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Implementation of Guided Discovery Learning Model with Videos for Learning on Students' Science Learning Outcomes in Elementary School Students

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Keywords	Abstract
	This study examines about the implementation of the Guided Discovery Learning learning model assisted by video learning on science learning outcomes in Elementary School students in Bondowoso Regency. The purpose of this study was to determine whether there was an effect of applying the Guided Discovery Learning learning model assisted by learning videos on science learning outcomes in elementary school students. The research approach used is a quantitative approach with the type of pre-experimental research with a one group pretest and posttest research design. The population and sample in this study were all 6th grade students at SDN Pujer Baru 3, Bondowoso Regency, consisting of 10 students consisting of 6 male students and 4 female students. The data collection technique used was an objective test pretest and posttest of 10 questions in the form of multiple choice adjusted to indicators of cognitive learning outcomes. Based on the results of the study it can be concluded that there is an influence on the application of the Guided Discovery Learning learning model assisted by video learning on science learning outcomes in elementary school students as indicated by the average pretest score of 48.17 and the average posttest of students of 75. The test results the hypothesis shows the sig. $0.000 < 0.05$, which means H_1 is accepted and H_0 is rejected. This proves that the Guided Discovery Learning learning model assisted by learning videos has a significant influence on science learning outcomes in elementary school students.

Kata Kunci	Abstrak
	Penelitian ini mengkaji tentang implementasi model pembelajaran Guided Discovery Learning berbantuan video pembelajaran terhadap hasil belajar IPA pada siswa Sekolah Dasar Kabupaten Bondowoso. Adapun tujuan penelitian ini adalah untuk mengetahui ada tidaknya pengaruh penerapan model pembelajaran Guided Discovery Learning berbantuan video pembelajaran terhadap hasil belajar IPA pada siswa Sekolah Dasar. Pendekatan penelitian yang digunakan adalah pendekatan kuantitatif dengan jenis penelitian pre-experimental dengan design penelitian one group pretest and posttest. Populasi dan sampel dalam penelitian ini yaitu seluruh siswa kelas 6 di SD Negeri Pujer Baru 3 Kabupaten Bondowoso sebanyak 10 siswa yang terdiri dari 6 siswa laki-laki dan 4 siswa perempuan. Teknik pengumpulan data yang digunakan adalah tes objektif pretest dan posttest sebanyak 10 soal berupa pilihan ganda yang disesuaikan dengan indikator hasil belajar kognitif. Berdasarkan hasil penelitian dapat disimpulkan bahwa terdapat pengaruh pada penerapan model pembelajaran Guided Discovery Learning berbantuan video pembelajaran terhadap hasil belajar IPA pada siswa Sekolah Dasar yang

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ditunjukkan oleh nilai rata-rata pretest sebesar 48,17 dan rata-rata posttest siswa sebesar 75. Adapun hasil uji hipotesis menunjukkan hasil sig. 0,000 < 0,05 yang artinya H_1 diterima dan H_0 ditolak, ini membuktikan model pembelajaran Guided Discovery Learning berbantuan video pembelajaran memberikan pengaruh yang signifikan terhadap hasil belajar IPA pada siswa Sekolah Dasar.

A. Introduction

The 21st century at this time has demanded a very big change in national education, it is known that the current education system is a legacy of the old education system whose contents are memorizing facts without meaning. Therefore, the education system must be oriented towards equipping and developing 21st century skills for students. In the 21st Century partnership learning framework, there are a number of 21st century skills that must be developed in students in today's learning, namely (1) critical thinking and problem solving skills (critical thinking and problem skills), (2) communication and collaboration skills (communication and problem solving). collaboration skills), (3) creating and updating skills (creativity and innovation skills), (4) information and communications technology literacy, (5) contextual learning skills, and (6) information and media literacy skills (Wijaya et al., 2016).

Law Number 20 of 2003 states that the learning process has three stages of education levels including basic education, secondary educationmiddle school, and higher education. Education at the basic education level is the basis for providing provisions to students through meaningful learning with basic abilities in the form of knowledge, skills, and attitudes (Susanto, 2014).

