



APPLICATION OF PROBLEM-BASED LEARNING TO IMPROVE STUDENT MOTIVATION AND LEARNING OUTCOMES ASSISTED BY WORDWALL

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Abstract

This study aims to determine student motivation and learning outcomes in applying project-based learning (PBL) assisted by Wordwall media. This type of research uses classroom action research (PTK). The study subjects were grade V students of SDN 1 Kedungbanteng, totalling 31 people. According to Kemmis and Mc Taggart, this research design refers to the Classroom Action Research (PTK) model; this research data collection technique uses observation, questionnaires and tests. The data analysis technique uses qualitative data analysis and quantitative data analysis. The results showed increased motivation and learning outcomes in PKN lessons using problem-based learning (PBL) through wordwall media. The study results were the results of the learning motivation questionnaire showing that the average class of students in cycle I was 61.69% in the medium category. In contrast, it increased by 11.09% in cycle II to 72.78%. The application of the problem-based learning (PBL) model through word wall media also improves student learning outcomes from before action (pretest) to the given action (posttest). Based on the results of the pretest scores, students showed 32.2% completeness, then the given action in cycle I increased to 45.16% and in cycle II increased to 87%. Based on the criteria set, problem-based learning (PBL) through wordwall media has met the predetermined standards of >70%.

Keywords: Learning Motivation, Learning Outcomes, Problem-Based Learning.

INTRODUCTION

Some rights and obligations are unique to each human being. One of the rights that humans have is the right to have the opportunity to participate in educational experiences. One of the most essential aspects that might contribute to the advancement of a nation is education. According to Yusuf (2018), education is meant to direct all of the inherent energies present in children to ensure that they, as human beings and members of society, can achieve the best possible safety and happiness. Education allows for acquiring new things, which may then be utilized to produce high-quality human resources. The achievement of an excellent education is a complex task; there are numerous challenges that educators must accomplish, and one of these challenges is the level of motivation and learning outcomes that students achieve.

It is essential to note that the learning process that has been carried out in Civic Education (PKN) sessions is impacted by the students' levels of motivation and the learning outcomes that they have achieved.

According to Saidurrahman and Arifinsyah (2018), PKN material is democracy education that prepares citizens to think critically and act democratically. It is accomplished through activities designed to instill awareness in the younger generation that democracy is the form of community life that best guarantees people's rights. Consequently, to accomplish learning goals, every educator must engage in the lesson design process, the execution of suitable learning, and the evaluation of the learning process. Implementing learning strategies and models, applying learning motivation, and maintaining high levels of student engagement and attention are all ways to create successful learning outcomes. According to the findings of Aninditya and Utama (2014), the level of motivation that students possess can have an impact on the learning outcomes that they successfully achieve. According to Purwanto (2021), motivation is the desire to exert self-effort to accomplish a particular objective. They can accomplish their educational goals (Gopalan et al., 2017). The power of motivation is equally applicable when it comes to the implementation of day-to-day life. Motivation can take the shape of external efforts when it comes to learning. It refers to the teacher encouraging, activating, and moving pupils to participate in learning actively. Every learning procedure that is carried out alters the consequences of learning. According to Nurrita (2018), learning outcomes are the results of assessments carried out on students. These evaluations include the students' attitudes, knowledge, and abilities due to the learning process. It is impossible to separate the concepts of motivation and learning outcomes when it comes to activities that include learning; hence, there is a need for an effort to be made to improve both of these components. The implementation of a learning model that makes use of a variety of media is one of them.

