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Integration Of Constructivism In Project Learning At Elementary School Level

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ABSTRACT

This study aims to investigate the role of constructivism philosophy in the implementation of Project-Based Learning (PjBL) model at primary school level. Currently, many of the teaching methods used are still conventional, leaving less room for students to be active in constructing their knowledge. The method used in this research is descriptive qualitative with a literature study approach, which analyzes various sources to deeply understand how constructivism is applied in PjBL. The results show that constructivism changes the perspective of education by making students the main actors in the learning process. The PjBL model provides real opportunities for students to not only receive information, but also to construct knowledge through direct experience, exploration, and interaction with their peers. This research also found that the role of the teacher changes from being a conveyor of information to a facilitator who creates a learning atmosphere that supports active learning. The main contribution of this research is an in-depth explanation of the relationship between constructivism and PjBL in primary schools. This model is proven to be effective in promoting creativity, critical thinking and learning independence among students. With a student-centered approach, they can develop process skills, collaboration and practical problem-solving abilities.

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INTRODUCTION

Currently, education methods in elementary schools are still inefficient. Most teachers only deliver material without involving students directly. This makes it difficult for children to improve their independent thinking and creativity. The Project-Based Learning (PjBL) model is a modern educational approach that encourages active involvement from students in learning activities. This method has a number of key features, where students are divided into groups to work together to complete a project, the project can be a product or activity agreed upon by the teacher and students to develop practical skills and analytical abilities, and finally, students play an active role in designing, investigating and leading their own learning process. The advantages of the PjBL model are that it gives students the opportunity to learn

Doi: 10.54209/edumaniora.v4i01.87

Pages : 0-15

independently, improves cooperation skills, prepares them to face challenges in the real world, and increases self-confidence and motivation to learn. The role of the teacher transforms into a facilitator who guides students, helping them to identify knowledge through direct experience in accordance with the philosophy of constructivism. The ultimate goal of this model is to improve the quality of performance of educators and learners, with an emphasis on developing soft skills that are needed in education.

An effective teaching and learning process requires students to be actively involved in the development of their knowledge. Based on the Regulation of the Minister of National Education Number 22 of 2006, ideal learning is an approach that makes students the main focus of learning activities.

One of the effective approaches to achieve this goal is through the Project Based Learning (PJBL) method. This method is characterized by encouraging students to think critically and independently through various research and problem-solving activities. In its implementation, PjBL is divided into three main stages: planning, creating, and processing. With this approach, students do not just passively receive information, but actively construct their own understanding by engaging in real tasks that reflect the complexity of the real world. By providing relevant and meaningful learning experiences, students can hone competencies that are useful in a variety of contexts. A well-organized learning atmosphere through authentic tasks will encourage students to explore, investigate and produce tangible products. This allows them not only to understand concepts, but also to develop critical thinking and innovation skills. Therefore, Project-Based Learning is not just an educational method, but a holistic approach that equips students to face complex challenges in everyday life (Mutuwally, 2021).

Project-based learning methods have a solid foundation in the theory of constructivism. At its core, this approach believes that people can independently develop their knowledge through interaction and personal experience. The central idea of constructivism emphasizes that learners are not just passive recipients of information, but active individuals who process and structure their own understanding. This process takes place through a series of activities that allow them to interact, exchange ideas, and expand their critical thinking.

In a study conducted by Sugrah (2020), it was stated that constructivism is a new perspective on how humans learn and understand their surroundings. Basically, learning is not just receiving information directly, but rather an active process of constructing knowledge based on existing experiences and understanding. In this approach, students are not seen as empty places ready to be filled with information. Instead, they act as active participants who process new information by referring to their existing knowledge. The basic principles of constructivism:

1. Knowledge is self-constructed by students
2. Learning depends on personal experience and context
3. Each individual has a unique way of understanding information

This theory asserts that education is an ongoing process, in which individuals independently construct understanding through interaction with the environment and their personal experiences. The constructivism approach encourages educators to create a learning environment that allows students to actively engage, think critically, and discover their own knowledge.

Each individual has a different method of understanding the world around them. Constructivism views learning as a personal process, where a person proactively forms understanding based on their experiences and perceptions. Core Thoughts:

1. Knowledge is personal and dynamic
2. Each new experience changes previous understanding.
3. Learning is a continuous effort to understand reality.

Doi: 10.54209/edumaniora.v4i01.87

Pages : 0-15

In the learning process, students do not simply receive raw information. They process new information by linking it to existing knowledge, creating their own models of understanding. For example, when students learn something new, they do not simply memorize it, but try to understand its meaning, relate it to previous experiences, and form personal interpretations. Constructivism is not about "rediscovering", but about understanding the process, encouraging curiosity, and developing critical thinking skills. This approach invites students to be active, creative, and independent in building their knowledge.

