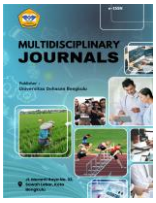

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A Library Study Of Collaborative Learning Based On Constructivism To Improve Critical Thinking Skills In Elementary School

Agnes Fibriana Kurniawati [1]
[1] Universitas Katolik Musi Charitas
[1] e-mail: agnes.kurniawati@gmail.com

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Abstract. This study aims to review the existing literature regarding the effectiveness of implementing constructivism-based collaborative learning in improving critical thinking skills in primary schools. The constructivism approach, which emphasizes learning as an active and interactive process, allows students to build their understanding through cooperation and discussion in groups. This learning method is expected to develop students' critical thinking skills, such as the ability to analyze, evaluate and construct logical arguments.This study uses the literature study method to collect and analyze various relevant previous studies. The results of the literature review show that constructivism-based collaborative learning can significantly improve elementary school students' critical thinking skills. Students who engage in collaborative learning show better ability in understanding concepts, solving problems, and thinking critically compared to students who learn through traditional methods. However, the implementation of this method also faces some challenges, including the need for teacher training, limited resources, and different levels of student engagement. Nonetheless, with adequate support from schools and policy makers, constructivism-based collaborative learning has great potential to be integrated in the primary school curriculum in Indonesia. This research provides practical recommendations for educators and policy makers to effectively implement constructivism-based collaborative learning. Thus, it is expected to create a learning environment that encourages the development of critical thinking skills, which are crucial for students' academic success and future life.

Keywords: *Collaborative Learning, Constructivism, Critical Thinking Skills, Primary School, Literature Review*

INTRODUCTION

In the current era of globalization, critical thinking skills are one of the important competencies that students must have. These skills not only support academic ability, but also prepare students to face complex challenges in the real world. Basic education, as the foundation of learning, has a very crucial role in the development of critical thinking skills. Therefore, it is important for educators to implement effective learning strategies to develop these skills early on.

One approach that has proven effective in improving critical thinking skills is constructivism-based collaborative learning. Constructivism theory, proposed by Jean Piaget and Lev Vygotsky, emphasizes that learning is an active process in which students construct new knowledge based on experience and social interaction. Through this approach, students are invited to work together in groups, discuss and solve problems collaboratively, so that they can develop a deeper and critical understanding of the material being studied.

Constructivism-based collaborative learning in primary schools not only allows students to share knowledge with each other, but also teaches them to think critically and reflectively. In a collaborative learning environment, students are encouraged to ask questions, analyze information, and evaluate different angles.

Collaborative learning emphasizes social interaction and the co-construction of knowledge through discussion, collaboration and shared reflection. Meanwhile, constructivism theory emphasizes the active role of students in building their own understanding through meaningful learning experiences. The combination of these two approaches forms a strong theoretical foundation for improving the quality of education, especially in terms of developing critical thinking skills.

Critical thinking skills, which include the ability to analyze information, evaluate arguments, and make decisions based on available evidence, are core competencies required in facing complex

challenges in the modern world. Constructivism-based collaborative learning aims to develop these skills by providing opportunities for students to actively participate in the learning process, share ideas and solve problems together.

In the primary school context, the implementation of constructivism collaborative learning offers the potential to broaden students' learning experiences through structured and meaningful interactions with peers. By discussing and working together in groups, students not only hone critical thinking skills but also build important social skills such as communication, cooperation and leadership abilities.

This study aims to review the existing literature regarding the implementation of constructivism-based collaborative learning and how this approach can improve critical thinking skills in elementary schools. By understanding the effectiveness and challenges faced in the implementation of this method, it is hoped that it can provide insights for educators and policy makers in designing more effective learning strategies that suit the needs of students. In addition, this study also aims to identify best practices that can be adopted and adapted to the Indonesian educational context, in order to create a critical, creative and future-ready young generation.

LITERATURE REVIEW

Constructivism

Constructivism is a learning theory that emphasizes that knowledge is constructed by individuals through interaction with the environment and their own experiences. Jean Piaget and Lev Vygotsky are the two main figures underlying this theory. Piaget emphasized that learning is an active process where children construct their own knowledge based on interactions with the surrounding world. He introduced important concepts such as assimilation and accommodation in the learning process.

Meanwhile, Vygotsky highlighted the importance of social interaction in cognitive development. He introduced the concept of Zone of Proximal Development (ZPD) which states that children can reach higher levels of understanding with the help of more competent others. Social interaction, collaboration and dialog are key elements in learning according to Vygotsky.

Collaborative Learning

Collaborative learning is an educational approach where students work together in small groups to achieve shared learning goals. In collaborative learning, students are encouraged to discuss, exchange ideas and help each other solve problems. This approach not only improves understanding of the subject matter, but also develops social skills and the ability to work in teams. Constructivism-based collaborative learning combines constructivist principles with collaborative practice. In this context, students are actively involved in the learning process, building knowledge through interactions with peers, and developing deeper understanding through discussion and collaboration. This learning emphasizes the importance of direct experience and active participation in the formation of knowledge.

Critical Thinking Skills

Thinking skills include the ability to analyze, articulate and logically structure arguments. Ennis (1985) defines critical thinking as reflective and reasoned thinking, which focuses on deciding what to believe or do. These skills include the ability to identify problems, collect and synthesize evidence, and make decisions based on sound reasoning.