Science learning in basic education has a central role in providing 21st century skills to students. Science learning in elementary schools should instill in themselves the development of process skills, concept development, applications and social issues based on science (Irianto, 2008). In science learning activities students are required not only to memorize concepts and answer questions, but students are expected to be able to understand, observe, analyze and solve problems that are later useful for everyday life. (Oktaviani & Dance, 2018). Based on the results of the Trend in International Mathematics and Science Study (TIMSS) study on measuring mastery of science and mathematics in 4th grade SD/MI students, the results showed that students' ability in science was ranked 45 out of 48 participants, while math skills scored 45 out of 50 participants (IEA, 2016).

Another problem based on the results of the researchers' observations is that science learning does not reflect independent, meaningful and fun activities. This is shown from the learning that is still less varied and the tendency to apply learning models with the old learning paradigm, namely the teacher as a learning center (teacher center). This causes the learning process to be less meaningful and students tend to be passive. Teachers rarely use video media in the science learning process, teachers also rarely carry out activities that allow students to carry out discovery activities such as practicum, so they tend not to be able to develop science process skills in students. Whereas the theory or material discussed needs to be practiced so that students can find concepts from the material independently. For example, in electrical energy material, students must understand the concept of electricity itself and find innovations to save electrical energy in everyday life. But in reality students listen and write more which causes the content of the lesson to be memorized so that students do not understand the real

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concept. As a result, the information obtained by students is only able to be remembered in a short period of time.

In previous research by (Kumala, 2016) where in his study that the use animated audio-visual learning has a very good impact on student learning outcomes (Aslam et al., 2020). In another study by (Sampieri, n.d.) that the learning model uses video Animation is more effective than the learning model without using animated video media student learning activities. Whereas in research (Johari et al., 2016) where to get results student learning good cognitive aspects of the material can use video and animation learning media, while to get better psychomotor and affective learning outcomes using video media thus the use of animated video learning media is very effective on increasing interest and learning outcomes of elementary school students.

The results of Lovisia's observations (2018) also show that there are several weaknesses in science learning which are carried out, among others, students seem to experienceboredom shown by the presence of several students whose views were not focused, chatting, and playing with their classmates when the science lesson material was explained by the teacher; students do not play an active role in constructing their knowledge during the learning process; students rarely get the opportunity to implement the concept findings obtained so that the knowledge gained by students becomes less meaningful.

Another finding is evidenced by Muliani's research (2019) from recording documents regarding the results of the UAS (Semester Final Examination) for science subjects for class V students in the first semester of the 2017/2018 academic year. It is known that the number of fifth grade students in Cluster IV Baturiti District is 95 people. It can be seen that the number of students who reached the KKM was less, namely 40 people or equivalent to 42% than the students who had not reached the KKM, namely 55 people or equivalent to 58%. This proves that students' mastery of science material in Cluster IV Baturiti District tends to be low or has not reached the classical completeness criteria because every fifth grade in Cluster IV Baturiti District has not had 85% of students who have reached the KKM.

Science learning has an important role in human development, both in terms of technological developments used to support their lives and in terms of applying concepts (Trisnani, 2015). In line with Trisnani's opinion, Widiana (2016) added that there are six standards a teacher can carry out science learning as follows: one can plan inquiry-based science learning; two carry out learning to direct and facilitate student learning; three assessments adapted to teacher teaching activities and in accordance with student learning; four develop learning from the environment in which students learn; five creating a science learning society; and six plan and develop lessons from the school science program.

Science learning is not only centered on the teacher, but students must also be given the opportunity to experiment and try themselves according to the material being taught. That way, students will not feel bored and have fun. It would be nice in this lesson for students to be directly involved in seeing the natural surroundings from things that are easy to reach (Sunami and Aslam, 2021).

