

## EFFECTIVENESS OF GUIDED INQUIRY LEARNING MODEL AND PROBLEM BASED LEARNING MODEL ON THEMATIC INTEGRATED LEARNING COMPETENCY

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### ABSTRACT

Learning competencies of 5th grade elementary school students in integrated thematic learning are still relatively low. This happens because the use of learning models still does not match the material and character of students. One effort that can be done to overcome this problem is by implementing a guided inquiry model and the Problem Based Learning model in the learning process. This type of research is a quasi experiment with a pretest-posttest only control group design. Data were analyzed using t test. From the results of the analysis obtained: (1) there is effectiveness in the use of Guided Inquiry models to improve learning competency aspects of knowledge, because  $t_{count} > t_{table}$  (2) there is effectiveness in using Problem Based Learning learning models to improve learning competency of  $t_{count} > t_{table}$  (3) there is no difference in effectiveness between Guided Inquiry and Problem Based Learning learning models to improve learning competency aspects of knowledge  $t_{count} < t_{table}$ .

**Keywords :** Guided Inquiry, Problem Based Learning, Knowledge Skills and Integrated Thematic Aspects.

### INTRODUCTION

According to (Sukerti *et al.*, 2014) integrated thematic learning is a learning approach that involves several subjects to provide meaningful experiences to students. The implementation of learning that is not in accordance with the characteristics of learners results in patterns of interaction that occur in the learning process that are less activating and less attractive to students so that the learning competencies of students

still look unsatisfactory. That way it can be explained that the skills competency for elementary school students must be in accordance with the stage of child development. According to Sundahry *et al.*, (2019) In thematic learning students gain direct experience and are trained to find their own various knowledge that is learned holistically, meaningfully, authentically and actively and also helps students to get critical thinking from students.

Some of the causes behind the researchers so choosing the model is because the two models both emphasize the activities of students optimally to find and find information, activities carried out by all students are directed to find and find their own answers from something in question so that it grows confident in students. The learning model that can be given to students and can think freely is a learning model where students can solve problems in teams so they can exchange ideas, teachers are only facilitators. This learning model is also known as the Problem Based Learning and guided inquiry model. According to Overton (2010), the problem based learning learning model is to promote a better understanding of concepts and improve problem solving and communication, presentation, and teamwork skills.

In this guided inquiry learning model, the teacher provides instructions to students as needed. These instructions can be in the form of questions that guide students to be able to find their own direction and actions to be taken to solve the problem given by the teacher. The process can be done alone or can be arranged in groups. Guided inquiry is one type of inquiry that emphasizes planning and guidance starting from the teacher to improve the skills of future students (Kuhlthau, 1965). Guided inquiry can add courage in communication because of guidance or guidance that will guide students to interact socially with their groups.

Problem based learning is not designed to help teachers provide as much information to students. Devi (2013) revealed that our knowledge of educators and participating students must be changed. Educators who were previously considered to be the ones who have the most authority over certain knowledge must now be questioned. According to Fitria *et al.*, (2013) suggested that PBL basically makes students gain understanding and mastery of knowledge, problem solving skills, learning to direct or manage their own learning, and group participation.

Therefore because it is one of the learning models that offer and bring learners in their own area to construct themselves from within with a container of learning in real life. Students must take an active role in choosing, managing information, constructing their hypotheses, deciding then reflecting on their experiences to determine how they can transfer that knowledge to various other situations.

The guided inquiry model and problem based learning models are not designed to help teachers provide as much information to students. The use of Guided Inquiry and problem based learning models is to develop intellectual abilities as part of the mentality, consequently in learning students are not only required to master the lesson, but students can use their potential. According to Fitria *et al.*, (2013) recommend learning science that can develop various skills of students with innovations such as problem-based learning (Problem Based Learning, PBL), which empowers all potential students. According to Fitria (2017) The learning process emphasizes giving direct experience to develop competencies in order to explore and understand the natural environment scientifically.

Ecosystem material is a suitable material to support the characteristics of students because the material characteristics of the ecosystem discuss the environment by presenting real phenomena that are very closely related to everyday life. Characteristics of students think rationally, have logical operations that can be applied to concrete problems that occur in the surrounding environment. So that the learning process becomes more meaningful and can develop students' learning competence. Given how important it is to develop learner competencies, a study is conducted to see the achievement of these abilities through the Effectiveness of Guided Inquiry Learning Models and Problem Based Learning Models to Improve Integrated Thematic Learning Competencies in Class 5 Elementary School Class I.

## METHOD

This type of research is a Quasi experiment research with the aim to see a comparison of the use of guided inquiry learning models and Problem Based Learning learning models on student learning competencies. This study used a pretest-posttest

only control group design research design. The population in this study were all fifth grade students of SD Negeri Gugus I, which amounted to 375 students. The sampling used in this study was cluster random sampling. Research for Experimental Class 1 was conducted at SDN 22 Ujung Gurun while experimental class 2 research was conducted at SDN 23 Ujung Gurun.

## RESULTS AND DISCUSSION

The normality test aims to see the learning competency data of both sample classes with normal distribution or not. To use the normality test, the liliefors test is used. After calculating the data in both sample classes, the probability (sig) > 0.05 is obtained, which means the data of the two sample classes are normally distributed. The variance homogeneity test aims to look at the experimental test results and the control class data that have a homogeneous variance or not. In the homogeneity test used the Barlet test.