In the educational context, critical thinking is considered an important competency that must be developed from an early age. Constructivism-based collaborative learning provides an environment that supports the development of these skills, as students engage in discussion, analysis, and reflection together. Interaction with peers and guidance from teachers helps students to think more deeply and critically about the material being studied.

The Relationship between Constructivism, Collaborative Learning, and Critical Thinking Skills Constructivism theory provides a strong foundation for understanding how students learn and develop critical thinking skills. Collaborative learning, as a practical application of constructivism, creates an interactive and supportive learning environment. Through working together in groups, students are encouraged to ask questions, test hypotheses, and convey information critically. This process naturally develops critical thinking skills.

METHODS

This research uses the literature study method to review the existing literature regarding constructivism-based collaborative learning and how this approach can improve critical thinking skills in elementary schools. The literature study method was chosen because it allows researchers to collect, analyze and synthesize findings from various relevant studies in order to gain an in-depth understanding of the topic under study.

RESULTS AND DISCUSSION

Result

This research reviews various literature that discusses the implementation of constructivism-based collaborative learning in elementary schools and its impact on students' critical thinking skills. The following are the main findings from this literature study:

1. Improved Critical Thinking Skills
   Most research shows that constructivism-based collaborative learning significantly improves elementary school students' critical thinking skills. Students who engage in this method demonstrate better abilities in analyzing information, evaluating arguments, and making logical decisions.
   In collaborative learning, students engage in in-depth discussions, exchange ideas, and provide feedback to each other, all of which contribute to the development of critical thinking skills.
2. Social Skills Development
   Collaborative learning also helps students develop social skills such as communication, cooperation, and empathy. Through interactions in groups, students learn to respect other people's opinions and work effectively in teams.
   Research shows that students who participate in collaborative learning tend to have more positive attitudes toward learning and are more motivated to achieve shared goals.Teacher
3. Role
   The success of implementing constructivism-based collaborative learning is very dependent on the teacher's role as a facilitator. Teachers need to create a supportive learning environment, guide the discussion process, and provide the necessary resources.
   Research shows that teachers trained in constructivist and collaborative methods are able to manage the classroom more effectively and encourage active participation from all students.
4. Implementation Challenges
   Some of the challenges faced in implementing this method include limited time, resources, and student readiness. Students who are not used to collaborative learning may need time to adjust. In addition, individual differences in critical thinking abilities also pose a challenge, because students develop at different rates.

Discussion

The findings of this research indicate that constructivism-based collaborative learning has great potential to improve students' critical thinking skills in elementary schools. This method allows students to learn actively and interactively, which is in line with the principles of constructivism. Here are some practical implications of these findings:

1. Interactive Learning Design
   Constructivism-based collaborative learning requires learning designs that allow interaction between students. Activities such as group discussions, collaborative projects, and case studies can be used to encourage students to think critically and reflectively. Teachers must ensure that each student is actively involved in the learning process and makes meaningful contributions in the group.
2. Teacher Professional Training and Development
   Teacher training is very important for the successful implementation of constructivism-based collaborative learning. Teachers need to be trained in facilitation strategies, classroom management, and evaluation techniques that are consistent with the constructivist approach. Continuous professional development can help teachers update their skills and stay up-to-date with the latest learning methods.
3. Differentiation Approach
   Given individual differences in critical thinking abilities, a differentiation approach is necessary to meet each student's learning needs. Teachers can use a variety of teaching strategies to ensure all

students get the maximum benefit from collaborative learning.Formative assessments can be used to identify individual student needs and provide appropriate support.

4. Technology Use

   Technology can be an effective tool to support constructivism-based collaborative learning. Digital platforms can be used to facilitate online discussions, resource sharing, and project collaboration. The use of technology also allows students to access information more widely and develop digital skills that are important in the modern era.

CONCLUSION

Constructivism-based collaborative learning offers an effective approach to improving students' critical thinking skills in primary schools. With the right support from teachers and a conducive learning environment, this method can help students develop critical thinking skills, social skills and a positive attitude towards learning.

Challenges in implementation can be overcome with adequate teacher training, interactive learning design and the use of technology. This research provides a strong foundation for educators and policy makers to integrate constructivism-based collaborative learning in the primary school curriculum.

LIMITATION

Based on the results of the research on constructivism-based collaborative learning strategies to improve critical thinking skills in elementary schools, there are several suggestions that can be given for further implementation:

1. Teacher Training: Teachers need to get continuous training on the implementation of constructivism-based collaborative learning strategy. This training should include facilitation techniques, classroom management and how to design learning activities that encourage active interaction and critical thinking.
2. Curriculum Planning and Adjustment: The primary school curriculum should be adjusted to make room for the implementation of constructivism-based collaborative strategies. This includes adjusting subject matter, allocating sufficient time for group activities, and using evaluation methods that support the development of critical thinking skills.
3. Providing Individualized Support: Teachers need to pay attention to the different abilities and learning speeds of students in the group. Providing individualized support and task differentiation can help ensure that all students benefit from this learning strategy.
4. Use of Technology: Educational technology can be utilized to support collaborative learning. Digital platforms that enable online collaboration and access to rich learning resources can increase the effectiveness of this strategy.

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