The implementation of discovery learning strategies to enhance student engagement in learning activities

Al Amin[1], Iyan Hayani[2]
[1]MAN 3 Lebak, Indonesia
[2]Ministry of Religious Affairs, Indonesia

Article Info	ABSTRACT
Keywords: Best practice Discovery learning Student engagement *Corresponding Author:* Al Amin MAN 3 Lebak Email: ala914123@gmail.com	This best practice report scrutinizes the implementation of discovery learning to enhance student engagement in learning. The discovery learning strategy was implemented through six stages: stimulation, problem statement, data collection, data processing, verification, and generalization. The strategy addresses low participation and passive learning behaviors. Results indicate significant improvements in students' activeness, critical thinking, and collaboration. Challenges, such as unfamiliarity with the approach, were mitigated through gradual implementation and careful planning. This report concludes that discovery learning fosters a dynamic classroom environment. Based on the findings, it is recommended to adopt discovery learning as an innovative teaching approach and to emphasize the importance of teacher training to support its implementation. Future research could further investigate the long-term impact of discovery learning on student outcomes.

1. INTRODUCTION

Improving the quality of education is an ongoing effort, especially in this era of globalization. Madrasas, as institutions that produce human resources, play a crucial role in enhancing educational quality. Each madrasa is expected to continually improve the quality of education so that its students excel and can compete in today's globalized world. High-quality education is not only measured by students' academic achievements but also by the learning process that nurtures creative and competitive generations. A teacher's success in teaching can be evaluated through the achievements of their students, suggesting that excellent teachers are those capable of creating innovative and creative learning experiences for their students. The quality of learning is reflected in students' creativity after the learning process and their active participation during lessons (Gultom, 2013).

Learning, by nature, is an interactive process between teachers and students, involving the active engagement of learners through various interactions and learning experiences. Student activeness is a fundamental element that significantly contributes to the success of the learning process. However, in reality, teachers often face challenges such as students' lack of activeness, passive learning behaviors, and minimal participation in classroom discussions, which hinder effective learning. To overcome such problems, discovery learning method can be utilized. According to Roestiyah (2012, p. 21), the discovery learning method offers several advantages, including:

a. Sharpening students' cognitive skills.
b. Retaining learned knowledge for a longer period.

    c.   Boosting students' enthusiasm for learning.
    d.   Developing students' self-reliance.
    e.   Increasing students' motivation.
    f.   Enhancing students' self-confidence.
    g.   Focusing on student-centered learning.

This Best Practice aims to describe the implementation of the discovery learning method to enhance the activeness of Grade XII students in learning at MAN 3 Lebak and to describe the improvement in the activeness of Grade XII students during the learning process at MAN 3 Lebak.

2.　METHOD

Description of current condition

       At MAN 3 Lebak, several teachers face challenges in engaging students actively in the classroom. Observations reveal that many students are passive during lessons, rarely ask questions, and are hesitant to participate in discussions. Such conditions hinder the achievement of learning objectives and limit students' ability to develop critical thinking and collaboration skills. In addition, grade XII students at MAN 3 Lebak, in particular, demonstrate low levels of activeness during Indonesian language lessons. Passive learning behavior and a lack of enthusiasm for participating in classroom activities are often observed. This has motivated the author to implement the discovery learning strategy as an alternative method to foster activeness and engagement among students.

Steps of Implementation

       The discovery learning strategy was implemented in the following stages:

a.　**Preparation Stage**
   o Teachers prepared lesson plans that incorporated the discovery learning method.
   o The learning objectives were adjusted to align with the strategy, emphasizing active participation and critical thinking.
   o Materials, tools, and resources required for discovery learning activities were prepared.

b.　**Implementation Stage**
    The teaching and learning process was conducted in six phases based on the discovery learning model:
   o **Stimulation**: The teacher introduced the lesson with stimulating questions or scenarios to pique students' curiosity.
   o **Problem Statement**: Students were guided to identify and articulate the problems to be solved during the lesson.
   o **Data Collection**: Students gathered information from various sources, such as textbooks, online materials, and class discussions.
   o **Data Processing**: Students analyzed and processed the collected information to find solutions or answers to the problems.
   o **Verification**: Students presented their findings and verified them through discussions or teacher feedback.
   o **Generalization**: The teacher helped students summarize the lesson and reflect on what they had learned.

c.　**Evaluation Stage**
   o Students' activeness was assessed through observation, participation in discussions, and completion of assigned tasks.
   o Feedback was provided to help students improve their engagement and learning outcomes.

