

The Effectiveness Of *Sikajari* Media In Distance Learning For Elementary School Students

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Abstract

This study is a research and development of *Sikajari*-based distance learning media. This study aims to analyze the effectiveness of *Sikajari* media in distance learning with the sub-theme of Cultural Diversity of My Nation 4th grade elementary school students in the Jepara district. This development research adapts the Borg & Gall model which consists of (1) research and data collection, (2) planning, (3) development preliminary of product, (4) preliminary field testing, (5) main product revision, (6) main field test, (7) operational product revision, (8) operational field testing, (9) final product revision, and (10) dissemination and implementation. Data collection techniques through pretest and posttest. Data analysis using the Gain score test. The results of the analysis showed that the average value of the pretest was 39.41 and the post-test was 84.88. The normalized gain value or n-Gain is 0.759 in the high category. This means that there is an increase in learning outcomes in the high category. The N-Gain % value is 75.9 which is interpreted in the effective category. That means the use of *Sikajari* media in distance learning is effective for improving learning outcomes of the Sub-theme of Cultural Diversity of my Nations for fourth-grade elementary school students in the Jepara Regency.

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Introduction

The education process in Indonesia has changed due to the COVID-19 pandemic. Education that has been taking place face-to-face in the classroom has been turned into distance learning, both online (in the network) and offline (outside the network). The government strictly prohibits the face-to-face learning process. This is done to protect teachers and students from the risk of being exposed to the Covid-19 virus as well as an effort to break the chain of its spread.

The government launched the Learning from Home program through Distance Learning with the Circular Letter of the Minister of Education and Culture Number 4 of 2020 which contains, among other things: (1) Providing meaningful learning experiences for students, without being burdened with demands to complete all grade promotion and graduation curriculum achievements. (2) Focusing on life skills education, including regarding the Covid-19 pandemic. (3) Providing a variety of learning activities and assignments for learning from home among students, according to their respective interests and conditions, including considering the gap in access/facilities for learning from home. (4) Provide feedback on evidence or products of learning activities from home that are qualitative and useful for teachers, without being required to give qualitative scores/values.

Distance learning is learning by using media that allows interaction between teachers and learners (Prawiyogi, 2020). The interaction of educators and students is carried out directly or

indirectly, for example by chatting via an internet connection (directly) or by sending e-mails to simply collect assignments (indirectly) (Rahmawati, 2016). The definition of distance learning is when the learning process does not occur in direct face-to-face contact between the teacher and the learner. Communication takes place in two directions which are bridged by media such as computers, television, radio, telephone, internet, video, and so on (Munir, 2009).

Distance learning during the COVID-19 pandemic is carried out by utilizing information and communication technology. The selection of learning media and technology is based on: (1) the learning objectives to be achieved. (2) Characteristics of students. (3) The type of stimulation desired. (4) The circumstances of the background or environment. (5) Potential media or technology. (6) The breadth of the reach to be served (Kemdikbud, 2020). The use of technology in learning is very suitable for the development of children today in accordance with developments in the technological era (Widiyatmoko et al., 2021)

The distance learning process does not run smoothly. Many problems arise in its implementation. Likewise, what happened in the Donorojo District, Jepara Regency. After some time, students become lazy to study because they feel bored studying alone at home. On the other hand, teachers are not yet skilled in managing distance learning. The teacher only gives instructions for learning to use books that students have brought at home. Teachers do not use appropriate learning media for distance learning. This causes student learning outcomes to below.

The role of parents is very important in the implementation of distance learning. Elementary school students have not been able to learn independently. Guidance from parents is still very much needed in the learning process. However, in reality, many parents are so busy that they cannot accompany students while studying at home. The low level of education and knowledge of parents is also very influential in the success of the student's learning process at home. There are often fights when parents are unable to help their children in doing the tasks given during distance learning. Parental and family support is essential in helping students succeed in distance learning.

To overcome these problems, teachers must be creative and innovative in managing distance learning. The cause of thematic learning is relatively difficult for students to understand because most teachers still deliver thematic learning material verbally so that the learning process tends to be boring and students find it difficult to understand the material presented (Utaminingsih, 2019). Distance learning can be held by utilizing information and communication technology-based media. One way to use technology in learning is the use of technological resources as a medium in the learning process (Maskur, 2017). Multimedia-assisted learning that has been developed recently has proven its benefits to assist teachers in teaching and helping students (Tiurma, 2014). One of the innovations of distance learning media based on information and communication technology is *Sikajari*. *Sikajari* is an acronym for Independent Learning Applications. *Sikajari* was created using the Sites app from Google. *Sikajari* contains learning materials consisting of reading texts, photos, videos, music, practice questions, which are arranged interestingly.

