

# LEARNING EFFECTIVENESS USING THE PROJECT BASED LEARNING (PjBL) MODEL IN ELEMENTARY SCHOOLS

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**Abstract:** This model emphasizes students working together to address a problem, ultimately resulting in the development of a product that showcases their abilities. The approach employed in this study is a systematic literature review (SLR). The research involved gathering various articles connected to the effect of the PjBL model in elementary school education. The literature study was carried out on national journal articles indexed by SINTA which were accessed through *google scholar* with a publication time span of the last 4 years. The results obtained stated that the PjBL model was effective for teaching in elementary schools where the PjBL model was declared effective in stimulating critical thinking skills in students and increasing learning motivation, besides that it was also useful for increasing learning interest and learning result of elementary school students.

**Keywords:** *Project Based Learning, Learning Interest, Learning Result*

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## INTRODUCTION

The world of education is currently undergoing a significant transformation. The advancement of technology and information has led to swift transformations that then change the way humans learn and teach. Educators as holders of a very important role are required to be competent to foster an engaging and delightful learning environment and to be capable of offering a more impactful learning experience for students. Educators are necessary to design a captivating and demanding learning environment. In this context, there needs to be an optimization of educator innovation when conducting teaching and learning activities. Educators can apply a learning model that is quite significant with the competencies needed in the 21<sup>st</sup> century, these competencies, referred to as the 4Cs, include skills in analytical thinking, innovative thinking, effective communication, and teamwork.

21<sup>st</sup> century competencies must be realized and outlined in learning in schools. Teachers as educators can implement a teaching model that can effectively enhance the skills contained in the 21<sup>st</sup> century competencies. One of the models that is considered to be able to help foster these competencies is the project based learning model or often called *project based learning* (PjBL). Undari et al., (2023) stated that the PjBL is a model that emphasizes student activities to produce products. This Project-Based Learning (PjBL) model promotes students' abilities to research, analyze, create, and present their work effectively as an application of concepts that have been learned through their direct experience. According to

Nurhadiyati et al., (2020) Project-based learning (PjBL) concentrates on student participation in activities in collecting information and utilizing it so that it can produce something useful for themselves and even others but still related to competency standards, basic competencies as well as the applicable curriculum.

Previous research by Aulia (2023) and Undari et al., (2023) stated that the PjBL model affects on 21<sup>st</sup> century competencies, specifically creative thinking, critical thinking, and problem-solving. Analysis executed by Nurhadiyati et al. (2020) and Rahayu et al. (2020) on the PjBL model similarly indicated that this model positively influences learning outcomes and critical reasoning skills. These studies demonstrate that the PjBL model effectively promotes 21<sup>st</sup> century abilities among learner.

The study intends to focus on two main questions: (1) What are the results and findings of previous research regarding the usage of *the Project Based Learning* (PjBL) learning model in elementary schools? (2) How effective the *Project Based Learning* (PjBL) learning model on critical reasoning skills, learning interests and result, student learning motivation and its relevance in the curriculum in elementary schools?

Given these questions, the researcher aims to assess the effectiveness of the project-based learning approach in greater detail, leading to the title: " Learning Efektivness Using The Project Based Learning (PjBL) Model In Elementary Schools."

## **METODOLOGY**

The study utilizes a qualitative method through a systematic literature review (SLR). As outlined by Nurfadilah et al. (2022) in Alifah et al. (2023), the SLR is carried out in five steps: (1) defining a research question, (2) conducting a search for relevant articles related to the formulated question and mapping them (3) classifying and evaluating the articles that have been collected, (4) processing and presenting data, (5) analyzing the findings of existing articles and then drawing conclusions.

