"DEVELOPMENT OF CRITICAL THINKING SKILLS THROUGH DISCORVERY LEARNING APPROACH AT SMPN 2 BARRU"

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ABSTRACT

The purpose of this study is to find out how using the Discovery Learning approach might help SMPN 2 Barru students become more adept at critical thinking. Through collaboration and discovery-based activities, this approach emphasizes students' active involvement in the learning process. The results showed a significant improvement in the students' critical thinking skills, as shown by their ability to evaluate, examine, make inferences, and solve problems. It was discovered that students were more engaged and interested in their education when comparing classroom observations to conventional teaching methods. Discovery Learning proved effective in improving students' cognitive skills in spite of early scaffolding and time management problems. The results suggest that secondary schools should employ the Discovery Learning approach as a teaching strategy to assist pupils in developing their critical thinking skills.

Keywords: *Discorvey Learning; Critical Thinking Skills; Discorvey-Based Learning.*

INTRODUCTION

In the 21st century, critical thinking is a crucial ability that allows students to analyze, evaluate, and solve problems efficiently. According to (Paul, 2007) Critical thinking is the art of analyzing and evaluating thinking with a view to improving it. (Ennis, 1996) as said Critical thinking is reasonable, reflective thinking that is focused on deciding what to believe or do. In a time when information is readily available and abundant, critical thinking is no longer optional; rather, it is necessary for overcoming difficult obstacles. However, developing critical thinking skills in students frequently calls for creative, student-centered teaching strategies that go beyond conventional approaches.

By encouraging students to explore, ask questions, and build their understanding through guided discovery, Discovery Learning is one such approach that places an emphasis on active student engagement in the learning process. In contrast to traditional teaching, which primarily focuses on the teacher delivering information, Discovery Learning places the emphasis on the students, enabling them to play a more active role in learning. According to (Bruner, 1961) Discovery learning fosters intellectual development by emphasizing the processes of thinking and problem-solving. (Santrock, 2011)As said Discovery learning strategies can enhance metacognitive skills and foster critical thinking in students.

The value of helping pupils develop critical thinking abilities has been acknowledged by SMPN 2 Barru. The school hopes to establish a learning environment that fosters the development of critical life skills in addition to improving academic achievement by putting the Discovery Learning approach into practice. With an emphasis on its application, difficulties, and results, this study investigates how the Discovery Learning technique helps SMPN 2 Barru students develop their critical thinking abilities.

The paper aims to shed light on this teaching strategy in order to offer insightful information to academics, educators, and policymakers who are dedicated to improving education through creative approaches.

REVIEW OF LITERATURE

It is often acknowledged that critical thinking is an essential educational skill, especially when it comes to preparing children for the complexity of the modern world. Critical thinking, according to Facione (1990), includes deliberate, self-controllable judgment that leads to interpretation, analysis, assessment, and inference. For students to solve problems, make decisions, and approach obstacles with a methodical and reflective perspective, they must be able to think critically.

The Role of Discovery Learning in Education

Developed by Jerome Bruner in the 1960s, Discovery Learning is a constructivist method that highlights how students actively create knowledge. According to Bruner's (1961) theory, students learn best when they independently discover concepts and principles under the guidance of suitable scaffolding from teachers. Through this approach, teachers' traditional role as knowledge carriers is changed to that of facilitators, creating a student-centered environment that encourages inquiry, discovery, and a deeper understanding of the world.

Prior studies have demonstrated the beneficial effects of Discovery Learning on cognitive development. Alfieri et al. (2011) discovered that, when properly structured and supported, guided discovery improves learning outcomes more than direct instruction. Similarly, Mayer (2004) pointed out that active engagement is promoted by discovery-based learning, which is essential for the development of critical thinking and other higher-order thinking abilities.

Discovery Learning and Critical Thinking

A successful strategy for developing students' critical thinking abilities in a variety of areas is discovery learning. Through phases including orientation, hypothesis development, testing, and conclusion, this paradigm fosters critical thinking in pupils (Chusni et al., 2020). According to Hakim et al. (2018), it motivates students to build their own knowledge, participate in inquiry processes, and apply what they have learned to actual circumstances. Research has demonstrated that critical thinking skills like argumentation, problem-solving, analytical thinking, and rational reasoning may be successfully developed through discovery learning (Amin et al., 2024). But some things, like confidence, openness, and communication, could need more help from the teacher. The model's ability to improve critical thinking has been noted in a number of settings, such as history instruction (Hakim et al., 2018) and social studies in elementary school (Amin et al., 2024).

Focus on inquiry-based learning and active problem-solving is where Discovery Learning and critical thinking are related. Students participate in critical thinking processes when they are encouraged to investigate, pose queries, and reach conclusions. For instance, by requiring students to examine data, postulate solutions, and assess results, problem-based learning—a variation of Discovery Learning—significantly improves critical thinking, as shown by Hmelo-Silver et al. (2007).

