

The Effectiveness of Use of Digital Learning Media on Student Creativity in Citizenship Education Subjects

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Abstract. Teachers are actors who really influence the educational process, because they are at the forefront of the teaching and learning process. Teaching and learning activities have several components such as objectives, materials, methods of teaching and learning activities, tools and learning resources. One of the most influential aspects in the teaching and learning process is learning media. With the current technological developments, teachers find it easier with the emergence of various interesting learning media, one of which is Digital Learning Media. There are several problems found in the world of education, especially at the elementary school level in Indonesia, such as the low ability of students to understand concepts, low student learning outcomes and low student motivation to learn. Other problems are also expressed in other research which suggests the use and utilization of learning media in elementary schools. It's still not done optimally. The target of this research will be included in the Bersinta journal.

Keywords: *Effectiveness, Digital Media, Creativity*

1. INTRODUCTION

Language has become an aspect of life that couldn't be separated from human being. People create them together as the way of life in society. Improving the quality of education can be determined by the learning designed and implemented by educators (Mekwong & Chamrat, 2021). Teachers play an important role in creating an active and interactive learning process because they interact directly with students as objects and subjects of study. Skilled in designing, implementing and evaluating the learning process of a teacher's duties (Crompton & Burke, 2018). An educator must have the right strategy in the learning process for students in order to achieve goals that can create an effective and efficient learning process. Teaching and learning activities have several components such as objectives, materials, methods of teaching and learning activities, tools and learning resources (Saputra et al., 2018). One of the most influential aspects in the teaching and learning process is learning media (Imelda et al., 2019). The formulation of the problem that will be carried out is as follows: Does the effectiveness of using digital learning media affect student creativity in Civics subjects at SDN 094155 Rambung Merah?

With the current technological developments, teachers find it easier with the emergence of various interesting learning media, one of which is Digital Learning Media (Ismail et al., 2020). Teachers are experiencing a transition from conventional manual learning media to digital learning media which are more effective and efficient in use in accordance with increasingly rapid developments (Haekal & Zulaeha, 2019). Learning media is divided into two, the first is non-electronic media and the second is electronic, digital media is presented in solving this problem (Kasih & Sembiring, 2022). Media as a tool in the teaching and learning process is a reality that cannot be denied. Because with the help of media it can help teachers in conveying material that is difficult for students to digest and understand, especially complicated or complex material (Supena et al., 2021). Each subject matter certainly has varying levels of difficulty, so it is necessary to choose learning media according to the level of difficulty and needs of the existing subject matter (Yuliarni et al., 2019). With the existence of digital media, it is hoped that the effectiveness of children's learning can increase because learning effectiveness is a condition that shows the extent of success and results that have been achieved after carrying out the learning process (Udayani et al., 2021). Learning is said to be effective in improving student learning outcomes if student learning outcomes show significant differences between before and after learning (Atiyah et al., 2020). Therefore, in the learning process the role of the teacher is needed in carrying out the learning process such as selecting methods, media and student evaluation techniques (Sakti et al., 2022).

State Of The Art And Novelty Of Research. In general, this research looks like the following state of the art image:

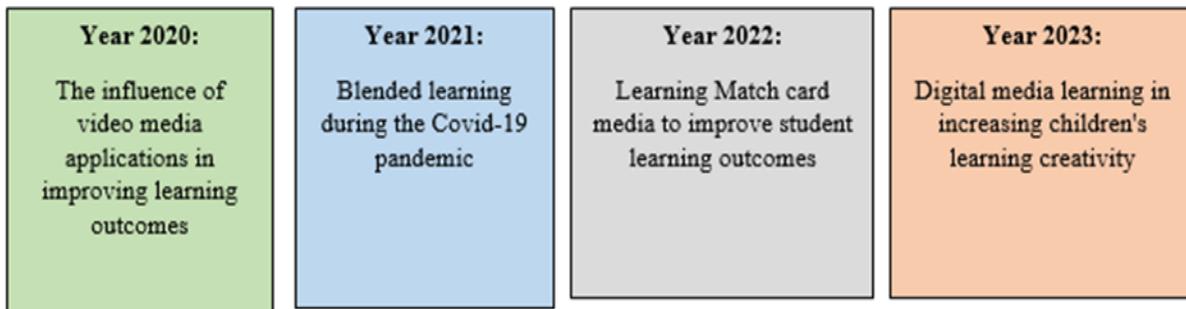


Figure 1. Researcher's State Of The Art

The novelty of researchers in learning digital media in children's creativity lies in the aspect being measured, namely teaching skills, the subjects studied are students (Graham et al., 2020).

