create a comfortable, pleasant classroom atmosphere and the learning process can run smoothly.

The problem that arises at SMKN 1 Kendit is the lack of teacher creativity. In

## THE EFFECT OF THE USE OF DIGITAL STORYTELLING ON BASIC LEARNING RESULTS OF GRAPHIC DESIGN BASIC

addition, the use of monotonous methods results in reduced student attention to the subject itself. Coupled with the interest of students in subjects that require students to use psychomotor to accept vocational subjects, especially in the Computer and Network Engineering expertise program. Lack of creativity in making learning methods which sometimes makes the learning atmosphere boring and makes students more easily bored in taking lessons.

The research that has been described shows that the use of multimedia in teaching helps students store new information and helps in understanding difficult material. To support the needs needed in implementing active learning in class on Basic Graphic Design Subjects, it is necessary to have media that can support the implementation of this learning optimally to spur effective communication skills through active learning that integrates information and communication technology, namely Digital Storytelling (digital storytelling). Which is a strategy for using a computer application program that combines audio and visual media. This concept makes the storytelling process deeper emotionally, when the information is conveyed to be more dynamic, the recipient of the information can easily understand it through visual and audio displays. The emotional aspect is also awakened, when the emotional aspect is awakened, usually the learning process becomes easier.

Media comes from the Latin "medium" which means "intermediary" or "introduction". Furthermore, the media are tools or equipment used to convey messages and information to the recipients of the message. The use of teaching media can help achieve learning success [1]. Learning media is a tool that is physically used to convey the contents of learning material consisting of books, tape recorders, cassettes, video cameras, video recorders, films, slides, etc. photos, pictures, graphics, television and computers [2].

Based on the understanding of the media above, it can be defined that learning media is a tool or material used in delivering subject matter during the learning process so that the objectives of learning can be achieved properly.

Digital is a depiction of a number state consisting of the numbers 0 and 1, or off and on (Binary numbers or also known as Binary Digits). Digital describes an electronic technology that stores, generates, and processes that data in 2 conditions: positive and non-positive. Positive is expressed or also represented by the number 1 and for non-positive by the number 0. Thus, data sent or data stored with digital technology is expressed as a string 0 and 1. Each digit of this status is referred to as bits (and the series of bits that a computer can or can handle individually ie as a group are bytes).

Digital Storytelling is essentially a process of combining images, sound, text, and video to tell or describe something [3]. In other words, Digital Storytelling is a new image of storytelling. Usually in storytelling, a story is written or illustrated on a sheet of paper, while Digital Storytelling is a story that is illustrated or manifested in a video that is equipped with sound, images, text, and animation so that it is more interesting using a computer application. In addition, Digital Storytelling also covers a wide variety of topics, not limited to classic stories, video results can be anything, and uses a variety of available software.

Based on the above understanding, it can be concluded that Digital Storytelling is a medium in the form of a short video with a duration of 3 to 15 minutes that combines images, sound, and music to convey information. Delivery of information can be in the form of stories, messages and subject matter. DST as a multimedia learning that is used appropriately and well will provide benefits in the

learning process.

A story is defined as a series of events, storytelling means the relationship between a series of events. In addition, storytelling is also called telling or storytelling, storytelling is telling stories by telling words. Storytelling is a technique in telling stories to students with a more interesting style and intonation [4].

The benefits of this storytelling activity include developing fantasy, empathy and various other types of feelings, fostering interest in reading, building closeness and harmony, learning media. Other benefits for children by storytelling include developing children's thinking and imagination, developing children's speaking skills, developing children's socialization skills, and means of communicating children with their parents [5].

In storytelling, there are various types of stories that can be chosen to be told or retold to students. Before doing storytelling, usually the storyteller has to make preparations in advance, whether it's equipment or the type of story to be told so that when storytelling can run smoothly.

Several types of storytelling, including : Fable, which is the most favorite fairy tale by students because the student's interest in animals is very high, this fairy tale contains about the animal world, for example the tale of Kancil and Crocodiles; Legend, namely a fairy tale about the events of a place and related to natural wonders, for example the fairy tale that happened to Lake Toba, the occurrence of Mount Tangkuban Perahu; Mite, namely fairy tales about spirits and gods, for example the fairy tale of Nyi Roro Kidul; Sage, which is a fairy tale that contains a lot of historical elements. Because it is told by word of mouth, over time there are additional imaginary stories, for example the tale of Jaka Tinggir; and Parables, namely fairy tales that contain similitude or wisdom as a way of life and contain a lot of educational values [6].

explains that there are nine benefits when we do storytelling, namely stimulating the ability to think in children, giving pleasure, joy, enjoyment and creating imagination in children, providing new experiences and developing insights in children, developing abilities and talking to children, connecting words words with imagination, build children's visualization, learn traits and characters, inspire various personalities, develop analytical skills [7].