Good learning will be created if the models and learning tools used are in harmony. One of the learning models for science subjects recommended by experts to improve students' science learning outcomes is the guided discovery learning model with the help of learning

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tools, namely learning videos. Eggen and Kauchak (2016:177) state that Guided discovery is a learning approach in which the teacher provides specific examples and topics to students and guides students to understand the topic. Guided discovery learning model is a learning model that actively involves students to try to find the information and knowledge expected by themselves with the guidance and instructions given by the teacher. At the beginning of this study, students are given stimulation in the form of a problem. Furthermore, students are required to find the concept, students must first identify the problems given previously. After that, students collect information from various sources and then interpret the ideas obtained in the form of mathematical symbols and pictures. If students can understand and plan problem solving correctly, then students can easily solve problems and find a conclusion. In addition, during learning, students work together and discuss with their groups (Dewi et al., 2019). students collect information from various sources and then interpret the ideas obtained in the form of mathematical symbols and pictures. If students can understand and plan problem solving correctly, then students can easily solve problems and find a conclusion. In addition, during learning, students work together and discuss with their groups (Dewi et al., 2019). students collect information from various sources and then interpret the ideas obtained in the form of mathematical symbols and pictures. If students can understand and plan problem solving correctly, then students can easily solve problems and find a conclusion. In addition, during learning, students work together and discuss with their groups (Dewi et al., 2019).

Previous research by Alfieri (2011) in his study related to Discovery-Based Instruction stated that the effect of discovery learning without guidance is very small, while the effect of discovery learning with guidance can increase student activity and knowledge construction. Guided Discovery learning has been carried out by several studies. Research conducted by Aini (2011) hasproves that by applying Guided Discovery can improve student learning outcomes. In line with the opinion of Mayer (2004) who concluded that Guided Discovery Learning is more effective than pure discovery in helping students' transfer and learning processes. Supporting devices to support learning models that are already relevant are used, so in this study using the help of learning videos.

Mahadewi, LPP, (2012: 3) states that video is defined as all electronic media formats that are used to stimulate students' thoughts, feelings, and interests to learn through showing videos or ideas, messages and moving image information. Learning videos also have a very important role, especially in learning because they can attract students' attention so that they can foster learning motivation, clarify the meaning of teaching materials so that they are easily understood by students, teaching methods are more varied and students do more learning activities.

Various research results have proven the success of the application of Guided Discovery Learning and video learning models in improving students' science learning outcomes. The results of research conducted by Sumarniti et al., (2014) on fifth grade elementary school students in Cluster VII Sawan District stated that there was a significant difference in science learning outcomes between groups of students who were taught with the Guided Discovery Learning model and groups of students who were taught by learning conventional. The group of students who were taught using the guided discovery learning model had an average value

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of science learning outcomes that was better than the group of students who were taught using conventional learning.

B. Methodology

This research is quantitative research supported by the type of pre-experimental research with one group pretest and posttest design. The population and sample in this study were all sixth-grade students of SD Negeri Pujer Baru 3 in Bondowoso Regency using a purposive sampling area technique, in order to obtain 10 research samples. This study uses the pretest and posttest objective test instruments in the form of multiple choices according to the indicators of cognitive learning outcomes with the research design as shown in Figure 1.

$$O1 \quad X \quad O2$$
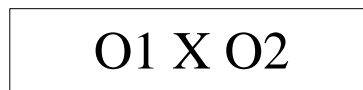
Figure 1. Research Design Pattern

Information:

O1   = Value *pretest* (before treatment)
X   = Treatment (Treatment)
O2   = Value *Posttest* (after being treated)

In this study, to determine the students' initial knowledge, a pretest was given first. After that, the treatment was given. The above treatment means that the application of the Guided Discovery Learning learning model is given with the help of learning videos in science learning. After being given treatment, students are given a posttest to determine the effect of the treatment that has been done. The paradigm of this research design is that there is a pretest before being given treatment so that the results of the treatment can be known more accurately, because it can compare with the situation before being treated.

