The Effectiveness of the Microsoft Sway Assisted Discovery Learning Model

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Abstract

This study aims to test the effectiveness of the Discovery Learning model assisted by Microsoft Sway on PPKn learning outcomes and to describe students in PPKn learning. This type of research is a quasi experimental design with nonequivalent control group design. The population of this study were fourth grade students of Gugus Wahidin, Grabag District and the samples were fourth grade students of SDN Pesidi as the experimental class and fourth grade students of SDN Ketawang 02 as the control class using cluster random sampling technique. Data collection using tests, observation, and documentation. The learning outcomes test used in the form of a pretest and posttest in the form of multiple choices. The data analysis used was hypothesis testing, gain test, and descriptive analysis. The results showed that the experimental class was 77% higher than the control class, namely 64%. The conclusion of this research is that the Discovery Learning model assisted by Microsoft Sway which is used in PPKn learning material forms of socio-cultural diversity in Indonesia can improve learning outcomes. so as to develop student social interactions that include aspects of cooperation, communicative, and solidarity.

Keywords: Discovery Learning; Microsoft Sways; PPKn

1. INTRODUCTION

Education is one of the factors that play an important role in a country. A good education will give birth to the next generation of the nation who are good, intelligent, and have noble character, and have skills that are in accordance with their fields. Thus, the condition of the nation will continue to improve along with the times. Based on the regulation of the Minister of Education and Culture Number 37 of 2018 it is stated that the structure of the SD curriculum consists of the following lesson content: (1) religious education; (2) civic education; (3) language; (4) mathematics; (5) natural sciences; (6) social sciences; (7) arts and culture; (8) physical education and sports; (9) skills/vocational; and (10) local loads.

Citizenship Education is one of the educational programs that has a fairly broad scope and includes at least three domains in the character building process, namely (1) conceptually civic education plays a role in developing concepts and theories, (2) curricular citizenship education develops a number of educational programs and models of their implementation. in preparing students to become adult human beings with character through educational institutions, and (3) socially culturally civic education carries out a learning process for the community to become good citizens.

Based on initial data through observations and interviews, it was obtained that document data in the form of learning outcomes for fourth grade students at SDN Gugus Wahidin in Civics learning was still low because students had difficulties in mastering the material, learning activities were fully held by the teacher while students had not been given the opportunity to find out something. from what they learn, and the learning facilities provided in schools have not been used optimally to maximize learning activities in the classroom.

Djamarah and Zain (2014:123) learning media is a tool to enrich students' insight and experience and teach students to achieve teaching goals. Aids can be visual, audio and audio-visual. The goal is to further clarify the material presented by the teacher to students.

Learning media are all forms and means of delivering information that are created and used in accordance with learning theory with the aim of channeling messages, stimulating students' thoughts and desires so as to encourage a deliberate, purposeful and controlled learning process (Nunuk and Setiawan, 2018:5).

Relevant research related to this research is research conducted by Fitria (2018) with the title "The Differences in Mathematics Learning Outcomes for Grade 4 Elementary School in Learning Using the Discovery Learning and Problem Based Learning Models" argues that learning outcomes using the discovery learning model significantly higher than the problem based learning model in the fourth grade mathematics lesson at SD Gugus Slamet Riyadi. Based on the t-test conducted with the Independent Sample T-Test technique on the posttest learning outcomes of learning with problem-based learning models (experimental group) and discovery learning (control group). The t test results show that sig. (2-

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tailed) of 0.026. Because the significance value is 0.026 < 0.05,

Research conducted by Sudarmoyo (2018) with the title "Utilization of the Sway Application for Learning Media" the findings prove that the Sway application learning media is appropriate if used for teachers and students at this time because this program is full of flexibility for learning presentations and can be used anywhere. .

Based on the background, the researcher limits the problems related to the models and learning methods used by the teacher. The lack of variety of learning used by teachers in the classroom makes students less interested in taking lessons in class. Therefore, researchers want to improve student learning outcomes through the Micrososft Sway-assisted discovery learning model for Civics Class IV subjects at Gugus Wahidin State Elementary School.

2. RESEARCH METHODS

The type of research used in this research is experimental research. The experimental research design in this research is Quasi Experimental Design. The design of this study was the Noneequivalent Control Group Design, this design the control group and the experimental group were not chosen randomly (Sugiyono, 2015: 116). Sampling of the experimental class and class is based on certain considerations, so that the experimental class is obtained, namely class IV SD Negeri Pesidi and the control class is class IV SD Negeri Ketawang 02. In this study, the independent variable is the Microsoft Sway assisted Discovery Learning model (X). And the dependent variable in this study is the learning outcomes of PPKn (Y) class IV students at Gugus Wahidin Elementary School, Grabag District, Magelang Regency.