Educators must be able to select a learning model that is in line with the content being taught. It is a dilemma for educators because it is challenging to avoid teaching using the lecture style, which can lead to repetitive learning. PBL, or problem-based learning, is a model considered one of the most appropriate learning methods for today's learners. It was described by Faqiroh (2020) that the PBL model is a learning approach that helps students recognize how to learn and collaborate in groups to find solutions to problems that are relevant to the real world. In the project-based learning (PBL) paradigm, students learn about real-world problems in their homes, schools, and communities. It provides them a foundation for gaining knowledge and concepts by utilizing their critical thinking and problem-solving abilities. Several learning media are essential to the success of a learning experience, including the utilization of creative and innovative learning media. In addition to using the PBL learning technique, there are other learning media. According to Daryanto (2015), learning media encompasses everything (whether it be people, objects, or the environment around them) that may be utilized to communicate or channel messages in the context of education. It is done to engage students' attention, interest, thoughts, and feelings in the context of learning activities to accomplish predetermined objectives.

For now, information and communication technology in education is connected to using learning media. Hasanah *et al.* (2019) have said that in today's world, educators are expected to continually study and adapt to become accustomed to using technology-based learning devices and applications. Learning appropriately by using information and communication technology that is becoming increasingly sophisticated is possible. The technology-based learning medium must be based on the learning objectives, the teaching materials that will be presented, and the student's intelligence level capacity to maximise learning outcomes. It is a possibility that teachers and professors need to take into consideration. As one manifestation of this attention, the organization of suitable and fascinating learning is one type. The findings of research by Harsiwi and Arini (2020) and Puspitarini and Hanif (2019) demonstrated that using interactive media in the learning process can enhance academic achievement outcomes. To achieve successful learning outcomes, students choose to respond positively.

During PKN learning, teachers do not employ a variety of learning models, and they only use technology-based media such as learning videos on YouTube, according to the findings of observations made in class V. This is based on the observations made. As stated by Madiung (2018), Civic Education is a subject that consists of various processes designed to direct students to be responsible participants. The fact that teachers do not use various learning models and media during the learning process, on the other hand, causes students to be less excited about participating in learning activities, which causes students to comprehend less of the material that the course instructor presents. Furthermore, pupils participating in learning activities continue to be less active, conversing with their fellow students at their desks, and the student's motivation to learn needs to be improved. As a result, modifications must be applied in innovative learning activities to improve learning outcomes. These modifications focus on utilizing technology-based learning media, namely wordwall apps.

According to Nenohai *et al.* (2021), the Wordwall application is a web-based digital application that can assist teachers in building their students' educational experiences and providing them with engaging and interactive educational resources. Some of the features of the Wordwall application include the Wordwall quiz, which is one of those features. Wordwall quiz is a learning medium that takes the shape of a quiz game. It displays several attractive and varied questions, and students answer these questions collectively to facilitate interactive learning. According to Arimbawa (2021), students who take a quiz using the Wordwall game not only improve their level of comprehension but also develop a commitment to scientific inquiry. Student demand for Wordwall is high since the application includes various engaging game-based games. Without even realizing it, students have the impression that they are playing, but in reality, they are gaining knowledge through these games. It has been suggested by Sinaga and Soesanto (2022) that the use of wordwall media has the potential to engage students in the process of learning and to produce an environment that is conducive to learning. The problem formulation research can be written as

"Can the problem-based learning model assisted by Wordwall media increase student motivation and learning outcomes?" This formulation is based on the background description of the problem presented before.

METHOD

Classroom action research was utilized during this study. According to Arikunto (2012), classroom action research is an investigation of learning activities that take the shape of an action and are carried out to appear and take place in a classroom setting. According to Kemmis *et al.* (2014), classroom action research typically consists of four parts: planning, acting, observation, and reflection. These steps are carried out in their respective order.

Thirty-one participants participated in this study, with 17 male and 14 female students making up the research subjects. The study was carried out at State Elementary School 1 Kedungbanteng, with the research subjects being students in the fifth grade. Civic Education (PKN) is the subject matter that is utilized. During this research, the data-gathering methods included questionnaires, tests, and observations. The equipment that is utilized as a means to collect data is referred to as a data collection tool. It is necessary to have this facility to conduct the data collection process to be analyzed according to the data type. Quantitative data will be processed using techniques for quantitative data analysis, and qualitative data will be handled using techniques for qualitative data analysis. Both types of data will be processed. The success indicator in this study is an increase in student motivation and learning outcomes of problem-based learning models through wordwall media with good criteria in each cycle.