Determination of the location of this research using a method based on purposive sampling area, ie the place chosen as the place of research is deliberately chosen by considering several aspects, such as time, funds, and also energy. And this place was chosen in accordance with the placement of the Teaching Campus program. The place where this research was carried out was at SD Negeri Pujer Baru 3 Bondowoso, precisely in class VI in the odd semester of the 2021/2022 academic year. There are two variables in this study, namely the independent variable and the dependent variable. The independent variable in this study is the learning model used, namely the Guided Discovery Learning learning model assisted by learning videos, while the dependent variable in this study is problem solving ability and student learning outcomes.

The research steps carried out by the researcher are as follows: Preparation Phase: preparing a cover letter for observation and research from the Faculty of Education and Culture, Jember University and determining the school that will be used for research and preparing a research permit to the school, Observation Phase: conducting initial observations to schools, determining population and sample using purposive sampling area technique. After carrying out observations at school, then the population and sample are selected, namely students of class VI SD Negeri Pujer Baru 3. because the population and sample are the same, it can be called population research, giving pretest to all samples (with documentation),

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carrying out learning activities in the experimental class with the model learning Guided Discovery Learning assisted learning video (with documentation), provide posttest to determine student learning outcomes (with documentation), analyze the data obtained during the study using SPSS, discuss the results of the data obtained during the study. The discussion in this study is used to determine the implementation of the learning carried out, and draw conclusions from the research conducted.

The data collection technique in this study was an objective test instrument consisting of 10 multiple-choice questions that matched the indicators of cognitive learning outcomes based on cognitive bloom taxonomy containing C1 to C6. and use documentation. This study uses data analysis techniques normality test, hypothesis testing and t-test on SPSS through several stages, namely, checking the tests that have been done by students, then the researcher gives an answer score, the data that has been obtained is processed which will then be obtained frequency, average average pretest and posttest scores, normality of test items, significance, and t-test scores. Normality test is a procedure used to determine whether the data comes from a normally distributed population or not. The normal distribution is a symmetrical distribution with the mode, mean and median at the center. Normality test is usually used to measure ordinal, interval or ratio scale data. Normality test using SPSS program with Shapiro Wilk. If the sig value is above 0.05 then the data is normally distributed and if the value is below 0.05 then the data is not normally distributed (Sugiyono, 2021).

Hypothesis can be interpreted as an allegation about something, or a hypothesis is a temporary answer to a problem, or a hypothesis can be interpreted as a temporary conclusion about the relationship of a variable with one or more other variables. Statistical hypothesis is a hypothesis expressed by the parameters of a population. The definition of hypothesis testing is a procedure used to test the validity of the statistical hypothesis of a population by using data from the population sample. Hypothesis testing was used to test the effect of the Guided Discovery Learning learning model assisted by learning videos on student learning outcomes. These two hypotheses use the Paired Sample t-test with the help of SPSS with the scores obtained from the post test at the end of the lesson.

Determination of whether the hypothesis is accepted or not is based on the level of significance. If the significant level shows less than 0.05 ($sig < 0.05$), then H_0 is rejected or there is an influence of the Guided Discovery Learning model assisted by video learning on students' science learning outcomes on the subject of electrical energy. Meanwhile, if the significant level or probability value shows more than 0.05 ($sig > 0.05$), then H_0 is accepted or there is no effect of Guided Discovery Learning model assisted by video learning on students' science learning outcomes on electrical energy. If H_0 is accepted, then this means that the influence of the independent variable partially on the dependent variable is considered insignificant. While the rejection of H_0 shows a significant effect of the independent variable partially on a dependent variable.

C. Result and Discussion

This research is included in quantitative research where the data generated is in the form of numbers. From the data obtained, analysis was performed using SPSS software. The

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research data was obtained through research that was carried out at the Pujer Baru 3 Public Elementary School in the odd semester of the 2021/2022 academic year. The population and samples of this study were all 6th grade students, totaling 10 people. The data to be collected is data related to the influence of the Guided Discovery Learning learning model assisted by learning videos on students' science learning outcomes on the subject of electrical energy.