Data collection techniques are carried out to obtain data that support research through tests, documentation, observations, and interviews. The data collection instrument used multiple-choice test questions that were tested on fifth grade elementary school students to test the level of validity, reliability, discriminating power, and level of difficulty of the questions. Of the 60 questions that were tested, after the analysis, 40 selected questions were obtained. These questions were then used as research material to test the students' pretest and posttest in the experimental class and control class.

3. RESEARCH RESULTS AND DISCUSSION

The study was conducted at SD Gugus Wahidin Grabag Magelang in February 2020. Before being given treatment to both classes, students were given a pretest to measure the initial abilities of students from both classes. Then the results of the pretest were analyzed by conducting a normality test, homogeneity test, and an average similarity test with the help of the SPSS 20 program. The following table analyzes the initial data obtained.

Table 1 Output Analysis of Initial Data Normality Test

Class		Statistics	df
Student learning outcomes	Class Pre-Test Experiment (DL)	,142	31
	Control Class Pre-Test (DI)	, 0.099	26

Based on the table above, it is known that the significance value of the experimental class and control class obtained is greater than 0.05. So it can be concluded that the data has a normal distribution.

Table 2 Output Analysis of Initial Data Homogeneity Test

Test of Homogeneity of Variances

Student learning outcomes

Levene Statistics	df1	df2	Sig.
1.059	1	55	,308

Based on the table, it can be seen that the significance value obtained is greater than 0.05. It can be concluded that there is no different variance in the data.

Table 3 Output Analysis of the Average Preliminary Data Similarity Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means
		F	Sig.	t
Student learning outcomes	Equal variances assumed	2,243	,140	2,354
	Equal variances not assumed			2,284

Based on the table, it is known that the significant value obtained is greater than 0.05, so it is concluded that the initial data from the two classes does not have a significant difference.

After analyzing the initial data, the students were then given treatment where the experimental class used the Discovery Learning model with the help of Microsoft Sway while the control class used the Direct Instruction model with the aid of image media. Furthermore, both classes were given post-ets to determine the ability of student learning outcomes after being given treatment. The results of the posttest scores were analyzed as the final data analysis. The analysis carried out includes normality test, homogeneity test, t-test, and N-Gain test. The results of the final data analysis using the SPSS 20 program are as follows.

Table 4 Output Analysis of Students' Final Data Normality Test

Class	The number of students	Average	Significance	Interpretation
Control	26	70.4	0.829	H0 accepted
Experiment	31	75.8	0.373	H0 accepted

Based on the table of results of the calculation of the data normality test, it is known that the significance value of the experimental class and control class obtained is greater than 0.05, then the data has a normal distribution. Furthermore, the homogeneity of the data was tested. The results are as follows.

Table 5 Output Analysis of Final Data Homogeneity Test

Levene Statistics	Df1	Df2	Significance
2,243	1	55	0.140

From the table, it is known that the significance value obtained is greater than 0.05. So it is concluded if the data is homogeneous or there is no difference in variance from the two classes. Then, a t-test was conducted to test the proposed hypothesis. The results of the t-test calculation are as follows.

Table 6 Output of Final Data Hypothesis Testing Analysis

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means
		F	Sig.	t
Student learning outcomes	Equal variances assumed	2,243	,140	2,354
	Equal variances not assumed			2,284

Based on the table, it is known that the significance value is less than 0.05, meaning that it is rejected and accepted. It can be concluded that the Microsoft Sway-assisted Discovery Learning learning model is effective compared to the Picture Media-assisted Direct Instruction model on the learning outcomes of Civics lesson content for fourth graders of SD Gugus Wahidin Grabag Magelang. Next, the N-Gain test was conducted to determine the increase in student learning outcomes. The results of the calculation are as follows.

Table 7 N-gain Increase in the Average Score of Students

Class	Pretest Average	Posttest average	N-gain value	Criteria
Control	62.1	70.4	0.243	Low
Experiment	61.3	75.8	0.363	Currently

Based on the table, it can be seen that the increase in the pretest value to the posttest value of the experimental class is in the medium category. The control class is included in the low category. The application of the Discovery Learning model involves students directly in solving real problems so that they can think critically in solving problems, thereby obtaining more meaningful knowledge. The Microsoft Sway-assisted Discovery Learning model can improve civics learning outcomes for elementary school students.

Learning with the Microsoft Sway-assisted Discovery Learning Model may be more effective to be applied in Civics learning on rights and obligations to the surrounding environment

because this material emphasizes practice and implementation so that students must gain concrete experience from the application of this material. By presenting a learning video from the Microsoft Sway application, students will be more concentrated and motivated and eager to participate in learning activities.

4. CONCLUSION

The average score of student activity through observations made in the control class and the experimental class on the content of Civics learning in the form of ethnic, social and cultural diversity in Indonesia shows that there is a difference in the percentage of student activity in the control class and the experimental class. In the control class, the average student activity score was 64% with good criteria and in the experimental class, the average student activity score was 77% with good criteria, so it can be concluded that the average student activity score in the experimental class is better than the average control class student activity score.

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