RESULTS AND DISCUSSION

Implementation Model Problem-Based Learning

There has been an increase in the use of the problem-based learning (PBL) model implemented during cycles I and II. The following is a comparison of observations made on the application of the problem-based learning approach, on average:

Table 1. Average Percentage of PBL Model Implementation

Cycle	Meeting		Average	Category
	1	2		
Cycle I	77%	83%	80%	Good
Cycle II	93%	98%	95%	Excellent

The study results are presented in Table 1, which reveals that the implementation of learning by researchers increased by 15%, going from 80% in cycle I to 95% in cycle II with perfect criteria. It has occurred due to the enhancement of any deficiencies identified at each meeting during the previous cycle.

Therefore, learning can be carried out in a manner that is consistent with what researchers anticipate in the future. Based on these results, the implementation of learning using the Problem-Based Learning model using wordwall media has the potential to increase as a result of an improvement and improvement of any flaws implemented in the past. According to the data shown in Figure 1 below, the percentage of student learning implementation during cycles I and II is as follows:

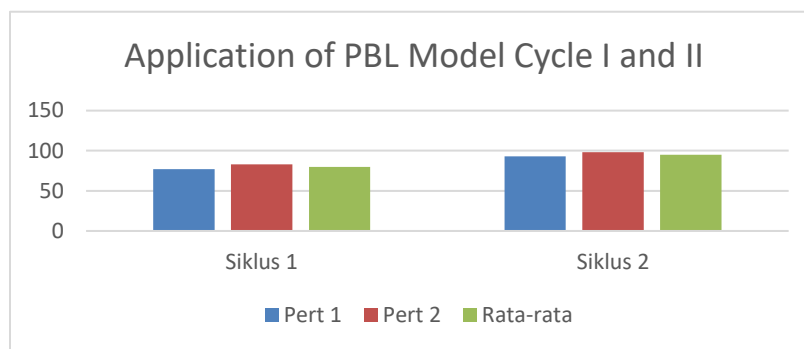


Figure 1. Diagram of Application of PBL Model Cycle I and II

Learning Motivation

As a consequence of the findings of the observations made about the level of learning motivation during the initial cycle, the indicator is classified as belonging to the medium category (50.01–70.0%). Overall, the average score from the observation of student learning motivation was 61.69%, which meant that it was included in the moderate qualifications category. In cycle II, all indicators attained high qualifications or increased, with 70.01%-85.00% reaching the highest possible standards. As a result of the fact that the average score of student learning motivation approaches the desired qualification, which is 72.78%, it is possible to assert that the learning can meet the criteria for completeness. According to the data presented in the table that follows, the following is the typical level of motivation for learning:

Table 2. Average Learning Motivation Outcomes

Cycle	Value	Average	Category
Cycle I	76,5	61,69%	Moderate
Cycle II	90,25	72,78%	Good

According to the data presented in Table 2, the average proportion of students motivated to learn climbed steadily from cycle I to cycle II after each meeting. The findings of this study indicate that interactive learning media have the potential to offer a high level of learning motivation during the process of learning. The findings obtained are consistent with the findings of research conducted by Puspitarini and Hanif (2019) and Subagja (2023), which explain that the utilization of an interactive technology-based learning media can have a favourable impact on the learning motivation of students, which in turn will

affect the academic performance of students. Within this context, Safitri *et al.* (2022) provided an explanation of their research findings, which demonstrated that the utilization of digital-based interactive media has the potential to foster learning motivation. Students are more motivated to learn and comprehend the content being studied when they play games based on digital technology.