Learning outcomes are an act of evaluation that can reveal aspects of the thought process (cognitive domain) and can reveal other psychological aspects, namely aspects of values or attitudes (affective domain) and aspects of skills (psychomotor domain) inherent [8]. in each individual student. This means that through learning outcomes, a holistic description of student achievement can be revealed after going through learning. The real manifestation of student learning outcomes at SMK can be seen in the implementation of the Vocational Practice Competency Test (UKK). Vocational Practice UKK is able to describe holistically the level of student achievement after learning because it has six assessment components including knowledge, preparation, process (systematics & work methods), work results, work attitude, and time.

Learning is a complex process and a change in behavior during the learning process is observed in changes in student behavior after an assessment. Educators must be able to understand and observe the process of changing students' behavior after an assessment. Student learning outcomes or student successes are usually in the form of values obtained. This value is obtained after students go through the learning process for a certain period of time and then take the final test. Then from

# THE EFFECT OF THE USE OF DIGITAL STORYTELLING ON BASIC LEARNING RESULTS OF GRAPHIC DESIGN BASIC

the last test that educators determine the learning achievement of their students.

The objectives to be achieved through storytelling activities can be chosen as a reference in this study. The teacher has the freedom to choose and determine the content or form of the story to be conveyed to students, but the selected story must describe the content of the story well. To find out the achievement of these goals, the writer makes an assessment by providing a pretest and posttest that is related to the purpose or content of the story so that they can find out to what extent students can understand the story that has been told. Because this storytelling has great benefits for student development and the achievement of educational goals. If the teacher teaches a material at school in the form of storytelling to students or students, then this will stimulate the mind and hone students' understanding skills to understand the subject matter, especially in Basic Graphic Design lessons, then this will help make it easier.

If students succeed in understanding the subject matter, then students can improve learning outcomes at school. To improve learning achievement in Basic Graphic Design subjects, an effective learning method is needed so that students can be motivated to follow lessons well and can improve the quality of student learning at school.

## 2. Method

This type of research is a pre experimental design research with one group pretest posttest design research form. Pre-experimental Design (Nondesign), that is, this type of research is not a real experiment, because there are still dependent variables. So the experimental results which are the dependent variable are not only influenced by the independent variable. The reason for using this research design is because there is only one group or class used in the study so that no group is used as the comparison group. In this design, the treatment is given before and after. Thus the results of treatment can be known to be more accurate, because it can be compared to the situation before being treated [9].

**Table 1. Research Design**

<i>Pre-test</i>	<i>Treatment</i>	<i>Post-test</i>
O <sub>1</sub>	X	O <sub>2</sub>

*Source* : [10]

Information :

O<sub>1</sub> = pre-test before the treatment is given

O<sub>2</sub> = final test (post-test) after the treatment is given

X = treatment by applying learning media  
Digital Storytelling

The purpose of this study was to investigate the presence or absence of this influence by being given a pretest with the same test, learning in the experimental class was treated using Digital Storytelling learning media. At the end of the meeting, students were given a posttest, namely by giving a test of the ability to solve questions conducted in the sample class with the same test questions to determine student learning outcomes.

The selection of research locations was selected based on considerations according to the research objectives, namely (Purposive). Purposive Sampling Area is a sampling technique that is often used in research. This study uses a sampling method with purposive sampling technique. The purposive sampling technique is an emphasis on the character of the sample members, which due to deep consideration is believed by the researcher to truly represent the character of the population [11]. It can be concluded, the researcher determines the location himself to be taken with certain considerations. So, the researchers chose the location themselves to be used as the research site, the reason was because it had never been studied regarding the effect of using Digital Storytelling on student learning outcomes and the existing facilities in the TKJ department of SMKN 1 Kendit were arguably quite complete, from computers to computer network devices, all were available.

The technique used in determining the sample in this study was purposive sampling. Purposive sampling is a sampling technique used by researchers not randomly but with certain considerations. These particular considerations, for example because of time, energy and limited funds, the authors can use a sample taken from that population.