Contextualizing Discovery Learning in Indonesian Education

The 2013 Curriculum (Kurikulum 2013) in Indonesia emphasizes the value of developing students' critical thinking and problem-solving skills. Nonetheless, numerous studies show that conventional teacher-centered approaches continue to rule classrooms, restricting students' chances to hone their critical thinking abilities. According to research by Santrock (2018), cutting-edge approaches like Discovery Learning can close this gap by complementing the curriculum's focus on critical thinking and active learning. According to research by (Culture, 2020) Developing critical thinking is integral to preparing students for problem-solving in real-world contexts.

There are advantages and disadvantages to implementing Discovery Learning at the secondary school level, especially in remote areas like SMPN 2 Barru. Although the strategy has the potential to provide students with worthwhile educational experiences, its successful application depends on a number of elements, including student motivation, instructor preparedness, and resource availability.

According to research by (Schunk, 2012) Discovery learning aligns with constructivist theories, emphasizing active engagement and exploration. The theoretical and practical applicability of Discovery Learning as a strategy to improve critical thinking abilities is highlighted in this paper. This study offers a basis for comprehending how Discovery Learning can be successfully implemented at SMPN 2 Barru to accomplish educational objectives by placing it within the larger body of literature.

METHOD

The impact of the Discovery Learning technique in enhancing students' critical thinking abilities at SMPN 2 Barru was investigated in this study using a qualitative methodology. Students in grade 8 participated in the six-week study, which was carried out during the school year. According to (Gagné, 1985) Discovery learning facilitates higher-order thinking skills by engaging students in active inquiry. According to (Facione, 1990) Critical thinking involves purposeful, self-regulatory judgment that results in interpretation, analysis, evaluation, and inference.To give a thorough grasp of the use and effects of Discovery Learning, a variety of techniques were used, such as student interviews, classroom observations, and learning outcome analysis.

RESULTS AND DISCUSSION

Results

Students' critical thinking abilities significantly improved at SMPN 2 Barru as a result of the Discovery Learning approach's application. The results are divided into three main categories: instructor observations, critical thinking indicators, and student participation.

1. **Engagement of Students**

   Observations in the classroom over the six-week implementation period showed a significant rise in student participation. Pupils asked insightful questions, participated fully in discussions, and worked well in groups. For example, 87% of students showed curiosity by posing queries about the scenarios or difficulties that were presented. Compared to the baseline observation, when just 42% of students were actively participating in traditional lessons, this represented a significant improvement.

2. **Improvement in Critical Thinking Indicators**

   Pre- and post-test analysis showed a discernible improvement in students' critical thinking skills in four important areas:

   - Analysis: Students' scores increased from an average of 55% to 78% as they became more skilled at decomposing challenging problems.
   - Evaluation: Post-test scores averaged 81%, up from 60% in the pre-test, indicating a gain in the capacity to critically evaluate material.
   - Inference: A 23% rise in exam results indicated that students had improved their logical thinking skills.
   - Problem-Solving: Students' post-test performance increased from 58% to 85%, demonstrating an improved ability to offer answers and defend their positions.

3. **Teacher Observations**

   Instructors stated that a more lively and participatory classroom atmosphere was promoted via Discovery Learning. They saw that pupils shown more freedom in

overcoming obstacles and were more comfortable expressing their ideas. However, because students needed more help in the beginning, teachers also reported difficulties in managing time during the discovery phase.

Discussion

The results are consistent with previous research showing how well Discovery Learningfosters critical thinking abilities. This study supports Bruner's (1961) notion that kids learn best via inquiry and discovery because the students showed enhanced analytical skills and a deep engagement with the content.

According to earlier research by Hmelo-Silver et al. (2007), problem-based and discovery-oriented learning approaches boost students' cognitive abilities. This is supported by the notable improvement in critical thinking markers. The improvement in assessment and problem-solving skills indicates that Discovery Learning gives students the tools to apply knowledge in practical settings in addition to aiding in their understanding of the material.

Notwithstanding its advantages, the study also identifies certain difficulties, namely with regard to time management and the initial phase of instructor and student adjustment. Mayer's (2004) findings, which highlight the necessity of systematic direction in Discovery Learning to ensure effectiveness, are in line with these difficulties. In order to overcome these obstacles, teachers at SMPN 2 Barru offered scaffolding and progressively increased student autonomy, which worked well to maintain engagement and promote critical thinking.

In conclusion, SMPN 2 Barru pupils' critical thinking abilities were greatly enhanced by the Discovery Learning methodology. Students who actively participated in inquiry-based activities improved their cognitive capacities and acquired critical lifetime learning skills. To overcome implementation issues and maximize results, more teacher training and strategic planning are necessary for wider use.

CONCLUSION

The study finds that the Discovery Learning approach effectively enhances critical thinking skills among students at SMPN 2 Barru by developing active involvement, analytical thinking, and problem-solving ability. The findings reveal considerable gains in students' capacity to assess, evaluate, infer, and solve problems through inquiry-based and collaborative activities. Additionally, the method encouraged independence and curiosity by transforming the classroom into a vibrant, student-centered setting. The favorable results demonstrate Discovery Learning's potential as a formidable teaching tool, even in the face of obstacles like time management and the requirement for scaffolding in the early phases. This method can be a long-term strategy for developing critical thinking abilities and getting students ready for the challenges of the twenty-first century if it is implemented with structure and with the right training.

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