This research was conducted at SD Negeri Pujer Baru 3 in Bondowoso District, Bondowoso Regency with a sample of 10 students consisting of 6 male students and 4 female students. This study uses data analysis techniques normality test, hypothesis testing and t-test with the help of SPSS version 26.0 that has passed the statistical testdescriptive which is based on the mean (average value), standard deviation (standard deviation value) and the minimum and maximum values for each variable. The following are the results of descriptive statistical tests on the pretest and posttest which are presented in table 1.

Table 1. Descriptive Statistical Analysis

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Pretest	10	43.33	56.67	48.1667	4.40608
Posttest	10	70.00	80.00	75.0000	3.33333
Valid N (listwise)	10				

Based on the table above, it can be seen that the average posttest value is higher than the pretest value. The mean value of the pretest was 48.1667. While the posttest average value is 75. It means that descriptively there are differences in students' cognitive learning outcomes before and after being given treatment. The standard deviation value on the pretest shows a value of 4.40 and on the posttest it shows a value of 3.33 where the average value of the pretest and posttest is greater than the standard deviation value, meaning that the value obtained is quite good and very high. Descriptively, it can be concluded that there are differences in students' cognitive learning outcomes before and after being given treatment.

Analysis of learning outcomes test data was carried out when the pretest and posttest data that had been obtained were tested for hypotheses using the Paired Sample T-Test test, but before testing the previous hypothesis, a prerequisite test was carried out, namely the normality test of the pretest and posttest data that had been obtained.

The normality test is one of the requirements to perform the t-test. This normality test has the aim of knowing whether the test data for science learning outcomes from students are normally distributed or not. The calculation in this normality test is to test both the pretest and posttest values. On this occasion, the normality test used is the Shapiro-Wilk test, because the data is small, which is less than 50 data. This normality test uses SPSS 26. To find out whether it is normal or not, if the significant level shows less than 0.05 (sig < 0.05), then H_0 is rejected or the data is not distributed. Significant level or probability value if it shows more than 0.05 (sig > 0.05) then H0 is accepted or the data is normally distributed.

Based on the significant values shown in Table 2 of Shapiro Wilk's section, the significant value for the pretest data is 0.373 and the significant value for the posttest data is 0.296. Based on the criteria of the normality test, it shows that, 0.373 > 0.05 and 0.296 > 0.05. Thus, H0 is accepted and states that the pretest and posttest data are normally distributed. Data

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with normal distribution can also be seen in Figures 4.1 and 4.2, which show that the data is spread around the line which indicates that the data has a normal distribution.

Table 2. Normality Test Output

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
Pretest	.164	10	.200*	.922	10	.373
Posttest	.200	10	.200*	.912	10	.296
*. This is a lower bound of the true significance.						
a. Lilliefors Significance Correction						

The next stage is to analyze the hypothesis test. Hypothesis testing is carried out after conducting a prerequisite test, namely the normality test, which based on the prerequisite test that has been carried out shows the data is normally distributed, then it is possible to test the hypothesis using the Paired Sample T Test with SPSS 26. The statistical hypothesis contained in this study is the hypothesis zero (H_0) and alternative hypothesis (H_1). The null hypothesis (H_0) in this study is that there is no effect of Guided Discovery Learning model assisted by video learning on students' science learning outcomes on the subject of electrical energy. The alternative hypothesis (H_1) in this study is that there is a significant effect on the application of the Guided Discovery Learning model assisted by video learning on students' science learning outcomes on electrical energy.

To determine whether the hypothesis is accepted or not, if the significant level shows less than 0.05 (sig < 0.05), then H0 is rejected or there is an influence of the Guided Discovery Learning model assisted by video learning on students' science learning outcomes on the subject of electrical energy. Significant level or probability value if it shows more than 0.05 (sig > 0.05) then H0 is accepted or there is no influence of Guided Discovery Learning model assisted by video learning on students' science learning outcomes on the subject of electrical energy. The output results of the Paired Sample T-Test using SPSS 26 are as shown in Tables 3 and 4 as follows. 05) then H0 is rejected or there is an influence of the Guided Discovery Learning model assisted by learning videos on students' science learning outcomes on the subject of electrical energy.

