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Improving Learning Outcomes Through the Guided Inquiry Model for Class VA Students at SDN 002 North Samarinda

Wika Fradila[1],Gamar Al Haddar[2]
[1,2]Universitas Widya Gama Mahakam Samarinda

[1]Email: wikafradila01@gmail.com.
[2]Email: gamarhaddar19@gmail.com

Abstract

This study aims to improve student learning outcomes by using a guided inquiry model approach to learning science. In the VA class of SDN 002 North Samarinda, this study used classroom action research (CAR). This research was motivated by the low learning outcomes of class VA students at SDN 002 North Samarinda because teachers used more of the lecture approach and made learning activities in class less interesting. Cycle III, consisting of three meetings per cycle was used for this research. The research subjects were 25 VA students at SDN 002 North Samarinda consisting of 14 boys and 11 girls. When conducting research, the guided inquiry approach can improve student learning outcomes. The percentage of student learning outcomes, increased from 69.6% in the first cycle in the poor category to 76.8% in the second cycle in the good category to 80.52 percent in the third cycle in the very good category. The following difficulties were found by researchers in using the guided inquiry model: students who were still passive in class and less effective in practicing the teacher's teaching tactics. The conclusions of this study support the notion that the use of guided inquiry learning models is very beneficial for student learning outcomes. Therefore, the guided inquiry approach can be used as a teaching strategy for teaching science topics in elementary schools.

Keywords: Use of the Guided Inquiry Model, learning outcomes

Introduction

The relationship between the teacher and students in the classroom is an important part of the learning process. Teaching and learning activities can help students succeed academically during the process (Forthmann et al., 2019). Learning is a process that changes a person's behavior from incompetent and unable to become competent and capable (Hendarwati, 2013; Ajeng, 2021). Learning is the process of imparting information to humans through education, training, and other people change for the better (Clarke and Hollingsworth, 2002). Learning is basically a process consisting of a unit that interacts and relates to achieving the desired results based on predetermined goals. Obtaining information obtained through experiences that develop through sharing, so that it is beneficial to others, is one of the advantages of learning (Meiklejohn et al., 2012; Degeng, 2013). The tendency of students to want to study effectively supports an increase in learning outcomes, but the teacher's teaching strategies, also have an impact on student learning outcomes (Rohaeni, 2020). The reality is that some teachers continue to use unattractive teaching methods, which hinder students from taking their participation in class work seriously (Hendarwati, 2013; Parlindungan, 2020). Today's students must incorporate the concepts and principles into their own learning activities. They should be encouraged to experiment and gain experience so they can discover their own principles (Clarke and Hollingsworth, 2002; Stichter, Malugen and Davenport, 2019).

The inquiry approach is a type of learning activity that emphasizes the use of analytical

thinking to find and solve problems (Yasmini, 2022). Students are required to actively participate in learning through science oriented activities when using inquiry-based learning strategies (Hendarwati, 2013). This will help ensure that knowledge is acquired in ways that go beyond simple memorization (Clarke and Hollingsworth, 2002; She et al., 2012). Because it is based on the reference to the nature of science learning since the first curriculum was compiled, learning with an inquiry-based approach was chosen (Wang, Chang and Li, 2008a; Ntobuo et al., 2018). Given that students are not used to being let go during the learning process without teacher supervision, guided inquiry was chosen as the inquiry style. Students may have opportunities to participate in active learning through guided inquiry. By actively participating in this strategy, students learn much more than they do by passively reading about a subject or idea (Domènech-Casal, 2018; Yasmini, 2022). The guided inquiry model can provide opportunities for students to engage in active learning. Students learn more through active participation in this method than if they simply read about a topic or concept (Roth and Lee, 2007; in Fuccia et al., 2012). In order to make learning more meaningful, this learning paradigm does not only emphasize the cognitive component, but also encourages students to feel and experience what they are learning directly. The Inquiry learning model according to the author is a teaching strategy that emphasizes the process of discovering concepts and relationships between concepts (Putranta and Supahar, 2019; Glassman et al., 2021). Students create their own experimental procedures in this method, which gives them a more dominant role while the teacher directs them in the right direction. Based on the practical experience of learning carried out at SDN 002 North Samarinda, it was obtained that the students' scores on Science Content were still below the KKM, of the 25 students who were able to achieve the KKM, only 10 students while the remaining 15 students. Students have not achieved KKM scores, from the data above, it can be seen that only 40% of students achieve KKM presentations and 60% of students do not understand learning related to science learning.

Research methods

In this study, researchers used classroom action research (CAR). Studies conducted in the classroom to find out the results of activities applied to research participants in the classroom are known as classroom action research. The subjects of this study were 25 students consisting of 14 boys and 11 girls from SD Negeri 002 North Samarinda who were research participants in class V. In this study, classroom action research was used. This study uses a classroom action research model. The PTK cycle model has a basic framework consisting of four components, namely planning, implementing, observing, and reflecting (Asrori, 2017).

As for data collection techniques (Sugiono, 2018) the data are described as follows:

Observation

Because it involves researchers actively in daily activities that are observed or used as a source of research data, participatory research is the type of observation used in this study. The researchers had carefully planned what they would observe.

Test

In this study, tests with multiple choice questions based on information that students have learned are used to measure how much learning outcomes have improved over time. The test was given at the end of the researcher meeting.