Research Roadmap

Relevance of RIRN 2017-2045, PRN 2020-2024, Higher Education Roadmap and Researcher Roadmap (Van Leeuwen & Janssen, 2019)



Figure 2. Relevance of RIRN 2017-2045



Figure 3. Sustainable Economic Growth 2024

3. RESULTS AND DISCUSSION

The purpose of this research is to find out whether there is an influence from the use of visual media on the creativity of grade 1 students on the sub-theme of family togetherness at school. YouTube media is media that is closely related to the eye's sense of sight. YouTube media will be able to help the understanding process, attract attention, strengthen memory, clarify material presentation, and illustrate material so that it is not easily forgotten or ignored. The application of YouTube learning media can be said to have an effect if student creativity increases statistically and significantly. During the research, the researcher first gave a pretest to grade 1 students with 20 multiple choice questions. The multiple choice questions given have first been tested for validation and reliability of each question item (Haulia et al., 2022).

Analysis (analysis)

The analysis carried out in this research includes: viewing, YouTube-based learning media, student creativity, in subjects. The results of this analysis are: a. Analysis of YouTube-based digital learning media was carried out to find out how students' activeness in learning has increased from schools at SD Negeri 091455 Rambung Merah, including: based on interviews conducted with class teachers at the school, Civics learning uses YouTube-based digital media and teaching materials. in the form of a printed book from the school, with material on rights and obligations. This can result in students becoming passive in the learning process (Andriyani & Buliali, 2021). It is hoped that this digital-based media can help students in the learning process and make students more active and independent, no longer dependent on instructors as the only source of information, creating interactive and student-centered learning (Marsevani, 2022).

a) Planning

After collecting pretest data, the next stage is to make a plan to include YouTube-based digital learning media to see students' responses to learning (Yulkifli et al., 2022).

b) Development of research format

Activities carried out at this stage include: preparation of lesson plans, preparation of questions, selection of learning media. At this stage, validation of several instruments is also carried out, including: expert validation instruments, material expert validation instruments and student response research test instruments (Idul et al., 2023).

Design (design)

After going through the analysis stage, the next step is to prepare a research design consisting of the following steps:

- Phase 1 Conveying learning objectives, the teacher conveys all the objectives learning that you want to achieve in this learning.
- Phase 2 Presenting questions/pre-test to students
- Phase 3 presents material using YouTube-based digital media
- Phase 4 provides post test questions to students
- Phase 5 The expert team returns to the Student group
- Phase 6 Evaluation All students.

Development

1. Implementation of the Instrument

a. Validity test

An instrument is said to be valid if the data from the variables are measured correctly. The validity test was carried out by giving questions in the form of 20 multiple choice questions, with a total of 23 students, with the condition that $r_{count} > r_{table}$ at $\alpha = 0.05$. Where $r_{table} = 0.413$, then the question is declared valid. There are 18 valid questions, namely numbers 2,3,4,5,6,7,8,9,10,11,13,15,16,17,18,19,20 and there are 3 questions that are not invalid, namely 1, 12 and 14. Valid questions can later be used as research instruments. Meanwhile, difficult questions will be discarded and valid ones will be distributed to respondents (Morcom, 2018).

b. Reliability Test

Reliability needs to be calculated to find the degree of gap between research instruments in measuring an instrument (Safitri et al., 2023). The instrument in this research was a multiple choice test sheet consisting of 20 questions. From calculations in SPSS Version 22, it shows that the r_{11} value obtained is 0.624.

Table 2. Reliability Test Data

Drawing Conclusions	Conclusion
Cronbach Alpha value 0.624	Reliable

c. Normality test

The normality test is carried out with the aim of testing whether the data is normally distributed or not. The normality test can be seen from the Significance Kolmogorov-Smirnov Test. The principles of testing data normality are:

- a. If the sig value is > 0.05 then the data is normally distributed.
- b. If the sig value <0.05 then the data is not normally distributed.

Table 3. Normality test

	Kolmogorov-Smirnov ^a		Sig.
	Statistics	Df	
Pretest	0.120	30	0.200
Posttest	0.156	30	0.061

Based on the data in the table above, it shows that the data from the pretest results (before treatment) is declared to be normally distributed because the significant value is 0.200 > 0.05, while the data from the posttest results (after treatment) shows that the data is normally distributed because the significant value is 0.061 > 0.05 (Fuady & Mutalib, 2018).