In this study, class X TKJ 1 was used as a group that was given treatment by applying Digital Storytelling learning media. So, the researcher influences class X TKJ 1 by implementing Digital Storytelling learning media. Researchers want to know the effect of Digital Storytelling learning media on student learning outcomes in class X TKJ 1.

The use of appropriate techniques in collecting data can allow objective data to be obtained. In this study, the authors used several data collection tools, namely observation, interviews, learning outcomes tests, and documentation.

The data collected in this study consisted of data on students' initial abilities, measured by giving a pretest, as well as data on students' abilities after learning Corel Draw using Digital Storytelling media measured by giving a posttest. The data obtained were processed as follows :

#### 1. Cognitive Test Data Processing

The first step in processing the quantitative data is to give a score of 10 for the correct answer and a score of 0 for the wrong answer on the pretest and posttest questions. then the score that has been obtained is converted into a value with the following conditions [12] :

$$\text{Score} = \frac{\text{Student Score}}{\text{Total Score}} \times 100 \quad (1)$$

The process of analyzing data on student learning outcomes was obtained from the students' post-test scores. If the average post-test score of students is  $\geq$  KKM and the percentage of student learning outcomes is  $\geq$  85%, when viewed in the complete learning concept, the Digital Storytelling media used is effective on student learning outcomes [13]. To find out how much the increase in student learning outcomes before and after using the Digital Storytelling media, namely by translating it into a gain score, to get the gain obtained by subtracting the posttest score with the pre test as follows :

**THE EFFECT OF THE USE OF DIGITAL STORYTELLING ON BASIC LEARNING RESULTS OF GRAPHIC DESIGN BASIC**

$$\text{Indeks gain} = \frac{\text{Posttest Score} - \text{Pretest Score}}{\text{Maximum Score} - \text{Pretest Score}} \quad (2)$$

**Table 2. Criteria for Normalized Gain (N-GAIN)**

Range	Criteria
0,81 – 1,00	Very High
0,61 – 0,80	High
0,41 – 0,60	Medium
0,21 – 0,40	Low
$g \leq 0,20$	Very Low

*Source* : [14]

2. Hypothesis Testing

Hypothesis testing is carried out with the aim of answering research questions that were previously conjectural. Hypothesis testing in this study was carried out in two stages, namely :

1) Paired Sample t-Test

To strengthen the analysis using SPSS (Statistical Package for Social Science) version 25, the authors also performed the analysis manually using the t test formula with t count. Hypothesis test t-test to find out whether there is a difference in the average of the samples taken. The following is the formula for finding the t-test value with the t-count following the formula used.

$$t = \frac{\frac{\sum D}{n}}{\frac{s}{\sqrt{n}}} \quad (3)$$

$$\text{With : } s = \sqrt{\frac{1}{n-1} \left( \sum D^2 - \frac{(\sum D)^2}{n} \right)} \quad (4)$$

Information :

- t = the calculated t value
- D = Difference X1 and X2 (pretest - posttest)
- n = Number of sample members
- s = sample standard deviation

Hypothesis testing in this study is by comparing the Sig. (2-tailed) on the Paired Sample t-Test with a value of  $\alpha$  (0.05) with the following test criteria :

1. If the value is Sig. (2-tailed) < 0.05 then H<sub>0</sub> is rejected and H<sub>a</sub> is accepted.
2. If the Sig. (2-tailed) > 0.05 then H<sub>0</sub> is rejected and H<sub>a</sub> is accepted.

2) Simple Linear Regression Test

Simple linear regression test is used for the purpose of predicting or testing the effect of one independent variable on the dependent variable. Simple linear

regression test is used to determine how much influence the use of Digital Storytelling has on student learning outcomes. The criteria used in using a simple linear regression test are as follows :

- a. If the data analysis technique consists of only one to two independent variables, the R-Square calculation results are used.
- b. If the number of independent variables is more than two, it is better to use an Adjusted R Square whose value is smaller than R-Square.