Significant level or probability value if it shows more than 0.05 (sig > 0.05) then H0 is accepted or there is no influence of Guided Discovery Learning model assisted by video learning on students' science learning outcomes on the subject of electrical energy. The output results of the Paired Sample T-Test using SPSS 26 are as shown in Tables 3 and 4 as follows. 05) then H_0 is rejected or there is an influence of the Guided Discovery Learning model assisted by learning videos on students' science learning outcomes on the subject of electrical energy. Significant level or probability value if it shows more than 0.05 (sig > 0.05) then H_0 is accepted or there is no influence of Guided Discovery Learning model assisted by video learning on students' science learning outcomes on the subject of electrical energy.

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as shown in Tables 3 and 4 as follows. 05) then H_0 is accepted or there is no influence of the Guided Discovery Learning model assisted by learning videos on students' science learning outcomes on the subject of electrical energy. The output results of the Paired Sample T-Test using SPSS 26 are as shown in Tables 3 and 4.

Table 3. Interpretation of Output Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
	Paired Sample Statistics				
Pair 1	Pretest	48.1667	10	4.40608	1.39333
	Posttest	75.0000	10	3.33333	1.05409

This output describes a summary of the descriptive statistical results of the two samples studied, namely the pretest and posttest scores. The pretest score obtained an average (mean) learning outcome of 48.17. Meanwhile, the posttest score obtained an average value (mean) of 75. The number of students or the research sample used were 10 students. The standard deviation value at the pretest is 4.41 and the posttest is 3.33. Furthermore, for the standard error value of the mean at the pretest is 1.39333 and for the posttest is 1.05. Furthermore, to find the effect of the difference between the two variables, use the Paired Samples Test. Table 4 is the interpretation of the output of the Paired Samples Test.

Table 4 Interpretation of Paired Samples Test Output

		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	T	df	Sig. (2-tailed)
		Paired Samples Test							
		Paired Differences			95% Confidence Interval of the Difference				
Pair 1	Pretest – Posttest	-26.83333	2.98660	.94444	-28.96982	-24.69685	-28,412	9	.000

The output of this Paired Samples Test is the answer to the formulation of the problem, namely whether or not there is an influence of the Guided Discovery Learning learning model assisted by video learning on students' science learning outcomes on the subject of electrical energy. Based on table 4 output of "Paired Samples Test", it is known that the value of Sig. (2-tailed) is 0.000, which means that the significant value is less than 0.05. So it can be concluded that there is a significant effect on the application of the Guided Discovery Learning model with the aid of learning videos on students' science learning outcomes on the subject of electrical energy.

This research was conducted to examine the effect of the Guided Discovery Learning learning model assisted by learning videos on students' science learning outcomes on the

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subject of electrical energy. Guided Discovery Learning learning model is a model where in addition to active students, teachers are also actively involved in guiding to find the concepts and principles of the given problem. In this case students can learn about how to solve problems so that they can increase their knowledge along with the essential concepts of the subject matter.

The material taught is electrical energy on how to produce electrical energy, how to save electrical energy, and how to distribute electrical energy. The researcher taught this electrical energy material in 6 meetings where the discussion of how to produce electrical energy was taught in 2 meetings, the discussion on how to save electrical energy was taught in 2 meetings, and the discussion of how to distribute electrical energy was taught in 2 meetings. The activity at each first meeting was a video explanation while at the second meeting was the implementation of experiments or experiments. At each meeting there is a pretest and posttest as research data in the form of multiple choices.

In learning that applies the Guided Discovery Learning model, students become more active and enthusiastic in the learning process. There are many interactions or two-way learning between teachers and students as well as interactions between students and other students. This is because students are given special treatment by using the Guided Discovery Learning model assisted by learning videos that invites students to find and conduct direct experiments on the material being taught.