Description of Data Analysis Results

a. Student Creativity Pretest Results

The pretest is carried out before using visual media. The KKM score is 70. The frequency of pretest results is that 1 person got a score of 30, 3 people got a score of 40, 1 person got a score of 45, 5 students got a score of 50, 5 students got a score of 55. people, 3 students who got a score of 60, 2 students who got a score of 65, 4 students who got a score of 70, 4 students who got a score of 75 for a total of 30 students.

After the students' pretest scores were obtained, the researcher's next step was to calculate the students' average scores. To find the average value, it can be obtained using the formula:

$$\begin{aligned} \sum \bar{x} &= \frac{\sum X}{N} \\ &= \frac{1.685}{30} \\ &= 56 \end{aligned}$$

So the average value of the students' pretest results before implementing YouTube learning media 5th grade SDN 094155 Rambung Merah For statistical analysis, descriptions of pretest data for grade 5 students at SDN 094155 Rambung Merah can be seen in the following table:

Table 4. Description of Student Creativity Pretest Results

No	Intervals	frequency	Performance (%)
1	90-100	0	0 %
2	80-90	0	0 %
3	70-80	4	13.3 %
4	<70	26	86.3 %
	Amount	30	
	Complete (>70)	4	13.3 %
	Incomplete (<70)	26	86.3 %
	Highest		75
	Lowest		30
	Average		56

Based on the data in the table above, it shows that the highest score from the student creativity pretest results is 75, while the lowest score is 30. The average pretest score is 56. The score classified as complete (>70) is lower than the score classified as incomplete. The completed score was 13.3% (4 students), and the figure for incomplete marks was 86.3% (26 students).

b. Student Creativity Post-Test Results

The posttest was carried out after using visual media, the KKM score was 70. Based on the table above, it can be seen that the frequency of posttest results was 1 person who got a score of 65, 6 people who got a score of 75, 9 people who got a score of 80. 85 as many as 9 people, who got a score of 90 as many as 3 people, who got a score of 95 as many as 2 people with a total of 30 students.

After the total number of students' posttest scores was obtained, the researcher's next step was to calculate the students' average scores.

$$\begin{aligned} \sum \bar{x} &= \frac{\sum X}{N} \\ &= \frac{2460}{30} \\ &= 82 \end{aligned}$$

So the average value of the posttest results for student creativity after the application of visual learning media class 5 at SDN 091455 Rambung Merah is 82. For statistical analysis, the description of the posttest data for class 5 students at SDN 091455 Rambung Merah can be seen in the following table

Table 5. Description of post-test results for student creativity

No	Intervals	frequency	Performance (%)
1	90-100	2	6.6 %
2	80-90	12	40 %
3	70-80	15	50 %
4	<70	1	3.3 %
	Amount	30	
	Complete (>70)	29	96 %
	Incomplete (<70)	1	3.3 %
	Highest		
	Lowest	95	
	Average	65	
		82	

Based on the data in the table above, it shows that the highest score from the student creativity posttest results is 95, while the lowest score is 65. The average posttest score is 82. The score classified as complete (>70) is higher than the score classified as incomplete. The completed score was 96% (29 students), and the figure for the incomplete score was 3.3% (1 student).

4. Hypothesis Testing

After the prerequisite test, namely the normality test, is fulfilled, it can be continued with hypothesis testing to provide answers to the problem formulation. Hypothesis testing is carried out through inferential statistical analysis techniques using the t test formula, with the following stages:

Table 6. Pretest-Posttest Score Analysis

No	Student's name	Pretest (x1)	Post-test (x2)	d(X1-X2)	d ²
1	Aaron Nathan Saragih	75	75	0	0
2	Alfredo Glen Sihaloho	60	95	35	1225
3	Anggita Situmorang	40	85	45	2025
4	Cecylia R Sinambela	70	85	15	225
5	Celsy Hutagalung	65	95	30	900
6	Clara Stefani	60	80	20	400
7	Chika Pakpahan	55	80	25	625
8	Florentina Sitorus	55	65	10	100
9	Jessy Emelya Nababan	55	80	30	900
10	Kriskly Mardeas	40	90	50	2500
11	Nathanael Diego	55	85	30	100

