Implementation of Discovery Learning Model on the Learning Motivation of Sixth Grade Students

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Article Info

Abstract

The research objective was to determine the effect of the discovery learning model on the student learning motivation. This study employed the classroom action research method. The research population were MI PUI Cigadog students, involving sixth-grade students (30 students) as samples. The sampling technique used was the total sampling. The instruments utilized were observations and questionnaires. The results of the first cycle of learning showed an achievement of 65.04%, as derived from data tabulation, falling into the category of satisfactory. Meanwhile, in the second cycle, through the evaluation and the successful refinement of the implementation of the discovery learning model, a significant improvement was observed. The percentage of learning motivation questionnaire results in the second cycle was 73.47%. The learning motivation outcomes fell into the "good" category, within the range of 70% to 79%. In conclusion, there was an evident enhancement in student learning outcomes in Physical Education from cycle to cycle, where both Cycle I and Cycle II showed an improvement. The discovery learning model can be employed by teachers as an alternative method to elevate the student motivation in learning Physical Education

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INTRODUCTION

As a teacher, one must be able to use teaching methods effectively to create an engaging learning process. One of the teaching methods that can be used is discovery learning. discovery learning has its advantages, as it can stimulate students' learning motivation due to their high curiosity. It also does not require students to memorize because educators directly apply concepts and principles in practice, making it easier for students to remember the material for a longer time (Prasetyana et al., 2015).

Discovery learning is a learning model that guides students through activities that develop their skills through the discovery and investigation of learning material concepts. This allows students to acquire knowledge through their own findings rather than memorizing a set of facts (Purnawati, 2021).

The goal of discovery learning is to obtain knowledge in a way that can train the intellectual abilities of students and stimulate their curiosity and motivation. Motivation is not only about engaging students in academic activities but is also crucial in determining how far students will learn from a learning activity or how well they can absorb the presented information.

Motivated students will use higher cognitive processes to study the material, leading to better retention and comprehension. The use of the discovery approach can involve students in problem-solving activities, self-directed learning, critical thinking, and creative learning (Ahmatika. 2017; Lieung, 2019; Monalisa, et.al., 2022).

A crucial task for teachers is to plan how to support students' motivation. Therefore, as a teacher, in addition to mastering the subject matter, it is also expected to deliver the material according to the students' abilities and readiness, resulting in optimal mastery of the material for the students. Moreover, teachers should be able to motivate students to make an effort to utilize all their abilities in the learning process.

One way for teachers to stimulate students' motivation is to start with the teacher setting an example of how important motivation is in the learning process (Muhammad, 2017; Harahap, et.al., 2021).

The success of learning objectives is determined by various factors, including motivation. Masni (2017) explains that motivation is an energy change in a person marked by the emergence of feelings and is preceded by a response to a goal. Motivation is also the internal driving force in a person to strive for better behavior to meet their needs (Syafei et al., 2019; Souisa & Huliselan, 2020; Mayanto, et.al., 2020).

The purpose of this study is to determine the extent of the implementation of the discovery learning model on students' learning motivation in the 6th grade in the PJOK subject at MI PUI Cigadog.

METHOD

The type of research used in this study is classroom action research. Classroom action research is a form of action research that consists of cycles, and its main indicator is the gradual improvement of students' learning motivation in the subject of PJOK.

This research design will involve four stages: planning, acting, observing, and reflecting, which will consist of two meeting cycles.
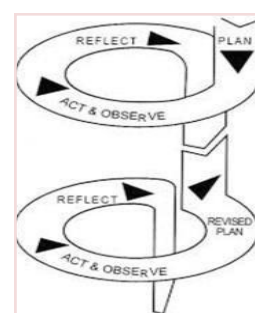
Picture 1. Kemmis and McTaggart's Research

Population

The population in this study consists of 30 sixth-grade students at MI PUI.

Instrument

The instructional instrument used is the

discovery learning model. In addition to observing the students, the observer also observes the teacher regarding the implementation of the discovery learning model.

As a guideline for conducting teaching and learning activities using the discovery learning model, observation sheets are also needed.

Data Analysis Technique

To analyze the data, quantitative descriptive analysis will be conducted through data collection, analysis, and discussion of the data obtained by matching the level of optimality against the achievement of the existing success indicators.

RESULT & DISCUSSION
Cycle I
a. Implementation
1) Preparation

In the preparation phase of implementing the discovery learning model, the teacher begins by providing an introduction to the students before engaging in discovery, clarifying what the students need to learn. The aim is for students to have guidelines for the discovery process.

The preparation continues by setting up the classroom and preparing the necessary teaching aids to support the teaching and learning activities using the discovery learning model (Cintia, et al., 2018).