Constructivism in learning is a change in the educational paradigm. This approach introduces a new way in the didactic process, where students are placed as the main focus in learning (Tishana et al., 2023). The role of the teacher changes from merely conveying information to being a facilitator, who helps students build understanding through practical experiences and social interactions. In this framework, each person is considered to have unique abilities to develop their own knowledge, with the teacher tasked with creating a learning atmosphere that facilitates autonomy, creativity, and critical thinking. The basic principle of this approach lies in the belief that knowledge is not only transferred, but is actively shaped by the learner. The learning process becomes a personal journey, where students digest new information, connect it to existing knowledge, and create relevant meaning. Teachers play an important role in designing challenging, contextual, and meaningful learning experiences, allowing students to discover, explore, and construct their own understanding (Mones et al., 202).

The change in the role of the teacher from "information provider" to "learning guide" creates opportunities for a more humane and dignified education. The main goal is to help students develop their potential as individuals, encouraging the courage to ask questions, investigate, and develop knowledge through dialogue, reflection, and personal development. Thus, constructivism is more than just a teaching method; it is an educational philosophy that places the individual as an active subject in his or her learning process.

The constructivist approach to project-based learning provides transformational opportunities for students to construct knowledge independently. This method supports students through a series of steps. The first step is active exploration where students design projects according to their interests and local contexts, and identify real issues around them. The second step is the process of knowledge construction, where students gather information through direct observation, then analyze the data with teacher support, and then relate the findings to their previous knowledge. The third step is reflection and reconstruction, where students draw conclusions from practical experiences, develop metacognitive skills, and build personal understanding of the concepts learned. Through real projects, students do not just receive information passively, but actively construct knowledge, develop critical thinking skills, and find meaning in learning independently.

This study aims to describe the implementation of Project Based Learning (PBL) from a constructivist philosophy perspective. In this description, the basic theories and principles of constructivist philosophy will be discussed as the basis for implementing the PBL model. Understanding these theories and principles is crucial for developing an effective PBL model. The learning process in the PBL model is carried out by considering the constructivist perspective. With a constructivist approach in PBL, it is expected that the objectives can be realized both theoretically and practically. Theoretical objectives include an understanding of the role of constructivist philosophy in the PBL model, while practical objectives focus on technical explanations related to the implementation of the PBL model by applying constructivist principles in the learning process.

Doi: 10.54209/edumaniora.v4i01.87

Pages : 0-15

METHOD

In the study entitled "The Role of Constructivism Philosophy in Project-Based Learning Models in Elementary Schools", the researcher applied a descriptive qualitative approach. Based on Sugiyono's opinion (2013), the qualitative method is an approach used in natural and real conditions, with researchers serving as the main instrument in data collection. Various techniques are used simultaneously to collect information, then analysis is carried out from field data towards more general conclusions. The authenticity of the situation being observed is maintained. The purpose of this study is to present a comprehensive picture of existing social conditions, compare various events from different social contexts, or look for patterns of relationships between different elements in related literature. This provides an opportunity to find new theories and hypotheses.

Literature study was conducted to gain a comprehensive understanding of various perspectives and scientific research related to the role of constructivism philosophy in project-based learning models at the elementary school level. Through the search and analysis of relevant literature, this study aims to reveal how constructivism philosophy plays a role in the learning model applied in elementary schools.

RESULTS AND DISCUSSION

Constructivism is a philosophical approach that views knowledge as something actively created by humans. From this perspective, the learning process is not just about receiving information without acting, but is a dynamic interaction in which individuals construct their understanding through personal experiences and interactions. Each individual has their own way of processing and understanding the information they receive. Learning is not only based on the transfer of knowledge by teachers, but rather on the ability of students to analyze, interpret, and create meaning from the material they learn. Humans are considered active entities that are of course bound by their biological and psychological experiences. Everyone has a different internal way of absorbing, processing, and constructing knowledge. This shows that learning is a personal process and is greatly influenced by the unique background and context of each individual. In the world of education, the constructivist approach encourages students not only to receive information, but to actively process, analyze, and provide personal interpretations of the material they learn. The curriculum is designed to create learning experiences that allow students to develop critical and constructive thinking skills (Putri & Desyandri, 2023). Thus, constructivism is more than just an educational theory, but a learning philosophy that makes students active creators of meaning, not just passive recipients of information (Mariska & Khobir, 2024).

Piaget and Vygotsky played a major role in understanding how human knowledge is constructed. Both provided different but complementary views on how a person develops understanding through social experiences and interactions with the environment. Piaget focused on discovery as the primary method of learning, where each individual actively develops knowledge through exploration and direct interaction with the world around them. Each new experience provides an opportunity for individuals to correct and enrich their cognitive structures, through the processes of assimilation and accommodation. On the other hand, Vygotsky criticized Piaget's overemphasis on internal aspects. He stated that cognitive development cannot be separated from the social, cultural, and historical contexts that surround it. Language serves as a primary psychological tool that not only allows humans to understand the environment, but also helps them create meaning from the social interactions that occur.

Constructivism views knowledge as the result of an individual's mental processes that are active and influenced by social context. Learners do not only receive information passively, but also actively develop understanding based on previous experiences and knowledge. Each

individual brings a unique background of knowledge, influencing how they interpret new information (Lukman et al., 2024).