12	Nathanael Benedit	75	85	10	900
13	Paramita A. Siallagan	70	75	5	25
14	Maria Mega Damanik	70	75	5	25
15	Styvano Hogansyah	35	80	45	2025
16	Vania R Situmorang	50	75	25	625
17	Rostar Hutapea	45	85	40	1600
18	Yoselyn Patricia	60	75	15	225
19	Agnes Rona Sianturi	55	85	30	25
20	Yesia Noviyanty Purba	40	80	40	900
21	Audry Eka Sari Silalahi	70	85	15	400
22	Ancient Bestaida Loyna	75	80	5	225
23	Hans Immanuel Saragih	50	80	30	1225
24	Prili Asshera Sinaga	55	75	20	1600
25	Sifa Ziana Aura Purba	65	80	15	2500
26	Vudan Adhsyta Sinaga	50	85	35	225
27	Steven April	50	90	40	1600
28	Maria Sianturi	30	80	50	2500
29	Rahul Gultom	75	90	15	225
30	See Sevino	35	80	45	2025
	N=30	$\sum X_1 = 1.685$	$\sum X_2 = 2.246$	$\sum d = 775$	$\sum d^2 = 26.275$
	Rata-Rata	56.16	82	25.83	875.83

Based on table, it can be concluded that the amount of Gain (d) in the Pretest Posttest is 775. Meanwhile the amount of Gain after squared ((d²) which is 26,275.

The steps taken to obtain hypothesis testing results are:

T test formula:

$$t = \frac{Md}{\sqrt{\frac{\sum x^2 d}{N(N-1)}}}$$

1. To find the mean deviation price "Md" using the formula:

$$Md = \frac{\sum d}{N} = \frac{775}{30} = 25.83$$

So the result of "Md" (Mean gain or difference between pretest and posttest) is 25.83

2. Looking for the difference between posttest and pretest scores " $\sum x^2 d = \sum d^2 \frac{(\sum d)^2}{N}$ "

$$= 26.275 - \frac{775^2}{30}$$

$$= 26,275 - \frac{600.625}{30}$$

$$= 26,275 - 20,020$$

$$= 6.255$$

So the result of $\sum x^2 d$ (sum of squared deviations) is 6.255

3. After obtaining the values (Md) and ($\sum x^2 d$), a calculated t test was carried out

$$t = \frac{Md}{\sqrt{\frac{\sum x^2 d}{N(N-1)}}} = \frac{25,83}{\sqrt{\frac{6255}{30(30-1)}}}$$

$$t = \frac{25,83}{\sqrt{\frac{870}{6.255}}}$$

$$= \frac{25,83}{\sqrt{7,18}}$$

$$= \frac{25,83}{2,67}$$

$$= 9.635$$

So the calculated t result in the formula above is 9.635

4. Determine the price t_{table}

To search, t_{table} researchers used a t distribution table with a significance level

$\alpha = 0.05$ and $db = N - 1 = 30 - 1 = 29$ then we get $t_{0.05} = 1.699$

When making conclusions, it must be based on decision rules

decision, namely the rules for significant testing:

- a. If $t_{count} \geq t_{table}$ then H_0 is rejected and H_a is accepted, meaning that the use of visual media influences the creativity of grade 5 students at SDN 091455 Rambung Merah

b. If $t_{\text{count}} \leq t_{\text{table}}$, it means that the use of YouTube media has no effect on the creativity of 5th grade students at SDN 091455 Rambung Merah. After $t_{\text{count}} = 9.635$ and $t_{\text{table}} = 1.699$, it can be said that $t_{\text{count}} > t_{\text{table}}$. So it can be concluded that H_0 is rejected and H_a is accepted (NEGARA, 2017). This means that there is a significant influence between visual media on the creativity of grade 5 students in learning the sub-theme of togetherness in the family at SD SDN 091455 Rambung Merah (Garrison, 2009).

4. CONCLUSION

Teachers are actors who really influence the educational process, because they are at the forefront of the teaching and learning process. Teaching and learning activities have several components such as objectives, materials, methods of teaching and learning activities, tools and learning resources. One of the most influential aspects in the teaching and learning process is learning media. With the current technological developments, teachers find it easier with the emergence of various interesting learning media, one of which is Digital Learning Media. There are several problems found in the world of education, especially at the elementary school level in Indonesia, such as the low ability of students to understand concepts, low student learning outcomes and low student motivation to learn. Other problems are also expressed in other research which suggests the use and utilization of learning media in elementary schools. it's still not done optimally.

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