The data collection method involves searching for various articles on journal platforms like Google Scholar, which is accredited by SINTA. The first step in gathering data is to identify the theme or keywords for analysis. In this study, the chosen theme is "*Project Based Learning* (PjBL) Learning Model in Elementary Schools" as the research focus. Data collection is carried out using *Google Scholar* by writing the topic to be analyzed with the provisions of the last 5 years or since 2020 and looking at the description of journals that have been accredited by SINTA. Furthermore, the researcher selects a journal relevant to the previous topic and downloads it and then analyzes it according to the criteria that the researcher will research. The researcher found and collected 17 journal articles with a span of the last five years (2020-2024) and the same theme as the main point of this research title. Then, from the 17 journal articles found, the researcher will select ten articles to be reviewed, analyzed, and reviewed in detail. The technique employed for data analysis is descriptive analysis that functions to describe facts, then analyzed and presented clearly, accurately and in detail so that it can be understood.

## **RESEARCH RESULT**

### **Finding**

This discussion will outline the various findings of the analysis of 10 journals that discuss related topics. The findings offer diverse perspectives, various methodologies, and research results that offer a thorough and detailed perspective on the issues studied. Through

the review of these findings, it is hoped that patterns, similarities, differences, and important implications for this field of study can be found.

The results are based on research carried out by Kibtiyah (2022) under the title "The Use of *the Project Based Learning (PjBL) Model in Improving Critical Reasoning Competencies in Classification Materials for Print Media Discourse Information for Grade 5 Elementary School Students*". The problem behind the research is that some students have difficulty in selecting information, looking for relationships between various information, and processing, analyzing, and deriving conclusions from the information. The finding from the research suggest that after the introduction of the PjBL learning model, students' analytical thinking competencies show improvement, specifically in grouping information from print media discourse in grade V of SDN Pati Kidul 01. The findings in another study, namely by Undari, et al., (2023) with the problem that progress in the field of education moves in line with the changing times, this means that the obstacles that students might encounter in the future will be more complicated from various areas of life. Therefore, it is necessary to advance 21<sup>st</sup> century skills that are in accordance with the development of the times and the advancement of education in teaching and study session in schools. With the findings, namely from several articles that have been *reviewed*, It is recognized that the PjBL model is both effective and efficient in upgrading 21st century skills for students. There are still other findings from previous researchers.

Research by Widiastutik, et al., (2023) is "The implementation of the PjBL model to enhance the learning result of grade V students of SDN Tlogosari Kulon 1" with a problem in the form that before using the PjBL learning model, almost half of the students in grade V obtained a score below the KKM, the acquisition of this score was due to the fact that students did not focus on listening to the teacher's explanation and were busy with their own play activities, with the results obtained, namely After applying the PjBL learning model for 2 cycles, it was proven a significant improvement was observed in student learning outcomes, this increased learning outcome was triggered by the high interest or interest of students in learning and motivation to learn with the PjBL learning model. Another finding is research by Taupik & Fitria (2021) motivated by the problem of science learning that still uses conventional methods so that it tends to produce lower achievements, due to low interest and motivation in student learning, which results in learning outcomes not reaching KKM. The result of the research point to a significant impact following the employment of the Project-Based Learning model in classroom instruction. Learner achievement result improve and are capable of meeting the minimum competency standards (KKM), unlike the results obtained from conventional teaching methods.

Furthermore, the findings in the research by Sukmana & Amalia (2021) with problems in the form of lack of student motivation in learning from home, students who cannot understand the material independently and no direct assistance from parents. With the results that there is a notable impact subsequent to the employment of the Project-Based Learning model in education from home, It inspires students to enhance their participation and drive in the learning process, along with strengthen collaboration among learner and

parents while learning project process. findings in another study by Irfana & Widiyono (2022) under the title "Effectiveness of *Project Based Learning* Learning Model (PjBL) in Enhancing Student Engagement and Academic Performance in. Elementary Schools" with the problem of low interest in learning which makes the student achievement of fourth grade students of SDN 4 Pancengaan Wetan Jepara incomplete. Throughout the learning process, the study's findings indicated that the use of the Project-Based Learning (PjBL) model improved both the engagement and academic performance of 4 grade students SD N 4 Pancengaan Wetan Jepara increase.

