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The Influence of Using Project Based Learning Model on Students' Learning Motivation in Science Subjects for Grade V Elementary School

Elisabeth Purba[1], Septilicia Purba[2], Meikardo Samuel Prayuda[3]

[1,2,3] Universitas Katolik Santo Thomas, Medan, Indonesia

Corresponding Author:

elisabethpurba@gmail.com

Abstract

This study aims to analyze the effect of the use of the Project Based Learning (PjBL) learning model on students' learning motivation in Natural Sciences (IPA) subjects in grade V of elementary schools located on Jalan Mapilindo Gang Bintara No. 5, Medan. The PjBL model was chosen because of its innovative approach in increasing student involvement through projects that require creativity, problem solving, and collaboration. In this study, a qualitative approach was used with observation and interview methods to collect data from students and documentation that supports the research findings. The results of the study showed that the implementation of the PjBL model contributed significantly to increasing students' learning motivation. Students were more enthusiastic in participating in learning, more active in discussions, and more enthusiastic in completing the project tasks given. This model also helps students develop critical and systematic thinking skills in understanding science concepts. However, challenges in the implementation of PjBL are still found, such as limited resources and teacher readiness in managing project-based learning. The conclusion of this study confirms that PjBL is an effective learning model in increasing elementary school students' learning motivation, especially in science subjects. Therefore, it is expected that the results of this study can be a reference for educators and policy makers in designing more innovative and interesting learning strategies for students. Thus, the use of PjBL in science learning at the elementary school level can continue to be developed to improve the overall quality of education.

Keywords

Project Based Learning; Learning Motivation; Natural Sciences; Elementary School

Introduction

This project-based learning design (PBL) has shown relevance and effectiveness in increasing student involvement in the teaching and learning process, especially in elementary school science lessons. Previous research shows that PBL is effective in increasing a child's inspiration and interest in science learning in a more interactive and real-world relevant way.

PBL supports students in developing children's critical thinking, participation, and solving problems in teaching and learning and then linking them to a child's real world.

Based on previous research, both studies concluded that student motivation in learning has a significant influence on science learning achievement in elementary schools. The first study showed that student motivation in learning has an influence of 48.1% on science learning achievement. Student motivation in learning is an inner drive or reason that drives and directs learning behavior, and can be improved through various indicators such as duration of activities, frequency of activities, perseverance, and level of aspiration. Student learning achievement can be seen from the value of the science subject formative test (Hamdu and Agustina 2011).

Meanwhile, the second study using meta-analysis found that the project-based learning model can also significantly improve students' learning outcomes and motivation in science subjects. This model allows students to learn constructively with a research-based approach, increase their creativity, and increase their responsibility, as well as improve their critical thinking skills (Fahrezi et al. 2020).

Therefore, in this context, the PJBL Learning Model can be considered a relevant solution to overcome the problem of low student motivation in learning in elementary schools. PJBL provides project-oriented learning, where students can develop children's motivation in learning individually by using project-centered learning and it can be concluded that the use of project-based learning design and student motivation in learning play an important role in increasing student values in science subjects in elementary schools. These two components can serve as references for more innovative and efficient learning approaches that will improve student learning outcomes.

The quality of human resources and development depend on education. Education in the 21st century focuses on improving students' intelligence by teaching them how to solve problems around them. Developing the teaching and learning process is one of the main strategies to improve the quality of education because it implies the relationship between teachers and students. In this situation, the involvement of an educator is very important in implementing meaningful learning designs, character-oriented, and focused on developing 21st century skills. One of the skills that a teacher must have is the ability to develop meaningful learning designs.

Project-Based Learning/PJBL is an innovative learning design that emphasizes situational learning through complex work that produces real products. In PJBL, students are involved in projects that require creativity, problem solving, and collaboration. By combining science subject matter with this PJBL model, students can obtain a deeper and more relevant learning study with the real world. Therefore, this study aims to find out how studying PJBL learning designs can affect students' interest in science learning in elementary schools. From the results of this study, we hope that it can help educators and policy makers create a learning approach that is superior and more interesting for students.

Learning motivation is what drives behavior towards learning goals. Because motivation is a complex issue that depends not only on what you want to do, but also on the accuracy and behavior of the individual. Learning motivation is the desire of an individual to achieve certain goals (Margareth 2017) (Emda 2018), Children who are motivated to learn are children who are characterized as more active in conducting experiments and asking about

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things they want to know during experiments (Andriani and Rasto 2019), Learning motivation is the whole action of both emotional or personal states of individuals in students that arise in the form of a learning activity, have responsibility for the sustainability of KBM and provide direction to KBM in order to achieve a goal (Nganjuk and Wahyuni 2023).

So, in this new learning motivation, the overall psychological suggestion in students not only starts, but also supports and guides their learning efforts. This suggestion allows students to be actively involved in student KBM. Thus, learning motivation becomes an essential catalyst in the educational process, ensuring that students remain focused and enthusiastic in pursuing their academic goals.

The Project Based Learning (PjBL) model is an active learning that links technology with everyday life through project activities and creating works. The PjBL model involves students independently to improve critical thinking and thinking power (S. Ida Kholida 2020). An educator has a role as a facilitator and evaluator for the results of products that have been produced by students. Project learning provides an opportunity for students to design assignments and obtain information that can later be implemented in everyday life. Project learning helps students gain a lot of experience, knowledge, skills and attitudes. Student motivation in teaching and learning can be increased through project-based learning (Handayani 2020), (Riza, Kartono, and Susilaningsiha 2020).