The R square value is said to be good if it is above 0.5 because the R square value ranges from 0 to 1. In this study, a simple linear regression test was carried out using the help of the SPSS (Statistical Package for Social Science) program version 25 with the Linear Regression Test. The correlation coefficient has the following criteria :

**Table 3. Criteria for Interpretation of Coefficients**

Coefficient Interval	Relationship Level
0,00 – 0,199	Very Low
0,20 – 0,399	Low
0,40 – 0,599	Medium
0,60 – 0,799	Strong
0,80 – 1,000	Very Strong

Source : [10]

### 3. Result and Discussion

This research activity was carried out at SMK Negeri 1 Kendit, Jalan Arjokusumo Number 02, Kendit Village, Kendit District, Situbondo Regency. The research starts on May 18, 2020 s.d. 20 May 2020. The population in this study were all students of class X TKJ 1 even semester of the 2019/2020 academic year which consisted of 31 students. The sample in this study was taken by purposive sampling technique. Purposive sampling is a sampling technique used by researchers with certain considerations not randomly. This research is included in quantitative research using experimental methods. The type of experimental method used was the one group pretest posttest design, namely the design by looking at the differences between the pre-test and post-test values.

The first step in processing the quantitative data is to calculate the pretest and posttest answer scores by giving a score of 10 for correct answers and a score of 0 for wrong answers then the scores that have been obtained are converted into values with the following conditions :

**Table 4. Assessment of Learning Outcomes**

No.	Student's Name	Number of Repetitions	Pretest Value		Posttest Value		Trend + / - / =
			Total Score	Score	Total Score	Score	
1.	Abdullah Faqih	-	70/100	70	80/100	80	+



**THE EFFECT OF THE USE OF DIGITAL STORYTELLING ON BASIC LEARNING  
RESULTS OF GRAPHIC DESIGN BASIC**

2.	Abdur Rahman	-	70/100	70	80/100	80	+
3.	Adhitya Surya Pratama	-	80/100	80	90/100	90	+
4.	Aditia Maulana	-	80/100	80	80/100	80	=
5.	Agus Rifaldy	-	80/100	80	70/100	70	-
6.	Ahmad Dani	-	70/100	70	80/100	80	+
7.	Ahmad Yusuf	-	80/100	80	90/100	90	+
8.	Ali Fauzan	-	80/100	80	80/100	80	=
9.	Aliful Khairullah	-	80/100	80	80/100	80	=
10.	Anas Baydhawi Ridwan	-	80/100	80	90/100	90	+
11.	Arif Prayoga	-	80/100	80	90/100	90	+
12.	Ariya Rifandi	-	60/100	60	80/100	80	+
13.	Ayu Ningsih Aprilia	-	80/100	80	90/100	90	+
14.	Ayu Wulandari	-	90/100	90	90/100	90	=
15.	Bahrul Ulum	-	60/100	60	70/100	70	+
16.	Dandi Pranata	-	80/100	80	80/100	80	=
17.	Deswita Risky Dwi Hasana	-	70/100	70	60/100	60	-
18.	Devintaria Febriyanti	-	80/100	80	90/100	90	+
19.	Dewi Sutriyani	-	80/100	80	80/100	80	=
20.	Diki Priwistawandi	-	60/100	60	90/100	90	+
21.	Dini Rizki Utami	-	60/100	60	80/100	80	+
22.	Dita Kurmania Puspita Ningsih	-	60/100	60	70/100	70	+
23.	Dwi Ayu Lestari	-	70/100	70	80/100	80	+
24.	Eka Wahyudi	-	80/100	80	70/100	70	-
25.	Fanya Shinta Verosiza	-	70/100	70	80/100	80	+
26.	Figo Mertha	-	70/100	70	70/100	70	=
27.	Finta Triyas Agustin	-	80/100	80	80/100	80	=
28.	Fitriya Kusumawati	-	70/100	70	80/100	80	+
29.	Gabriel Indra Jaya	-	80/100	80	70/100	70	-