Sikajari is learning multimedia. Learning multimedia has characteristics including (1) having more than one convergent media, for example combining audio and visual elements, (2) being interactive, having the ability to accommodate user responses, (3) being independent, having ease and completeness of content in such a way that users can use without the guidance of others. *Sikajari* media can also be used by parents in guiding students while studying at home. What teachers need to note is that parents are not trained teachers who are asked to take on challenging

assignments, while they are also dealing with other tasks and demands at home. Therefore, parents need guidance from teachers in assisting students to study at home. With the *Sikajari*-based distance learning media, it is hoped that parents can accompany and guide students while studying at home so that student learning outcomes can increase.

Method

This study is a research and development to design a product and test its use. The development steps adopted from Borg and Gall, consist of (1) research and data collection, (2) planning, (3) development preliminary of product, (4) preliminary field testing, (5) main product revision, (6) main field test, (7) operational product revision, (8) operational field testing, (9) final product revision, and (10) dissemination and implementation. The subjects in this study were thirty-two (32) grade 4 students from four (4) elementary schools in the district of Jepara. The average number of students is small because it is located in a mountainous area. Data collection techniques using pretest and posttest. To analyze the data used normality test, homogeneity test, and Gain score test.

Result and Discuss

The following are the results of data collection in determining the effectiveness of *Sikajari* media in distance learning, sub-theme of Cultural Diversity of my Nation, 4th-grade elementary school students in Jepara district:

Pretest and Posttest

The test results data were obtained from 4 elementary schools, namely SDN 3 Jugo, SDN 2 Blingoh, SDN 4 Blingoh, and SDN 6 Blingoh, totaling 32 students. The data was obtained by giving pretest and posttest questions.

Table 1. Description of Pretest and Posttest Data

	Pretest	Posttest
N	32	32
Mean	39.41	84.88
Minimum	11	67
Maximum	67	100
Sum	1261	2716

Based on the table above, it is known that there was an increase in the average value of the pretest and posttest. The average value of the pretest is 39.41 and the average value of the posttest is 84.88. By using learning media can increase student learning motivation so that student learning outcomes increase (Munadi, 2013).

Student learning outcomes increase with the use of the *Sikajari* media. *Sikajari* is learning multimedia that can increase students' motivation and willingness to learn which will have an impact on student learning outcomes. Multimedia learning can be interpreted as a multimedia application that is used in the learning process to channel messages and can stimulate students' choices, feelings, attention, and willingness so that the learning process takes place, is directed, and controlled. In the implementation of online learning applications learning has an important role in increasing student interest and motivation (Pratiwi: 2021)

Normality Test

The normality test uses the Shapiro-Wilk test because the sample is < 50 . If the significance value has a value > 0.05 then the data is said to be normally distributed.

Table 2. Normality Test

Class		Shapiro-Wilk		
		Statistic	df	Sig.
Score	Pretest	.938	32	.065
	Posttest	.880	32	.102

Based on the normality test table for the pre-test value, the calculated sig value is 0.065 and the post-test sig count is 0.102, with a significance level of 0.05, so the sig-count value is $>$ from the significant level (0.05). This means that all data have a normal distribution so that the data from the test results can be widely used for research subjects.

Homogeneity Test

The results of the homogeneity test are as follows:

Table 3. Homogeneity Test

		Levene Statistic	df1	df2	Sig.
Score	Based on Mean	1.073	1	62	.304
	Based on Median	.630	1	62	.430
	Based on Median and with adjusted df	.630	1	59.112	.431
	Based on trimmed mean	1.079	1	62	.303

Based on the homogeneity test table above, the significance value (sig) calculated on the Based on Mean is 0.304. The value is $0.304 > 0.05$, so it can be concluded that the data from the test results are broadly the same or homogeneous.

n-Gain Test

A normalized gain test (N-Gain) was conducted to determine the increase in students' cognitive learning outcomes after being given treatment. The gain test is done with the help of SPSS. The results of the N Gain test on the data from the broad trial are as follows:

Table 4. N-Gain Test Results of Broad Trials

No	Score	Class
1	N-Gain	0, 7593
2	Criteria	high
3	N-Gain %	75.93
4	interpretation	effective

Based on these data, the result of the gain calculation is the normalized gain value or n-Gain of 0.759 in the high category. This means that there is an increase in learning outcomes in the high category. The N-Gain % value is 75.9 which is interpreted in the effective category. This means that the use of *Sikajari*-based distance learning media is effective in improving student learning outcomes with the theme of the beauty of diversity in my country.