From the Definition of PjBL put forward by several experts above, it is concluded that PjBL is an active learning activity carried out with project activities that can make students produce a work. PjBL provides access or opportunities for students to design their own assignments and seek information to be implemented in projects and everyday life. PjBL makes students think more critically and improves their problem-solving skills in project activities.

Methods

The research was conducted at Jalan Mapilindo Gang Bintara NO. 5. Medan Timur District, Medan City, North Sumatra. This research is included in research that uses a qualitative approach. This study takes data in the form of, primary data, namely data taken directly from the research subjects, namely 5th grade elementary school children through interviews and direct observation. Secondary data, namely data taken by researchers through documentation during the research. The data sources produced in this study were 5th grade elementary school children at Jalan Mapilindo Gang Bintara NO. 5. Medan Timur District, Medan City, North Sumatra. Several experts have put forward the definition of Qualitative Research, (Murdiyanto 2020) defines qualitative research as a procedure for investigating social phenomena and human problems. Qualitative research is also defined as a strategy for finding meaning, understanding, concepts, characteristics, symptoms, symbols or descriptions of phenomena, with a focus on using several methods, this method is natural and holistic, prioritizing quality and presented narratively (Dr. Umar Sidiq, M.Ag Dr. Moh. Miftachul Choiri 2019), (Hafsiah Yakin 2023). So, it can be concluded that qualitative research is a method or technique that is narrative in nature and is presented descriptively in scientific research to explain or describe the meaning of certain phenomena, situations, or symptoms being studied.

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In this case, the researcher conducted direct observations at the school and also conducted interviews with parents of students. Observations were carried out by observing field conditions directly, namely when students were learning face-to-face. Interviews were conducted to collect data and find problems in the research process. Several criteria for student learning motivation are by categorizing each variable, sub-variable and indicator. The subjects of this study were children who were on Jalan Mapilindo Gang Bintara No. 5.

Discussion

The results of the study from field observations showed that there was an increase in children's learning motivation when the study was conducted using the learning model. In this study, the learning model applied was the Project Based Learning model which is expected to increase students' learning motivation in science learning. The advantages of this model are that students can gain more critical thinking, and conduct analysis that accustoms children to think systematically in solving a problem. The results of the researcher's interview research involved 5 children as samples to be given questions related to the Project Based Learning learning model presented by the researcher in increasing the children's learning motivation. The researcher presented 7 lists of questions to be asked to students. In conveying these questions, the researcher did not forget to ask the child's name and class.

From the first sample, researchers can conclude that learning with the Project-based learning method is more fun, because with this method children can work together with their friends. Children consider learning more interesting and more effective than learning individually or with conventional methods such as just writing. Children feel more comfortable and motivated when learning with their friends. Children say they can better understand learning materials through projects, this method is considered not boring and increases their curiosity to find out more about the topics being studied. However, there are also challenges in project-based learning, such as difficulty in determining themes and attaching pictures, students still consider it a positive experience. They have a desire to use learning with this method in the future, indicating that the benefits felt outweigh the difficulties faced. This indicates that project-based learning can be an effective alternative to increase student involvement in the learning process.

From the second sample, researchers can conclude that children consider this method more interesting, not boring, and provides a different learning experience from conventional methods that only focus on books. Children feel that previous learning experiences may be monotonous or less interesting. Project-based learning methods offer more flexible variations and interactions, so that students feel more interested and motivated in learning. In addition, other factors are also important, where children have the opportunity to collaborate with their friends. Although children admit that project-based learning can be challenging, they still consider it a preferred method compared to conventional methods that only use books. Children's desire to return to using project-based learning methods in the future shows that the experience of learning using this project method has shaped their learning options.

From the third sample, researchers can conclude that this study has a positive view of project-based learning. Students consider this method more fun and effective, especially because it provides direct learning experiences and better understanding. Students also emphasize the benefits of learning with friends, which increases interest in the learning process.

Although students consider project-based learning more fun and easier to understand, students also admit that teacher explanations are also important in learning. This shows that students still need the role of a teacher as a facilitator in learning. Students' desire to return to using project-based learning methods in the future shows that direct learning experiences with this project method have given them choices about their own learning methods.

In the first sample, it was found that Project based learning received a positive view of the learning process. Project based learning attracts children's interest, this is evidenced by the behavior of students who are more active in the learning process. They feel that project-based learning is an interesting and not boring method by giving them a direct learning experience which is certainly different from conventional learning methods. This was also found in the next sample. This sample explains that project-based learning is one of the effective and enjoyable learning methods because they can better understand learning by providing direct learning experiences.

While in other samples, it was found that social factors also greatly influence their learning process, this allows them to interact and learn more with their peers so that they can increase their learning motivation. In contrast to some of the samples above, other samples actually consider project-based learning to be a bit troublesome, but this is a challenge for them. They think that learning by working together with friends will be easier. Thus, it can be concluded that with creative learning and involving students directly, Project based learning can be an effective learning model in increasing student learning motivation.

Conclusion

Based on the results of the study, a positive influence was obtained in the use of Project based learning on students' learning motivation. This was proven during direct interview observations. This shows that project-based learning has an important influence on students' learning motivation in science subjects in elementary school. The influence of project-based learning can be seen from the results of interviews conducted with students. Project based learning affects students' learning motivation, supported by factors in this project-based learning, namely that students are more active in learning and working together with their friends. The inhibiting factor is that some students feel that project-based learning is a little difficult. Based on the results of the study, it can be concluded that the project-based learning model has a positive effect on increasing students' learning motivation.

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