3.　RESULTS AND DISCUSSION

Positive Outcomes of Discovery Learning Implementation

After implementing the discovery learning strategy, several positive outcomes were observed, highlighting the effectiveness of this approach in fostering a more dynamic and enriching learning environment:

1. **Increased Activeness**

   Students exhibited higher levels of engagement during lessons. They participated actively in classroom discussions, frequently asked insightful questions, and displayed enthusiasm in completing learning tasks. This increased activeness not only improved their understanding of the subject matter but also cultivated a more vibrant classroom atmosphere.

2. **Improved Critical Thinking Skills**

   The structured activities in discovery learning, such as data collection and analysis, allowed students to approach problems systematically. They were able to identify issues, evaluate evidence, and propose well-reasoned solutions. These activities significantly enhanced their ability to think critically and apply knowledge to real-world scenarios.

3. **Enhanced Collaboration**

   Group activities played a pivotal role in fostering collaboration among students. Working in teams required them to share ideas, divide tasks, and respect differing opinions. This collaborative atmosphere not only improved their social skills but also taught them the value of teamwork in achieving common goals.

4. **Better Retention of Knowledge**

   The hands-on and inquiry-based nature of discovery learning helped students retain information more effectively. By actively participating in the learning process, they connected new knowledge with prior experiences, resulting in deeper and longer-lasting understanding.

Challenges

While the discovery learning strategy proved beneficial, its implementation also presented some challenges. These obstacles and the solutions applied to address them are as follows:

1. **Students' Initial Hesitation**

   Some students hesitated to participate actively due to their unfamiliarity with the discovery learning method. They were accustomed to traditional teacher-centered instruction and found the shift to a student-centered approach challenging.

2. **Time Constraints**

   The discovery learning strategy often required more time than conventional teaching methods, particularly during the exploration and experimentation stages. This created challenges in covering the curriculum within the allocated time frame.

3. **Diverse Student Abilities**

   The varied learning paces and abilities of students sometimes created disparities in group activities, where more advanced learners dominated discussions while others struggled to keep up.

4. **Resource Limitations**

   Implementing discovery learning sometimes required materials or resources that were unavailable in the classroom.

5. **Assessment of Learning Outcomes**

   Assessing student performance in a discovery learning setting was more complex compared to traditional methods.

Solutions

Regarding the challenges encountered, following is the solutions.

- o The teacher addressed this issue by providing consistent encouragement and scaffolding. Small, guided activities were used to gradually introduce the method, allowing students to build confidence and adapt to the new approach.
- o Teachers tackled this issue by optimizing lesson plans to focus on essential activities that aligned with learning objectives. They also integrated discovery learning tasks into homework or independent study sessions to make the most of class time.

- o   Teachers assigned roles within groups to ensure equitable participation. For example, assigning tasks like note-taker, presenter, or question generator encouraged each student to contribute meaningfully based on their strengths.
- o   Teachers used creative alternatives, such as utilizing online tools, everyday objects, or multimedia resources, to simulate the necessary conditions for discovery learning activities.
- o   The teacher employed a combination of formative and summative assessments, including rubrics for group work, reflective journals, and individual presentations, to capture the breadth of students' learning progress.

4.   CONCLUSION

The implementation of the discovery learning strategy in Grade XII at MAN 3 Lebak successfully enhanced students' activeness during Indonesian language lessons. The method encouraged students to participate actively, think critically, and collaborate effectively, resulting in a more dynamic and engaging learning environment. Based on the findings, it is recommended that teachers are encouraged to adopt the discovery learning strategy in their teaching to foster student activeness and creativity. In addition, schools should provide training and support for teachers to implement innovative teaching strategies effectively. Furthermore, future studies can explore the long-term impact of discovery learning on students' academic achievements and personal development.

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