30.	Gilang Prasetyo	-	70/100	70	70/100	70	=
31.	Imam Hanafi	-	60/100	60	70/100	70	+
<b>Rerata</b>				73,55		79,35	

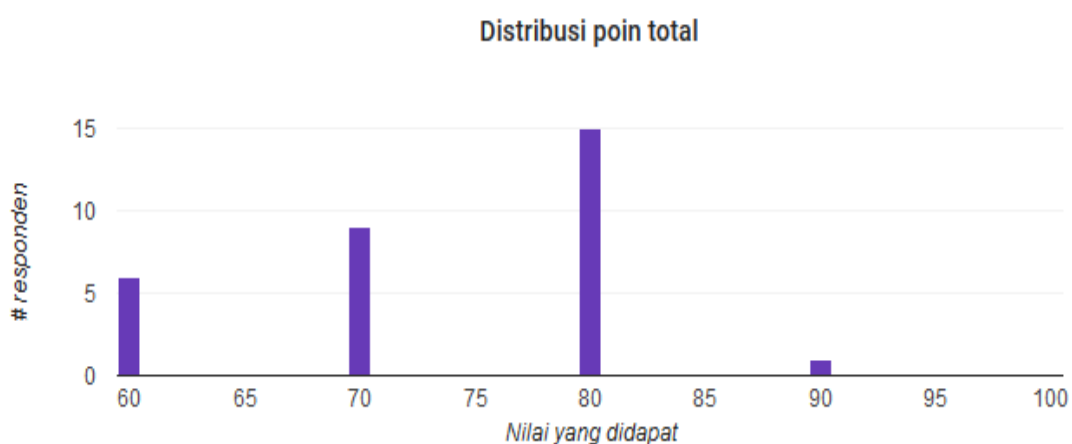
Information :

Trend (trend) + = There is a change in value for the better. The Posttest Value is greater than the Pretest Value.

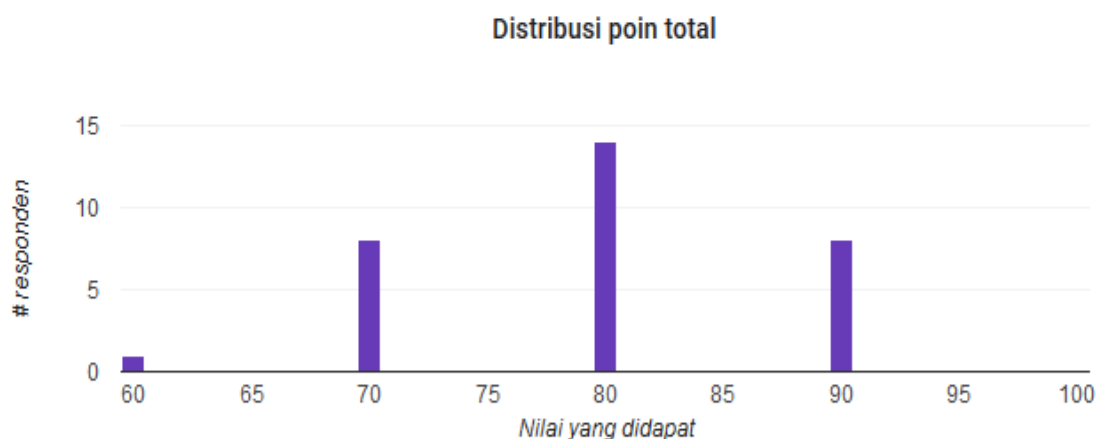
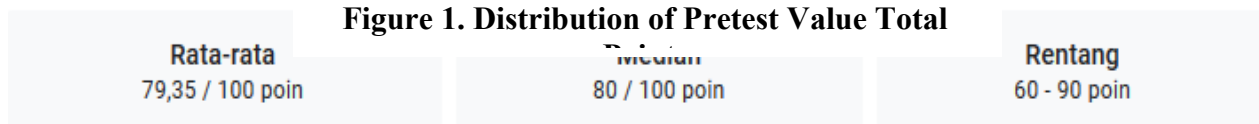
Trend (trend) - = There is a change in value for the worse. The Posttest Value is smaller than the Pretest Value.

Trend (trend) = = There is no change in value. The Posttest Value is the same as the Pretest Value.

Data on student learning outcomes Basic Graphic Design is also translated into gain scores, to determine the increase in student learning outcomes before and after using Digital Storytelling media. To get the gain obtained by subtracting the posttest



**Figure 1. Distribution of Pretest Value Total**



## THE EFFECT OF THE USE OF DIGITAL STORYTELLING ON BASIC LEARNING RESULTS OF GRAPHIC DESIGN BASIC

score from the pre test. Mathematically this equation can be written as follows :

$$\begin{aligned} \text{Indeks gain} &= \frac{2230 - 1620}{3100 - 1620} \\ &= \frac{610}{1480} \\ &= 0,41 \end{aligned}$$

Based on the criteria table for the N-Gain value against the level of activity as stated in Chapter III, the N-Gain value is 0.41 - 0.60, the student learning outcomes are categorized as moderate. So that the hypothesis which reads "The Effect of Using Digital Storytelling on Student Learning Outcomes in Basic Graphic Design Subjects for Class X SMK Negeri 1 Kendit Academic Year 2019/2020 is categorized as moderate" can be accepted.