The use of *Sikajari* media is effective in improving student learning outcomes in distance learning. *Sikajari* is electronic learning (e-learning) media. E-learning is an alternative to distance learning. E-learning is information and communication technology to enable students to learn whenever and wherever (Hartanto, 2016; Prasetya, 2015; Candrawati, 2016). By utilizing e-learning learning motivation can increase (Swastika, 2018). Utilization of information technology in this case e-learning is needed not only by skilled educators in utilizing technology and technology for the manufacture of teaching materials but a design is needed to carry out learning effectively (Hanum, 2013). Mobile learning or m-learning is mostly called e-learning, referring to learning using mobile technology from e-learning (Wirawan, 2018). It is necessary to develop technology-based media to increase student interest in learning. In addition, teachers can use Android in making games to improve students' critical thinking skills (Sulistiyaningsih Astriani et al., 2021)

Mobile learning is a form of e-learning, which in its application can be accessed anytime and anywhere with the help of mobile phones, iPods, and other portable devices, which can help to access the information needed (Kadirir, in Keskin 2011). According to Franklin, in Alwan (2018) mobile learning is learning (which can be done anytime and anywhere, meaning that mobile learning is not only limited to time and place but mobile learning can provide flexible services without being limited by place and time. The benefit of online learning is that students can listen to material from home, not limited by place, more effective use of time because students do not spend time for a trip to school, in addition to the data or material that has been submitted by the teacher can be recorded and reused, while the most frequent drawbacks are network instability, learning material content is not delivered accurately, and student concentration is reduced (Handayani: 2020)

Sikajari is interactive learning multimedia that allows students to learn independently and creatively. *Sikajari* media is designed in such a way that it is interesting for students to study independently at a distance. With interesting learning media, students will be motivated to continue learning. Students who do not have high learning motivation tend to fail in distance learning (Yungga, 2020). The learning process will be more fun because *Sikajari* is digital-based learning multimedia. This is based on the fact that children prefer to play with smartphones than learn with books. Learning while playing can be used as an alternative in managing distance learning. *Sikajari*-based distance learning media is an interactive learning media. Interactive learning media make the learning process more interesting (Arindiono, 2018).

Media is very closely related to learning. Learning is everything that can bring information and knowledge in the ongoing interactions between educators and students (Asyhar, 2012). Learning is a process that is carried out consciously by each individual or group to change attitudes from not knowing to know throughout their lives (Huda, 2018). In the learning process, the media has a function as a carrier of information from the source (teacher) to the recipient (student) (Daryanto, 2016). In learning activities, the media has a function to clarify the message so that it is not too verbalized. In addition, the media also serves to increase learning motivation, increase direct interaction between teachers and students, enable students to learn independently according

to their interests, provide the same stimulant, equate experiences, and equalize perceptions. Media serves to facilitate the communication process.

The use of media can improve students' memory because the media can increase students' attention and motivation towards learning materials. According to Arsyad (2015) media has several practical benefits in learning activities. These benefits are to clarify the presentation of information, increase learning motivation, overcome limitations (object size that is too large or too small, past events, very complicated processes, dangerous events or experiments, and natural events that cannot be witnessed directly), and provide a common experience to students. The use of appropriate learning media that is fun can provide fun learning for students (Ismaya, 2020).

The use of media can streamline learning. According to Nurjani (2018), media is a communication tool and a tool to make the learning process more effective. Media cannot be separated from the learning process to achieve educational goals in general and learning objectives in particular. According to Susilo (2020), learning media are media that are used to facilitate the delivery of messages from the sender of the message to the recipient of the message. Learning media is a vehicle for distributing messages or learning information (Nurseto, 2011). Therefore, the media is very necessary for the learning process as a support in the teaching and learning process.

Sikajari media is a tool used to assist students in learning. Leslie J. Briggs in Wina Sanjaya (2016) states that the media is a tool to provide incentives to students so that the learning process occurs. Media is used as a tool to provide real experiences to students. In addition, the use of *Sikajari* media makes the learning process more enjoyable. Learning media is used as a tool or media in the process of delivering material, especially abstract material so that students can experience a pleasant direct experience (Aditya, 2020).

Sikajari media can be operated using a computer, laptop, or android-based smartphone. The use of android smartphone-based learning media is one of the applications of 21st-century learning styles (Yektyastuti, 2016). The rise of Android-based smartphones in Indonesia can be used as a medium in learning (Endnote, 2011, Nanda, 2018). Children prefer to learn to use gadgets than books. That is the reason for using technology-based media in learning. Gadgets tend to be more dominantly used by humans today (Santoso: 2019). *Sikajari* is given to students through the Whatsapp application. WhatsApp is the most popular application for communicating via the internet. 83% of 171 million internet users are WhatsApp users who connect the community (Pakpahan and Fitriani, 2020)

Sikajari media can be used by parents in helping students study at home. The role of parents is very important in increasing students' learning motivation. According to Pratiwi (2021), several things that can affect children's learning motivation includes (1) parental direction and educators, (2) children's encouragement in learning, (3) parents' background and occupation. With the support of parents, children will have high motivation and enthusiasm for learning which will affect their learning outcomes.

Conclusion

As revealed in this study, the use of *Sikajari* media in distance learning with the sub-theme of Cultural Diversity of my Nation for grade 4 students can effectively improve student learning outcomes. The students' average scores increased from 39.41 to 84.88. Based on these results, it can be recommended to teachers be able to use *Sikajari* media in distance learning. In addition,

teachers can develop various media based on information and communication technology so that learning becomes more interesting so that it can increase students' learning motivation.

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