Another study by Alhayat, et al., (2023) with findings in the form of problems that occurred due to changes in learning that were originally directly learned at school in-person learning transitioned to online learning making students' interest in learning low and impacting academic performance that fell short of the KKM standards. The data obtained from the study indicated that after the adoption of project based learning (PjBL) model, the engagement levels of fourth-grade students increased, which had an impact on learning outcomes that also increased. The next finding was a study carried out by Nurhadiyah, et al., (2021) entitled "The Effect of the *Project Based Learning* (PjBL) Model on Student Learning Outcomes in Elementary Schools" with the problem obtained indicating that the academic performance of fifth-grade students in integrated thematic learning are quite low, this is due to the lack of students' ability to express their opinions and the lack of attitude to be able to receive opinions from their classmates. The conclusion of the study indicate that the application of the Project Based Learning (PjBL) model positively impacts student learning results.

Another finding was obtained in a study by Mahendra, et al., (2023) entitled "The Influence of the Project-Based Learning *Learning Model* on the Motivation of Mathematics Learning of Elementary School Students" with the problem that students consider mathematics subjects to be difficult learning so that the motivation of 3rd grade students of SD Inpres 46 Sorong City in learning in these subjects is very low. According to the outcomes of the study, *Project Based Learning* learning model has a very substantial influence related to the increase in learning motivation of 3rd grade students of SD Inpres 46 Sorong City. which can be seen from the enthusiasm of students participating in their projects or group assignments. Another finding in the previous study was by Ruhyadi, et al., (2022) with research motivated by the problem that teachers do not optimize the learning model when teaching, so that students' thinking skills are not honed and make students less motivated in learning, especially in science and science subjects in the independent curriculum. With the research result it's proven that after the implementation of *the Project Based Learning* (PjBL) learning model in high grades, students' learning motivation increases by carrying out project-based learning activities.

### **1. Application of PjBL to Critical Reasoning Ability**

The implementation of the instructional model in teaching and learning activities has given many satisfactory results. Some of the abilities and competencies that students are expected to have developed significantly, one of these abilities is critical reasoning.

Critical reasoning skills mean having an attitude that is open to a variety of perspectives and new evidence. (Kibtiyah, 2022).

Critical reasoning skills can be achieved through instruction that motivates students to be able to think and express their ideas. To encourage this ability, the PjBL model is considered effective as research by Kibtiyah (2022) which said that in the era of globalization that is getting faster and corresponding to the decision from the Ministry of Education and Culture that education is directed to form a Pancasila student profile. This policy does not only apply at the national level but is even a reference for educators in developing the character and morals of students in a more limited learning environment. There needs to be teaching that can realize critical reasoning skills, for examples via project-based learning.

The PjBL model was chosen cause with this approach the students will face problems that are then solved in the form of projects. This project will later help students in utilizing new ideas or ideas they get through theories, concepts and information that have been developed. Research by Kibtiyah (2022) shows that this PjBL model provides possibilities for students to make choices the projects they want to work on, including developing the questions they want to answer, choosing research topics, and determining research activities to be carried out. From some of these explanations, the author can conclude that the implementation of the project based learning (PjBL) model can significantly upgrading analytical thinking skills on children, particularly in elementary school students.

## **2. Application of PjBL to Interest and Learning Outcomes**

A strong interest in learning is essential for every student. This is because learning interest will affect the results that students will get later. To foster interest in learning, educators must be able to make the learning that will be carried out interesting and fun. If the learning is fun and can attract students' attention, then students will try to follow the learning and understand the learning until it is finished, so that from this it will produce satisfactory learning results as well.

There needs to be an innovation that can be applied in learning, one way to achieve this is by implementing various learning models. There are various types of learning models, and one of them is the PjBL model. Undari et al., (2023) The PjBL model emphasizes students' involvement in producing a product as a form of applying their competencies in researching, analyzing, developing, and presenting products derived from concepts they have learned through direct experience.

Research by Widiastutik et al, (2023) said that the PjBL model is effective in improving student academic performance. The implementation of the PjBL model in learning can enhance the activeness of students in working in groups so that their level of understanding and learning outcomes increase. This increased learning outcome is spurred by high student learning demands. Project-based learning models can spark students' interest in learning and increase students' activity levels as well as involve themselves in project completion and group cooperation.