### 1. Hypothesis Testing

Hypothesis testing in this study was carried out in two stages, namely :

#### 1) *Paired Sample t-Test*

**Table 5. Data on Student Score Results**

Student's Name	Pretest (X1)	Posttest (X2)	D = X1 - X2	D <sup>2</sup>
Abdullah Faqih	70	80	-10	100
Abdur Rahman	70	80	-10	100
Adhitya Surya Pratama	80	90	-10	100
Aditia Maulana	80	80	0	0
Agus Rifaldy	80	70	10	100
Ahmad Dani	70	80	-10	100
Ahmad Yusuf	80	90	-10	100
Ali Fauzan	80	80	0	0
Aliful Khairullah	80	80	0	0
Anas Baydhawi Ridwan	80	90	-10	100
Arif Prayoga	80	90	-10	100
Ariya Rifandi	60	80	-20	400
Ayu Ningsih Aprilia	80	90	-10	100
Ayu Wulandari	90	90	0	0
Bahrul Ulum	60	70	-10	100
Dandi Pranata	80	80	0	0
Deswita Risky Dwi Hasana	70	60	10	100
Devintaria Febriyanti	80	90	-10	100
Dewi Sutriyani	80	80	0	0

Diki Priwistawandi	60	90	-30	900
Dini Rizki Utami	60	80	-20	400
Dita Kurmania Puspita Ningsih	60	70	-10	100
Dwi Ayu Lestari	70	80	-10	100
Eka Wahyudi	80	70	10	100
Fanya Shinta Verosiza	70	80	-10	100
Figo Mertha	70	70	0	0
Finta Triyas Agustin	80	80	0	0
Fitriya Kusumawati	70	80	-10	100
Gabriel Indra Jaya	80	70	10	100
Gilang Prasetyo	70	70	0	0
Imam Hanafi	60	70	-10	100
<b>Amount</b>			-180	3600

$$s = \sqrt{\frac{1}{n-1} \left( \sum D^2 - \frac{(\sum D)^2}{n} \right)}$$

$$= \sqrt{\frac{1}{30} \left( 3600 - \frac{(-180)^2}{31} \right)}$$

$$= \sqrt{0,03333333333 \times 2.554,83871}$$

$$= \sqrt{85,161290248}$$

$$= 9,2282875$$

$$t = \frac{\frac{\sum D}{n}}{\frac{s}{\sqrt{n}}}$$

$$= \frac{-180}{\frac{9,2282875}{\sqrt{31}}}$$

$$= \frac{-5,806}{1,657}$$

$$= -3,503$$

Tabel 6. Hasil Uji *Paired Sampel T-test* SPSS Versi 25

		Paired Samples Test							
		Paired Differences		95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	Lower				Upper
Pair 1	Pre Test- Pos Test	-5,806	9,228	1,657	-9,191	-2,421	-3,503	30	,001

## THE EFFECT OF THE USE OF DIGITAL STORYTELLING ON BASIC LEARNING RESULTS OF GRAPHIC DESIGN BASIC

From the results of the paired sample T-test above, it is known that the sig value. (2- tailed) of 0.001. In accordance with the basis of decision making in the paired sample T-test that the sig. (2-tailed)  $<0.05$  or  $0.001 <0.05$ , then  $H_0$  is rejected and  $H_a$  is accepted, so it can be concluded that there is a significant difference between the pretest and posttest results, which means that there is an effect of using Digital Storytelling media on student learning outcomes in the eye. Basic Graphic Design lessons for class X SMK Negeri 1 Kendit in the 2019/2020 academic year.

### 2) Simple Linear Regression Test

In this study, a simple linear regression test was carried out using the help of the SPSS (Statistical Package for Social Science) program version 25. From the calculation of the simple linear regression test, the following output results were obtained :

**Table 6. Simple Linear Regression Test Results**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,377 <sup>a</sup>	,142	,112	7,901

In the criteria for determining the simple linear regression test, it is determined that if the data analyzed uses only one independent variable, the calculation result used is the value of R Square. Because in this study only uses one variable, the calculation result used is R Square.

From the calculation it is known that the value of R Square is 0.142 or 14.2%. This shows that the percentage of the influence of the independent variable on the dependent variable is 14.2%, while the rest is influenced by other variables outside the study.

Based on the coefficient interpretation criteria table as stated in Chapter III, the R Square value of 0.00 - 0.199 is categorized as very low. It can be concluded that Digital Storytelling has a very low effect on student learning outcomes.