2) Discovery Process

Before initiating the discovery process, the teacher rechecks the students' understanding of the problem to be solved and the tasks assigned to them. If students still don't understand, the teacher provides further explanations until the students truly grasp the problem and the tasks they will solve.

Once students understand the problem and the tasks to be solved, the teacher gives them the opportunity to formulate hypotheses for the upcoming discovery and proceeds with the discovery process. While waiting for the

discovery process to unfold, the teacher can observe how the process is progressing. If students encounter difficulties, the teacher can assist them with the information/data they need to support their discoveries.

3) Presentation of Results and Conclusion

After the discovery process is completed, the teacher leads the analysis process carried out by each student by exchanging information through discussions. Discussions involve several students who are asked to present their research findings and are then responded to by other students. Responses can take the form of questions or objections to the findings presented by the presenting students.

The purpose of the question and answer session during this discussion is to complement data by exchanging information. Other students can complete any findings that may be incomplete or inquire about the findings if they differ from the presenting students' results.

After several students present their findings, the teacher, along with all the students, formulates conclusions based on the principles and generalizations of their discoveries. Afterward, to assess students' motivation toward PJOK subjects, the researcher distributes questionnaires to understand the students' responses.

b. Observation of the Implementation of the Discovery Learning Model

During the teaching process, observations are conducted to determine the success level of implementing the discovery learning model. In the observation of the implementation of the discovery learning model in the first cycle, data collection is performed by observers filling out observation sheets for the implementation of the discovery learning model. These observation sheets serve to measure the extent to which the discovery learning model is implemented in the first cycle.

Here is a table presenting the results of the observation of the implementation of the discovery learning model in the first cycle it

can be seen in table 1:

Table 1. Result of Cycle I

No.	Observer	Percent
1	Observer 1	91.67%
2	Observer 2	91.67%
	Average	**91.67%**

From the table above, it can be seen that the percentage of teaching and learning activities using the discovery learning model has not been fully implemented.

c. Student Learning Motivation Questionnaire

Student learning motivation data were obtained from the questionnaire sheets filled out by the students. Students were asked to complete the questionnaire sheets at the end of each teaching and learning session. Based on the responses collected from the students' questionnaires, the motivation level is 65.08%.

d. Reflection

Based on the results from the observation sheets and the student questionnaires, it is revealed that the implementation of the discovery learning model has reached 91.67%, and the students' learning motivation is at 65.08%, which falls into the "sufficient" category. Therefore, this research cannot be concluded at this stage because the full implementation of the discovery learning model has not been achieved. Additionally, the students' learning motivation is considered very low and has not met the predetermined success indicators for student learning motivation.

The inability to fully implement the discovery learning model is attributed to the fact that the Physical Education and Health (PJOK) class exceeded its scheduled time. This was due to prolonged discussions during the session, which extended beyond the time allocated for the discussion.

Based on the reflection conducted, it is concluded that further research is needed in Cycle II. Cycle II is necessary because the treatment provided, which involves the discovery learning model, has not been maximally implemented. Additionally, the predetermined success indicators for student learning motivation have not been met.

Cycle II
a. Implementation
1) Preparation

In the preparation phase of implementing Cycle II of learning with the discovery learning model, the teacher introduced the topic to the students in a general and non-specific manner. This was followed by a clarification of what needs to be learned and the roles of each group member to provide more structured guidance for the students' discovery process. Additionally, the teacher encouraged the students to read all relevant references to aid their discovery process.

The preparation continued with setting up the classroom and ensuring that all necessary materials were available to support the teaching and learning activities using the discovery learning model. The seating arrangements for each student were adjusted based on the groups that had been previously determined through random selection.

2) Discovery Process

Once the discovery phase was completed, the teacher checked the students' understanding of the problems to be solved and their respective tasks. If students still had difficulties comprehending, the teacher provided further explanations until the students fully understood the problems and tasks that needed to be solved.

After the students had a clear understanding of the problems and tasks, the teacher gave them the opportunity to formulate hypotheses for their discoveries, followed by the actual discovery process. While waiting for the discovery process to take place, the teacher observed the progress and could assist students with information or data needed to support their

findings if they encountered challenges.

3) Presentation of Results and Conclusion

Following the completion of the discovery process, the teacher facilitated the analysis process carried out by each student through discussions. Several students were chosen to present their research findings, and their presentations were followed by responses from other students. These responses could include questions or objections regarding the findings presented by the student presenters.

The purpose of the Q&A session during the discussion was to enrich the data by sharing information. Other students could complement findings that may have been incomplete or inquire about discoveries that differed from those presented by their peers.

Once several students had presented their findings, the teacher, together with all the students, reached conclusions based on the principles and generalizations derived from their discoveries to ensure consistency in the results.