The data in this study were obtained using pretest and posttest data which were composed of 10 questions referring to the indicators of the research variables with the number of respondents totaling 10 students. Before being treated with the application of the Guided Discovery Learning model, students were given a pretest to determine the students' initial understanding of the subject matter. After being given treatment, students are given a posttest which aims to determine the differences in student learning outcomes. Pretest and Posttest were distributed to 10 samples and then the results were analyzed using the SPSS 26 program.

Based on the results of the SPSS analysis that has been carried out in this study, it was found that the average score of the students' pretest was 48.17. Meanwhile, the students' posttest average score is 75. It is known that the posttest average score is much higher than the pretest average value. So it can be proven that there is an effect on the treatment of Guided Discovery Learning learning model assisted by learning videos on students' cognitive science learning outcomes because there is an increase in test results. This is because the Guided Discovery Learning learning model is a two-way discovery learning model that can involve students actively answering the questions given by the teacher. This model can train students' courage to express opinions (Kurniasih, 2014).

This can be proven by the results of the recapitulation of research activities in the application of the Guided Discovery Learning model which is shown in Appendix F. Based on the results of observations, at the first meeting, the results of the observation with a value of 84%, the second meeting with a value of 81.33%, the third meeting with a score of 88%, the fourth meeting with a score of 88%, the fifth meeting with a score of 88% and the sixth meeting with a score of 88%. This means that it can be concluded that the results of observing the activities of teachers or researchers on the application of the Guided Discovery Learning model are quite good. The Guided Discovery Learning learning model has advantages, namely

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making students' abilities develop, motivating students in learning and having the courage to put forward a concept in learning, maintaining memory.

The use of video media in learning in electrical energy material can help visualize concepts that are considered abstract for students. Students will better understand the material provided by inserting visual and musical simulations. Video media in the form of audio visual media devices can provide new knowledge to students more easily, visualization of abstract concepts is facilitated and the learning process becomes faster. As a result, students can think critically, problem solving skills increase, and can increase student interest in learning (Atika et al., 2018). The results of the analysis of the normality test of the pretest and posttest data in this study obtained a significant value from the pretest data of 0.37 and the significant value for the posttest data was 0.29. Based on the criteria of the normality test showed that, 0.37> 0.05 and 0.29> 0.05. Thus, H0 is accepted and states that the data and posttest are normally distributed. Furthermore, in the analysis of hypothesis testing using SPSS 26, the results of the comparison of pretest and posttest data resulted in a significance of 0.000 <0.05. It can be concluded that H0 is rejected or there is an influence of Guided Discovery Learning assisted by learning videos on students' cognitive learning outcomes on electrical energy material.

The video-assisted Guided Discovery Learning learning model has an effect on cognitive learning outcomes because there are videos that provide interest for students to be actively involved in learning activities. Through the Guided Discovery Learning model, researchers provide problems presented in student worksheets. Researchers provide a stimulus in the form of problems in everyday life to attract student curiosity which is presented in student worksheets and direct students to interesting information through videos so that students want to be actively involved in building their knowledge through the stages in learning using the Guided Discovery Learning model. This is in accordance with Sumarniti's research (2014) which states that there is an effect of the application of the Guided Discovery Learning model on students' cognitive science learning outcomes, in which there is an increase in students' objective test results. In addition, a similar study was also conducted by Jatmiko et.al (2014) which stated that there was an effect of using instructional video media on students' science learning outcomes. Students can more easily master the concepts of the material being taught.

Based on the total results of this research activity, it can be concluded that the application of the Guided Discovery Learning model assisted by video learning can affect the science learning outcomes of class VI students on the subject of electrical energy at SDN Pujer Baru 3. The Guided Discovery Learning model assisted by video learning can provide an alternative for educators and students so that learning activities can be more varied and not boring. This model can be used in science material, but in its application it is adjusted to the material to be delivered so that students can understand the use of Guided Discovery Learning models assisted by learning videos in learning.

D. Conclusion and Recommendation

Based on the research that has been done by the researcher, it can be concluded that there is a significant effect of the implementation of the guided discovery learning model assisted by video learning on the learning outcomes of science in elementary school students.

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E. Acknowledgement

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