The summary of the results of the hypothesis testing is shown in the table below :

**Table 7. Summary of Hypothesis Testing Results**

No.	Purpose	Analysis Technique	Result	Information
1.	Difference test mean value of pretest and posttest.	<i>Paired Sampel T- test</i>	0,001 < 0,05	There is a significant difference.
2.	To find out whether there is influence Independent variable to the dependent variable, and how big is the percentage.	Simple Linear Regression Test	0,142 or 14,2%	The independent variable has an influence on the dependent variable, amounting to 0.142 or 14.2% which can be concluded that Digital Storytelling has a very low effect on student learning outcomes.

The purpose of this study was to test and analyze the influence of Digital Storytelling on student learning outcomes in Basic Graphic Design subjects at SMK Negeri 1 Kendit.

The results of the N-Gain value test on the level of activity as stated in Chapter III, the N-Gain value of 0.41 - 0.60 means that student activity is categorized as moderate or acceptable, because the posttest score is greater than the pretest score, as evidenced by the histogram results on Google form, namely :

- a) In the results of the pretest students who got a score of 60 there were 6 students, there were 9 students with a score of 70, there were 15 students with a score of 80 and only 1 student got a score of 90.
- b) In the results of the posttest students who get a score of 60 there are only 1 student, there are 8 students' score of 70, there are 14 students with a score of 80 and 8 students who get a score of 90.

The results of the Paired Sample t-Test show that there is a significant difference between the pretest and posttest results, which means that there is an effect of using Digital Storytelling media on student learning outcomes in Basic Graphic Design subjects in class X SMK Negeri 1 Kendit in the 2019/2020 academic year, because in Table 4.3 Results of Paired Samples T-test SPSS version 25, it is known the value of sig. (2- tailed) of 0.001. In accordance with the basis of decision making in the paired sample T-test that the sig. (2-tailed) <0.05 or 0.001 <0.05, then H0 is rejected and Ha is accepted, so it can be concluded that there is a significant difference between the pre-test and post-test results.

Then the Simple Linear Regression Test shows full support for the hypothesis, because in table 4.4 of the SPSS version 25 Simple Linear Regression Test Results, the coefficient of determination (R Square) is 0.142 or 14.2%. This means that the independent variable (Digital Storytelling) is

## THE EFFECT OF THE USE OF DIGITAL STORYTELLING ON BASIC LEARNING RESULTS OF GRAPHIC DESIGN BASIC

explained by 14.2% by the dependent variable (Learning Outcomes), this shows that the independent variable affects the dependent variable by 14.2% while the remaining 85.8% is influenced by other variables outside. studies that were not included in the regression model. Based on the table of coefficient interpretation criteria as stated in Chapter III, the R Square value of 0.00 - 0.199 is categorized as very low. So it can be concluded that Digital Storytelling has a very low effect on student learning outcomes. The reason for the effect is very low, because researchers conducted research during the Covid-19 pandemic, so face-to-face learning was replaced with online learning, so researchers could not directly monitor whether students were serious or not in understanding the material in the form of Digital Storytelling Videos sent via the WhatsApp group. . Based on the researcher's experience, studying at home is even more difficult than face-to-face learning in a classroom, because there is a distraction that is not conducive so it is difficult to be able to focus on the material provided.

### 4. Conclusion

Based on the analysis of hypothesis testing data which includes analysis of the N-Gain value, Paired Sample T-test, and Simple Linear Regression Analysis and the results of the discussion that have been put forward by the researcher, the following conclusions can be drawn :

- 1) Based on the results obtained from the analysis of the N-Gain value on the level of activity as stated in Chapter III, the N-Gain value of 0.41 - 0.60 means that student activity is categorized as moderate. So that the hypothesis which reads "The Effect of Using Digital Storytelling on Student Learning Outcomes in Basic Graphic Design Subjects for Class X SMK Negeri 1 Kendit Academic Year 2019/2020 is categorized as moderate" can be accepted.
- 2) Based on the results of the paired sample T-test above, it is known that the sig value. (2- tailed) of 0.001. In accordance with the basis of decision making in the paired sample T-test that the sig. (2-tailed)  $<0.05$  or  $0.001 <0.05$ , then  $H_0$  is rejected and  $H_a$  is accepted, so it can be concluded that there is a significant difference between the pre-test and post-test results, which means that there is an effect of using Digital Storytelling media on student learning outcomes. in Basic Graphic Design subjects class X SMK Negeri 1 Kendit in the 2019/2020 academic year.
- 3) Based on the results obtained from the analysis of the Simple Linear Regression Test, it is known that the value of R Square is 0.142 or 14.2%. This shows that the percentage of the influence of the independent variable on the dependent variable is 14.2%, while the rest is influenced by other variables outside the study. Based on the coefficient interpretation criteria table as stated in Chapter III, the R Square value of 0.00 - 0.199 is categorized as very low. It can be concluded that Digital Storytelling has a very low effect on student learning outcomes.