Documentation

Researchers need documentation to complete their data sets and to track any changes that occur after new actions are taken. Student data, learning outcomes, and other information is one of the documentation requirements in this study.

The research data analysis strategy combines qualitative and quantitative analysis. Analysis Techniques Qualitative data were obtained from observations using the Miles and Huberman interactive model. Quantitative data obtained from formative tests in each cycle or student learning outcomes (Arikunto, Suhardjono and Supardi, 2016).

Results

The Guided Inquiry Model for Improving Science Content Learning Outcomes for Grade VA Students was used to conduct this research at SDN 002 North Samarinda in the 2021–2022 academic year. In this three-cycle study, students took a test at the end of each cycle to measure their learning objectives, which were then assessed to determine their next course of action. Research data were

collected through observing teacher and student behavior during teaching and learning activities in class, observation sheets provided by researchers, and evaluation exams given at the end of each cycle. Student assessment tests are used to assess the results of student achievement, while the observation data is the observation data of teacher activity during learning.

Based on the teacher's observation of student learning outcomes in cycle I, there were deficiencies and problems that caused the low results in a cycle I, namely only 14 out of 25 students who completed. While 11 students did not succeed because their scores did not meet the KKM standards. KKM is the minimum standard of completeness chosen by the education unit. The KKM for the Science Content subject for class V SDN 002 North Samarinda is 70. Based on the scores that have been achieved by students and the KKM standards set, a total of 25 students is obtained, 14 students who have completed it with a percentage of 56%. While those who did not complete were 11 students with a percentage of 44%, the overall average score of students was 69.6%. Based on observations made in cycle II, it was found that of the 25 students, 21 students had learning outcomes above the KKM, and 4 students had learning outcomes below the KKM. This shows that 84 percent of students successfully complete their studies. There were 18 students who completed the psychomotor domain (skills) with a percentage of 72%, and there were 7 students who did not complete with a percentage of 28%. Psychomotor learning outcomes have been successful.

Based on observations made in cycle III, student learning outcomes from 25 students who scored above the KKM 23 and those who scored below the KKM 2 people, thus it can be seen that the percentage of student completeness was 92% increased student learning at the beginning of the previous cycle of students not yet focused on learning to focus and pay attention to the lessons of the learning test results of 23 students who complete the lesson, where this researcher has reached the predetermined criteria of completeness.

Discussion

Based on research data collected through observing teacher and student behavior during teaching and learning activities that take place in class, observation sheets provided by researchers, and evaluation tests at the end of each cycle. Student assessment tests are used to assess the level of student achievement, while the observational data are data on observing teacher activity during learning. The researcher checked the pre-cycle score in science content learning before giving the first cycle test. The learning outcomes obtained met the less stringent criteria of the KKM, the researcher used a completeness percentage of 40% with 10 students who completed and 15 students who did not complete. The student learning level is still below the KKM expected by the teacher because they have not understood the scientific material in the previous lesson. To decide how to improve learning outcomes for the next cycle, pre-cycle findings are used as benchmarks or basic principles. Based on the research results, the guided inquiry model can be used to teach science material to VA students at SDN 002 North Samarinda semester II for the 2021–2022 academic year. The success of the percentage of observations of how students and researchers put into practice what they have learned and the percentage of mutant science learning outcomes achieved by students in cycles I, II, and III are two indicators of these achievements (Wang, Chang and Li, 2008b). ; Arrimada, Torrance and Fidalgo, 2021; Yasmini, 2022).

Learning Outcomes in the Cognitive Domain 14 of the 25 VA class students who took the test successfully completed it, with a completeness level of 56%, according to the data on student learning outcomes from working on the test questions. 11 students with a completeness level of 44% included those who did not complete the course, while students with a completeness level of 56% had an overall average score of 69.6%. Assessment of Psychomotor Learning Outcomes Students in cycle 1 whose learning outcomes were assessed in the psychomotor domain obtained a completion percentage of 68%, consisting of 17 students who passed and 8 students who had not completed with a score of 32%. The results of observing student learning activities This study found that only 60% of students followed the teacher's explanation during the learning process, recorded what the teacher said, and completed the tasks requested at the first cycle meeting. However, at the second meeting there was an increase of 72%.

The results of research conducted by researchers during cycle III showed an increase in both student learning outcomes and student activity in the learning process (Hendarwati, 2013; Attard, Mountain and Romano, 2016; Griscti and Camilleri, 2020). So it can be concluded that learning

Science Content with the Guided Inquiry Model can improve learning outcomes Science Content for V.A. class students.

Conclusion

The Guided Inquiry Model resulted in an increase in cognitive learning outcomes in each cycle, with the first cycle having a 69% completeness level, the second cycle having a 76% completeness level, and the third cycle having an 80.52% completion rate of all students population. Utilizing the concept of guided inquiry, student learning outcomes in the psychomotor domain increased from cycle 1 to 68%, cycle 2 to 72%, and cycle 3 to 80% of the overall student population. Student learning activities increase in terms of attention, activity, and engagement when the guided inquiry paradigm is used. The findings of this study reveal the learning experience by involving students in the learning process to improve their skills regarding problem solving. These skills are of course very important as an effort to improve participants' skills in life skills.

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