The teaching and learning activities using the discovery learning model concluded with the teacher expressing appreciation to the students for their successful discoveries. This gesture aimed to praise their efforts and motivate them to remain interested and motivated in future discovery-based learning.

b. Observation of the Implementation of the Discovery Learning Model

Throughout the teaching process, observations were carried out to evaluate the level of success in implementing the discovery learning model. During the observation of the implementation of the discovery learning model in Cycle II, data collection was conducted by observers filling out observation sheets related to the implementation of the discovery learning model. These observation sheets were used to assess the extent to which the discovery learning model was implemented in Cycle II

Below is the table displaying the results of the observation of the implementation of the discovery learning model in Cycle II it can be

seen in table 2:

Table 2. Result of Cycle II

No.	Observer	Percent
1	Observer 1	100%
2	Observer 2	100%
Average		**100%**

From the table above, it can be seen that the percentage of teaching and learning activities using the discovery learning method in Cycle II has been fully implemented. Therefore, the success indicators of the discovery learning model's implementation have been maximally achieved.

c. Student Learning Motivation Questionnaire

Data regarding students' motivation to learn in the subject of Physical Education was obtained from the results of questionnaires filled out by students. Students were asked to complete these questionnaires at the end of each teaching and learning session. Based on the questionnaire responses from students in Cycle II, the results indicated a percentage of 73.47%.

d. Reflection

Based on the results from the observation sheets and questionnaires, it was found that the implementation of the discovery learning model reached 100% in Cycle II. Furthermore, students' learning motivation was rated at 73.47%, falling within the "Good" category. Consequently, this research will not proceed to the next cycle, as the implementation of the discovery learning model has been carried out to its fullest extent.

Additionally, students' learning motivation is considered to have met the success indicators of student motivation, which range from 70% to 79%. To observe the differences and improvements here is students' learning motivation improvement with discovery learning can be seen at the diagram 1 of recapitulation of
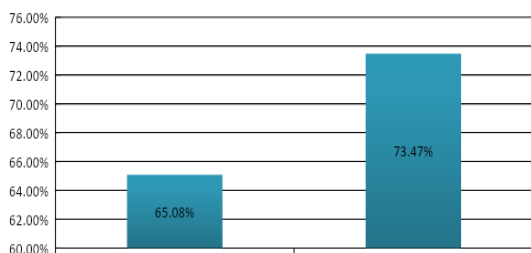
cycle I and II:

Diagram 1. Recapitulation of Cycle I and II

According to the chart above, it can be concluded that the students' learning motivation has increased from cycle I to cycle II. It started at 65.08% in cycle I and increased to 73.47% in cycle II, meeting the success indicator for learning motivation. This improvement occurred after the implementation of the discovery learning model. These findings are supported by previous studies in different subjects, such as the Indonesian language (Patandung 2017; Putri, 2017; Halim et.al., 2019; Susmiati, 2020; Winangun, 2020; Hasnan et.al., 2020; Subagio et.al., 2021).

The implementation process of the discovery learning model proceeded well and was successful, even though it was not perfect in the first cycle. The discovery learning model emphasizes learning that can increase students' interest and motivation during the learning process by encouraging active participation, such as asking questions.

Students are required to analyze the learning materials to enhance their skills and cognitive processes. Most importantly, it aims to keep students engaged in the Physical Education and Health subject. In this context, it can be observed that the discovery learning model has successfully increased students' motivation for Physical Education and Health. This is further supported by previous research regarding the improvement of learning motivation and learning outcomes through discovery learning (Darsana, 2019). This study serves as a stimulus for teachers to enhance their enthusiasm for teaching and the ability to develop and implement existing teaching models, especially the discovery learning model.

The benefits of this research are to encourage students to develop motivation in learning skills in the Physical Education subject. For teachers, it enhances the development of approaches and teaching models to improve students' motivation in learning. It is an alternative learning method that can be used by Physical Education teachers in schools. For further development, researchers recommend assessing and exploring other aspects that can be developed through the discovery learning model. The researcher consider this improvement in learning successful (Nurmiati, 2020).

Discovery Learning provides real experiences, high-level thinking, student-centered, critical and creative thinking, meaningful knowledge in life, relevance to real life, behavioral and knowledge changes. Furthermore, students' learning outcomes can improve due to high learning motivation (Mahartati 2017; Sulfemi, 2019). Advice for teachers, Being a teachers should use appropriate media and methods to make learning more meaningful and improve classroom management skills. Moreover, teachers should be able to enhance their self-confidence, especially in teaching students.

CONCLUSION

Based on the research findings and discussion in Chapter IV. The learning motivation outcomes fell into the "good" category, within the range of 70% to 79%. So, it can be concluded that there is an improvement in the Implementation of the discovery learning model on Students' Learning Motivation in Grade 6 in the Physical Education and Health subject at MI PUI Cigadog.

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