### 5. Suggestion

Based on the results of the research that has been done, the researchers provide the following suggestions :

- 1) For teachers and educational institutions, developing creativity in learning media can affect student learning outcomes. Therefore, it is necessary to increase the creativity of teachers in schools that can make the learning atmosphere more interesting and and not cause a bored effect for students, so that it will experience an increase in

student learning outcomes.

- 2) For future researchers, it is hoped that they can examine other factors that also affect student achievement, so that other factors that contribute to improving student learning outcomes can be identified.

## 6. Reference

- [1] Nunu Mahnun, "Peranan Media Pembelajaran Dalam Meningkatkan Minat Belajar Mahasiswa," *J. Komun. Pendidik.*, vol. 2, no. 2, p. 103, 2012, doi: 10.32585/jkp.v2i2.113.
- [2] Yudiantara, "Pengembangan Media Pembelajaran Berbasis Multimedia Pada Mata Kuliah Kompetensi Pembelajaran Pokok Materi Keterampilan Dasar Mengajar," *J. Pendidik. Tek. Sipil*, vol. 8, no. 1, pp. 24–30, 2015.
- [3] Frazel, "PENERAPAN DIGITAL STORYTELLING DALAM PEMBELAJARAN BAHASA metode pengajaran dengan memanfaatkan komputer dan internet . Salah satu metode yang," no. September 2017, 2010.
- [4] Miller, "DIGITAL STORYTELLING UNTUK MENGEMBANGKAN ASPEK SPIRITUAL ANAK TAMAN KANAK-KANAK ( TK ) AL-HIDAYAH BAKUNG 01 KABUPATEN BLITAR," no. september, 2011.
- [5] Nursalam, "Journal of Telenursing," vol. 1, pp. 67–79, 2013.
- [6] Rosidatun, "STORYTELLING DENGAN MEDIA BUKU KOSAKATA," no. September, pp. 20–21, 2018.
- [7] Dewi, "Berbahasa Pada Anak Prasekolah," *Pros. Semin. Nas. Call Pap.*, pp. 36–44, 2011, [Online]. Available: <http://fppi.um.ac.id/wp-content/uploads/2019/07/5-STORYTELLING-SEBAGAI-METODE-DALAM-MENGEMBANGKAN-KEMAMPUAN-BERBAHASA-PADA-ANAK-PRASEKOLAH-36-44.pdf>.
- [8] Sudijono, "Faktor-Faktor Yang Mempengaruhi Hasil Belajar Siswa Pada Pembelajaran Praktik Kelistrikan Otomotif Smk Di Kota Yogyakarta," *J. Pendidik. Vokasi*, vol. 6, no. 1, p. 111, 2012, doi: 10.21831/jpv.v6i1.8118.
- [9] Sugiyono, "Halus Pada Anak Kelompok A Di TK Hidayatullah Lidah Kulon Surabaya," pp. 3–6, 2015.
- [10] Sugiyono, "Pengaruh Harga Jual Kaca Patri Jenis Silver Terhadap Nilai Penjualan Pada Cv. Karunia Kaca Palembang Tahun 2004-2015," *J. Ecoment Glob.*, vol. 2, no. 2, p. 49, 2014, doi: 10.35908/jeg.v2i2.251.
- [11] Yunus, "FAKULTAS PSIKOLOGI MEDAN," 2016.
- [12] Arikunto, "Proportional Stratified Random Sample," *Dict. Stat. Methodol.*, vol. 02, no. 01, 2013, doi: 10.4135/9781412983907.n1534.
- [13] Trianto, "Pemanfaatan Digital Storytelling sebagai Media Pembelajaran Tematik di SD," *Springer Ser. Cult. Comput.*, pp. 547–558, 2010.
- [14] Sundayana, "Metode Penelitian Metode Penelitian," vol. 2, pp. 22–34, 2014.