

# The Effect of Discovery Learning Strategy and Learning Motivation on Learning Outcomes of Islamic Education Elementary School of Number 106190 Kotapari, Pantai Cermin District, North Sumatra

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**Abstract:** This study aims to determine: (1) differences in student learning outcomes taught by using the discovery learning strategy with student learning outcomes taught by expository strategies, (2) differences in the learning outcomes of students who have high motivation and low motivation by using learning learning strategies, (3) differences in learning outcomes of students who have high motivation and low motivation using expository learning strategies, and (4) the interaction between the effects of learning strategies and motivation on student learning outcomes. The research method used is quantitative with a quasi-experimental model of factorial design 2 x 2. The research sample is 1 class for discovery learning strategy learning and 1 class is expository learning strategy. Data collection instruments are tests and questionnaires. The data analysis technique is a two-way analysis of variance. The difference in value between the experimental class and the control class is not significant enough so that it can be interpreted that there cannot be a significant difference in student learning outcomes between the experimental class and the control class.

**Keywords:** discovery learning; expository; learning motivation

## I. Introduction

Learning strategies are a series of activities in learning activities that are designed to achieve educational goals. The application of learning strategies requires active participation from students, such as, moving, exploring, experimenting, discussing, and formulating. Thus certainly not much use of lecture methods but other methods such as project work group work, or independent work, this activity is in accordance with the demands of brain performance. The brain requires a variety of stimuli and patterns in receiving and managing information, because if it only uses a monotonous way, the brain will experience burnout, which in the end will not be able to receive and absorb information or subject matter to the fullest.

Discovery learning is a cognitive learning method that requires teachers to be more creative in creating situations that can make students actively learn to find their own knowledge. Thus the discovery activities through experimental activities can improve students' knowledge and learning skills, which will be summarized in student learning outcomes (Sani, 2019: 234). To achieve maximum learning outcomes in addition to learning strategies, the internal factors which become the study of this research are motivation. Motivation of students in participating in learning varies, which in outline can be divided into two types, namely instructional motivation, and extrinsic motivation, and a teacher has a responsibility to generate motivation from within students in order to achieve learning goals.

## II. Review of Literatures

Discovery learning is a series of learning activities that involve the maximum ability of students to search and investigate systematically, critically, and logically, so students find their own knowledge, skills, and skills, as a form of behavior change (Hanafiah and Cucu, 2010: 77).

Discovery learning learning strategy is one of the learning strategies by prioritizing the role of the teacher in creating learning situations that involve students actively and independently. In the discovery learning strategy students try to gain knowledge that they do not yet know through the process of discovery of problems that are engineered by the teacher. As stated by Bruner that discovery learning is learning to find, where a student is faced with a problem or situation that seems odd so that students can look for ways to solve (Markaban, 2008: 9)

The main characteristics of learning find are: (1) exploring and solving problems to create, combine, and generalize knowledge, (2) learner-centered, and (3) activities to combine new knowledge and existing knowledge (Hamalik, 2009: 187).

Majid (2017: 3) explains the characteristics of discovery learning are: (1) encourages independence and learning initiatives in students, (2) views students as creators of the will and goals to be achieved, (3) holds that learning is a process, not pressing on the results, (4) encouraging students to be able to conduct investigations, (5) respecting the critical role in learning, (6) encouraging the development of curiosity naturally in students, (7) learning assessment emphasizes more on performance and understanding students, (8) emphasizing the importance of "how" learners learn, (9) encouraging students to actively participate in dialogue or discussion with other students or teachers and (10) emphasizing the importance of context in learning.

The steps in discovery learning are: (1) the teacher explains the learning objectives, (2) the teacher divides the practical / experimental instructions, (3) the students carry out under the teacher's supervision, (4) the teacher shows the observed symptoms, and (5) ) students deduce the results of the experiment (Sani, 2019: 234).

Expository learning is learning that emphasizes the process of delivering material to students verbally, which aims to get the material to students optimally. In other languages it is called direct learning and students are not required to find material. Expository learning strategies use a teacher-oriented approach (teacher center approach), because in this strategy the teacher plays a dominant role and students tend to be passive, subject matter is delivered in a structured manner with the expectation that the subject matter delivered can be mastered by students well. The main focus of this strategy is students' academic abilities.

The expository strategy has characteristics, namely: (1) the expository strategy is carried out by conveying subject matter verbally, (2) the subject matter delivered is ready-made subject matter, such as data, or facts, certain concepts that must be memorized so that they are not ask students to think again, (3) the main purpose of learning is the mastery of the subject matter itself (Sanjaya, 2016: 179). Furthermore, Sanjaya explained (2016: 185) that the steps in the implementation of expository learning strategies include preparation, presentation, correlation, generalization and application.

Sardiman (1988: 77) explained that learning motivation means that the overall driving force in students causes learning activities, which ensures the continuity of learning activities, so that the desired goals of the learning subject are achieved.

Hamalik (2003:121) states that motivation, both extrinsic and intrinsic, is influenced by several factors, including: (1) the level of student awareness of the needs that drive their behavior and actions and awareness of the learning objectives to be achieved, (2) the teacher's attitude towards the class, teachers who are wise and always stimulate students to act towards a goal that is clear and meaningful to the class, (3) the influence of student groups. if the influence of the group is stronger, then the motivation is more inclined to extrinsic motivation, and (4) class atmosphere.