The research by Taupik (2021) explained such the implementation of the PjBL model can create direct student involvement in project work and increase students' comprehension of the conten presented so that the learning outcomes they get are better. Another research by Irfana (2022) explained that in the application of PjBL, students who take part in learning are given a stimulus, so that students can learn and build projects together with their groups. This will make learning more interesting and fun, so that students' interest increases when participating during classroom instructional and educational activities within the classroom.

Furthermore, students are able to grasp the material more effectively presented and students respond to the questions for evaluation provided by the teacher appropriately and then get satisfactory learning results. Nurhadiyah et al, (2021) explained that implementing project-based learning will offer students opportunities to gain experience in project organization, time management, and resource allocation necessary for task completion.

From this explanation, the author concludes that the Project Based Learning (PjBL) approach effectively enhances students' involvement and academic performance. Students with a strong interest in learning are likely to achieve better outcomes that align with the intended educational objectives.

### **3. Implementation of the PjBL Model to Learning Motivation**

Sukmana & Amalia (2021) said that the practice of *Project Based Learning* (PjBL) requires students to be the main focus in learning activities, so that they can explore the material they are learning in more depth. In the context of project-based learning, students will be more connected to their parents, because parents play a role in accompanying children when completing projects that are the result of learning. In addition, children's motivation to learn will also increase, because parents take on the role of teachers next to their children.

Mahendra, et al, (2023) stated that the implementation of the PjBL model is expected to enhance learner motivation and improve their learning results. This is not only effective for completing learning outcomes but also for stimulating students' creativity and significantly differentiating learning outcomes. Through the PjBL model, students can understand the relevance and application of what is learned in real situations in daily life, thus influencing students' motivation in learning. Thus, it can be concluded that learning carried out by applying the PjBL model is able to significantly strengthen students' motivation for learning, especially elementary school students.

### **4. Relevance of the PjBL Model to the Independent Learning Curriculum**

Nowadays, the change of curriculum is something that should be understood. In accordance with advancements in science and technology and the increasingly global era, there is a need for a curriculum that can support the abilities that must be possessed in that century. The Independent Curriculum is designed as an answer to the educational challenges of the modern era by emphasizing the cultivation of essential skills for the 21<sup>st</sup> century that students require to succeed in a world that is becoming more complex and dynamic. One of the ideas of the Independent Curriculum is the existence of project-based learning that is outlined within the characteristics of Pancasila students. This is intended to equip a more meaningful learning experience and prepare students to have the skills contained in 21<sup>st</sup> century skills.

The integration of 21<sup>st</sup> century skills in the Independent Curriculum not only helps students to develop the necessary abilities in the future, but also supports the formation of Pancasila character and values. Through a flexible and innovative approach, the Independent Curriculum provides chances for students to acquire knowledge actively and suited to current societal needs. The Independent Curriculum also emphasizes the importance of project-based learning as an efficient strategy to achieve educational goals. The PjBL model goes hand in

hand with this, as this method explicitly uses projects as a means to learn, encouraging students to invest in the process and outcomes of the projects that they are engaged in.

Alhayat et al, (2023) revealed suitability between project-based learning, or *Project-Based Learning* (PjBL), and the Independent Curriculum is very visible in the "Pancasila Student Profile" program and the variety of learning methods. These two elements show that the Independent Curriculum strives to be integrated, allowing students to connect subject matter with the competencies they learn (Ruhyadi et al., 2022). Thus, learning becomes more meaningful and its benefits can be clearly identified as students learn a topic. The concept of the Independent Curriculum also presents a collaborative learning environment, which can maximize the potential possessed by students (Oyetero & Kareem, 2016). In addition, a learning process that demands direct involvement of students, supported by the good use of visual media, will improve their understanding.

## CONCLUSION

According to the literature review provided, the Project-Based Learning (PjBL) model has demonstrated a beneficial result on teaching practices. This approach offers students an engaging and stimulating learning experience. The PjBL model successfully enhances 21<sup>st</sup> century competencies including analytical thinking, innovative thinking, effective communication, and teamwork while also fostering student interest, motivation, and academic performance in elementary schools (SD).

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