Free Degrees,  $dk = 1$ . Table value, If  $\alpha = 5\%$  of the chi square distribution table with  $dk = 1$  obtained  $\alpha^2 = 4.17$ . Conclusion: By using the formula  $0,000461 < 4,17$ , it means that  $H_0$  is accepted, so the hypothesis which states homogeneous variance is accepted. Hypothesis testing is carried out by t-test analysis. This analysis can be done if the required assumptions are met. Riduwan, (2013) explained that before conducting the test must be fulfilled the requirements of analysis first with the assumption (1) normal data, meaning that the data that is connected is normally distributed, then the normality test is carried out and (2) homogeneous, meaning the data compared is similar homogeneity. From the results of the analysis it can be concluded that the learning competency variable is normal and has a homogeneous variance.

Based on the calculation results obtained by the results of the t test Hypothesis 1 as follows: Hypothesis 1: because the significant value of the students' posttest value -  $8.5467 > 0.05$  means that there is effectiveness in using Guided Inquiry models to improve learning competencies aspects of class student knowledge V SD Gugus I, Padang Barat Sub district, Padang City. Based on the calculation results obtained by the results of the t-test Hypothesis 2 as follows: because the significant value of the

students' posttest value  $-20.9351 > 0.05$  means that there is effectiveness in using the Problem Based Learning learning model to improve the learning competency aspects of knowledge of fifth grade elementary school students in District I District West Padang City of Padang.

Based on the calculation results obtained by the results of the t-test Hypothesis 3 as follows: because the significant value of students' N-Gain value  $0.7409 < 0.05$  means that there is no difference in effectiveness between Guided Inquiry and Problem Based Learning models to improve learning competence aspects of knowledge of fifth grade students of SD Gugus I, Padang Barat Sub district, Padang City. The research that the researchers conducted was in the fifth grade of SDN 22 Ujung Gurun and 23 Ujung Gurun Kota Padang in the academic year 2018/2019 which amounted to 60 class V students.

The learning process in experimental class 1 namely Guided Inquiry was conducted using Guided Inquiry models that were in accordance with the steps of the Guided Inquiry model. Research prepares lesson plans, teaching materials, worksheets, and quiz questions that are validated by experts. The research ranks the steps of the Guided Inquiry model and its details. In the learning process takes place, the fifth grade teacher teaches according to the plan stated earlier. Before starting the research the researcher gave questions about the pretest to students of grade V SD 22 Ujung Gurun. The average test of learner's competency in the class is 20,0689. In accordance with Fitria (2017b: 36) that inquiry method always involves students in searching and processing information, so students have the ability to think scientifically. The rational reason for using the inquiry method is that students will get a better understanding and will be more interested in learning.

At the pretest the average learning competency test of the knowledge aspects of students was 14,833 and at posttest it was 19.80. And after testing the hypothesis, it can be concluded that there is effectiveness in using the Problem Based Learning learning model to improve learning aspects of knowledge competencies in fifth grade students of SD 23 Ujung Gurun, Padang Barat District, Padang City. This result is in accordance with Mulyati's opinion; The Word; Yanti Fitria, (1999) PBL aims to foster confidence and ability to think in students about solving the answers to a problem through group

discussion. In line with Fitria (2017) the Problem based Learning model is expected to be able to develop active attitudes in students in the learning process.

Learning aspects of knowledge competency in both classes can be seen in the learning competency test aspects of the knowledge that students do individually. Based on the results of the learning competency data analysis aspects of knowledge obtained the maximum grade N-Gain score taught with Guided Inquiry model is 0.800 and the minimum score is 0.333 while the average N-Gain grade taught by Guided Inquiry model ) is 0.485. The maximum score of the class taught with the PBL model is 0.750 and the minimum score is 0.222 while the class average value taught with the PBL model is 0.4703. Thus it can be concluded that there is no difference in effectiveness between the Guided Inquiry model and the Problem Based Learning learning model to improve the knowledge aspect of the competency of the fifth grade students of SD Gugus I Padang Barat District, Padang City.

Based on calculations there are no differences in learning outcomes of students who are taught using Guided Inquiry models with learning competencies in the knowledge aspect of students who are taught using Problem Based Learning learning models. Kennedy, Hyland, & Ryan (2009: 10) state "Competence generally defines applied skills and knowledge that enable people to successfully carry out in professional, educational and other life contexts. According to Sari, Yulia Ratna; Ahda (2018: 39) Problem Based Learning models aim to achieve students' ability to think critically, analytically, and logically to find alternative solutions to problems through empirical exploration of data in order to foster a scientific attitude. If students are able to cultivate a scientific attitude in the learning process it will have an impact in improving student learning competencies.

## CONCLUSION

There is effectiveness using a guided inquiry model and PBL model to improve learners' competencies in the knowledge aspect. Based on the conclusions above, some suggestions can be made to improve initial knowledge and narrative writing skills, including: (1) Teachers; Providing insight to the teacher as an alternative in the learning process by using Guided Inquiry models and Problem

Based Learning models for students; The advantage of Guided Inquiry and Problem Based Learning models is that student activities are more dominant during the learning process. Looking for information yourself and learning in groups, (3) Principal; As information and increase the knowledge of principals in guiding teachers to use Guided Inquiry models and Problem Based Learning models in integrated thematic learning processes.

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