In the constructivist view, the learning process is seen as an ongoing negotiation between existing mental schemas and new experiences. When students are confronted with information that is different from their understanding, they will carry out cognitive reconstruction, either by adjusting old understandings or forming new concepts of knowledge.

The role of educators in this framework has undergone significant changes. Educators are no longer the only source of knowledge, but rather facilitators who create a learning atmosphere that supports exploration, investigation, and knowledge formation. The main task of educators is to recognize the differences of each student, explore existing knowledge, and provide the necessary support.

The application of constructivism in education requires a holistic approach. Educators are required to design meaningful learning experiences, encourage social interaction, provide time for reflection, and respect students' various ways of thinking. In addition, assessment also shifts from simply assessing results to understanding how knowledge is constructed. The main challenge in this approach lies in the complexity of the individual learning process. Each student has a different speed and way of building understanding. Educators need to be sensitive to these differences, not assume that each student's understanding is the same, and provide support that is appropriate to each person's needs. Ultimately, constructivism offers an educational perspective that positions students as active actors, rather than passive objects in the process of knowledge transfer. This approach acknowledges the complexity of the human learning process, appreciates the uniqueness of each individual, and encourages the development of critical, creative, and reflective thinking skills.

Learning in constructivist theory focuses more on learning through experience, namely learning obtained from the experiences of the students themselves through human adaptation based on real experiences such as discussing with classmates or carrying out practicums that lead to the formulation of new ideas and the development of fresh concepts. Therefore, teaching and educational activities are not centered on educators but on students. Some important points in constructivist learning include: 1) concrete learning in a relevant context; 2) learning process for students; 3) learning based on social experience; 4) learning carried out to strengthen student experience.

The constructivist perspective considers students in elementary schools as individuals who have the ability to grow independently. This independence can be obtained through learning experiences that provide support for their growth and development. Elementary schools that have a positive atmosphere usually involve assistance from teachers and friends, where the role of the teacher is to act as a facilitator for students in the learning process (Subekti & Verrysaputro, 2024).

Project Based Learning (PjBL) model is one of the ideal approaches to be applied at the elementary school level. In this approach, teachers not only function as sources of information, but also as supporters who help students in the learning process. With a supportive educational environment, students can learn in a more real and practical way. A good atmosphere in elementary schools will offer the necessary support to increase students' curiosity.

Constructivism also encourages elementary schools to become places that help students value themselves as independent learners (Rahayu, 2022). The PjBL model acts as a tool to invite students to work together in groups, so that they can work on real and relevant projects. In the context of PjBL, the teacher functions as a facilitator, while students are the focus of learning. Teachers create an interesting learning environment, while students are given opportunities to learn in creative and collaborative ways. Student creativity in elementary

schools can develop through various experiments involving analysis, reflection, and problem solving. The Project-Based Learning Model offers an effective alternative in elementary school learning because it helps students improve their process skills. The collaborative aspect of PjBL facilitates solution mapping, sharing of responsibilities, and more informed decision making among students.

Although constructivism and PjBL are two different ideas, both can collaborate very effectively at the elementary school level. Constructivism acts as the foundation or essence in the application of the PjBL model, providing the necessary impetus for the learning process. On the other hand, PjBL offers a concrete way to carry out activities that pay attention to students' independence in learning. In this situation, teachers and students function as part of a process that applies constructivist principles and follows the steps of PjBL. Constructivism encourages teachers and students in elementary schools to see each other as individuals who need each other. The steps of PjBL direct teachers and students to follow a series of organized project stages. In this context, teachers need students to support the learning process, while students need teachers to get a structured and independent learning experience. The existence of teachers as learning facilitators is very important in elementary schools, because it helps students create a learning environment that supports their activities. The existence of students in groups also motivates teachers to apply innovations in fun and challenging learning. Teachers will receive recognition through various positive reactions from students who carry out projects in a meaningful way.

The interaction between teachers and students at the elementary school level is located on the spectrum of constructivist learning, where each party can find many new things as reflections and solutions to improve their abilities. Thus, the collaboration between teachers and students in the PjBL model not only enriches the learning experience, but also forms social and academic skills that are important for students' future development. Through this approach, students in elementary schools can learn in a more enjoyable and meaningful way, so that they are better prepared to face challenges in the wider world.

CONCLUSION

Constructivism is a philosophical approach in education that is essential to changing the way we view the learning and teaching process. In this view, students are considered as individuals who are active in creating knowledge, relying on personal experiences and social interactions, rather than just passive recipients of information. This approach appreciates the uniqueness of each individual in building understanding, by highlighting the dynamic process in which students proactively process, interpret, and give meaning to the material they learn. The Project-Based Learning (PjBL) model is a real example of the implementation of the constructivism philosophy in the world of education. With this approach, students are encouraged to participate directly in the learning process through the creation of real projects, which require critical thinking skills, creativity, and collaboration. PjBL is not just a teaching technique, but an educational strategy that changes the learning experience to be more meaningful, relevant, and in accordance with real-world challenges.

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