Siregar (2010:52) explains that motivation has the following functions: (1) encouraging people to act, so as an activator or motor that releases energy, (2) determining the direction of action, ie towards the goal to be achieved, (3) selecting the act, which determines what actions must be done in harmony to achieve the goal, by setting aside the actions that are not useful for the purpose. For example a student who hopes to pass the exam, will be serious in learning.

### **III. Research Methods**

This research was carried out in elementary school of number 106190 Kotapari, Pantai Cermin District, North Sumatra. The research method used is quantitative with a quasi-experimental model of factorial design  $2 \times 2$ . The research sample is 1 class for discovery learning strategy learning and 1 class is expository learning strategy. Data collection instruments are tests and questionnaires. The data analysis technique is a two-way analysis of variance.

### **IV. Discussion**

The average value of discovery learning is 20.91, while the average value of expository learning is 19.59. That means even though there is a difference of about 1.32 difference values between the experimental class and the control class, it is not significant enough, and it can be said that the ability of the two classes is relatively the same, thus it can be concluded that the first hypothesis is rejected.

The difference between the learning outcomes of the two classes with high learning motivation between those who were given the discovery learning model (experimental) and those who were given the expository learning model (control), then it must be seen how much the significance value. Criteria for testing is that if the value is significant or the probability is smaller  $< 0.05$  then there are differences in the results of science process skills between the two groups. Conversely, if the significant value or probability is greater  $> 0.05$  then there is no difference in the results of science process skills between the two groups.

Significant value between students with high learning motivation between those who were given the discovery learning model (experimental) and those who were given the expository learning model (control) amounted to 0.428, that means greater than  $> 0.05$ . So it can be concluded that there is no difference in learning outcomes between students with high learning motivation between those who are given the discovery learning (experimental) model and those who are given the expository (control) learning model so that  $H_a$  is rejected and  $H_o$  is accepted.

The difference between the learning outcomes of the two classes with low learning motivation between those who were given the discovery learning model (experimental) and those who were given the expository learning model (control), then it must be seen how much the significance value. Criteria for testing is that if the value is significant or the probability is smaller  $< 0.05$  then there are differences in the results of science process skills between the two groups. Conversely, if the significant value or probability is greater  $> 0.05$  then there is no difference in the results of science process skills between the two groups.

Significant value between students with low learning motivation between those who were given the discovery learning model (experimental) and those who were given the expository learning model (control) amounted to 0.136, it means greater than  $> 0.05$ . So it can be concluded that there is no difference in learning outcomes between students with low learning motivation between those who are given the discovery learning model (experimental) and those who are given the expository learning model (control) so that it means that  $H_a$  is rejected and  $H_o$  is accepted.

Interaction between the effect of the discovery learning and learning motivation on student learning outcomes, it must be seen how much the calculated F value and the significance value. Criteria for testing is that if the calculated F value is greater than the F value of the table and or a significant value or smaller probability  $< 0.05$  then there are differences in the results of science process skills between the two groups. Conversely, if the calculated  $F_{count}$  is smaller than the  $F_{table}$  and or the significant value or probability is greater than 0.05 then there is no difference in the results of science process skills between the two groups.

The interaction of learning models and learning motivation on student learning outcomes obtained a  $F_{count}$  value of 0.260, and a significant value of 0.613. If seen from the  $F_{table}$  value for the distribution value with the number of respondents as many as 22 people and the df 1 value is 4,301, it means that the  $F_{count}$  value of 0.260 is smaller than the  $F_{table}$  value. Meanwhile, if seen the significant value that is equal to 0.613 is greater than  $> 0.05$ . Thus it can be said that the discovery learning learning model and learning motivation have no influence on student learning outcomes. This means that  $H_o$  was accepted and  $H_a$  was rejected.

## V. Conclusion

The conclusions of the study are: (1) there is a difference in score of 1.32 between the experimental class and the control class, but this is not significant enough, and it can be said that the ability of the two classes is relatively the same, (2) significant value of 0.428, it means greater than  $> 0.05$ , thus there is no difference in learning outcomes between students with high learning motivation between those who were given the discovery learning model (experimental) and those who were given the expository learning model (control), (3) significant value of 0.136, means greater than  $> 0.05$ . This shows that there is no difference in learning outcomes between students with low learning motivation between those who are given the discovery learning model (experimental) and those who are given the Expository learning model (control), and (4) the calculated F value is 0.260, and the significant value is 0.613. Meanwhile the F value is 4,301, it means that the calculated F value of 0.260 is smaller than the F value of the table. Meanwhile, if seen the significant value that is equal to 0.613 is greater than  $> 0.05$ . Thus it can be said that the Discovery Learning learning model and learning motivation do not have an influence on student learning outcomes.

Suggestions can be given as follows: (1) to improve student learning outcomes are advised to teachers, especially to Islamic Education teachers to improve the ability to implement various learning strategies, which can be obtained automatically or by following workshops related to the development of learning strategies, (2) to improve student learning outcomes, it is recommended to teachers, especially Islamic Education teachers, to play an active role in triggering student learning motivation, (2) to improve learning outcomes, students are advised to read more, practice, discuss, both with teachers and related friends things learned, and (3) other researchers are expected to be able to obtain more perfect research results, by conducting research related to the application of learning strategies, in an effort to improve students' learning abilities or outcomes.

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