Learning Outcomes

According to the learning outcomes that were achieved at the time of the pretest, the average score in the reaction is a number that ranges from 0 to 80, with 80 being the most excellent possible value. The number of students who have finished their studies or attained the set KKM is sixty, equal to ten or 32.2% of the total. On the other hand, the number of students who still need to finish their studies is twenty-one, which is 67.8%. While the most outstanding value in cycle I is 100 and the lowest value is 40, the average value in cycle I is 70. The highest value in cycle I is 100. Seventy students have either finished their education or have attained the set KKM, which amounts to 14 students or 45.16% of the total.

On the other hand, 17 students still need to finish their education, which accounts for 54.83% of the total. At the end of cycle II, the average value is 82, with the maximum value being 100 and the lowest value being 60. It is even though the learning outcomes gained were obtained in cycle II. While the number of students who have either finished their education or have attained the set KKM is seventy, totalling twenty-seven individuals with an 87.00% percentage, the number of students who have not finished their education includes four students, with a percentage of thirteen per cent. As can be seen in Table 3, the following is a comparison of the preaction learning outcomes for cycle I and cycle II, which are as follows:

Table 3 Comparison of Learning Outcomes in Preaction, Cycle I and Cycle II

Aspects	Preaction	Cycle I	Cycle II
Top Rated	80	100	100
Lowest Value	20	40	60
Average rating	44	70	82
Completeness Percentage	32,2%	45,16%	87%

If a diagram is used to display the average score that students achieved in preaction, cycle I, and cycle II, then the following is the result that will be obtained:

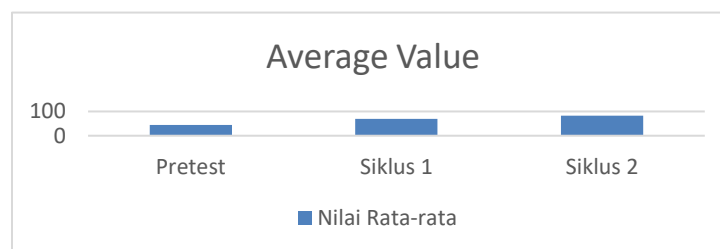


Figure 2. Average Value Comparison

Based on Figure 2, the average score of the students improved throughout the study. The pupils' average score reached 44 during the preaction stage, and after that, it grew to 70 during cycle I, and then it increased once more during cycle II, reaching 82. Student learning results have improved due to the implementation of the problem-based learning model with the assistance of wordwall media. It is indicated that the PBL paradigm paired with interactive wordwall media has an impact on increasing student learning outcomes, which is in line with the findings of the research conducted by Wijayanti and Sulianto (2023). A comparison of the percentages of completion is shown in the following diagram:

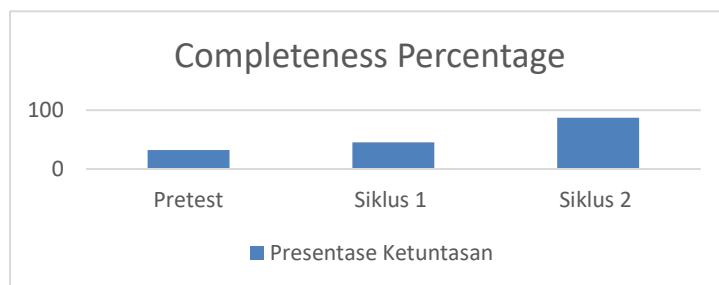


Figure 3. Completeness Percentage

In addition, the percentage of those who have reached KKM has increased throughout the study, as seen in Figure 3. During the preaction stage, the percentage of complete students reached only 32.2%. However, during the first cycle, the percentage of complete students grew to 45.16%. However, this level of completeness did not meet the previously established requirements, which was 80%, which is why the second cycle action was carried out. During the second cycle of actions, the percentage of complete students grew again to 87.0%. It indicates that the students met the criteria for completeness established by the researcher, which resulted in the termination of the research.

On the other hand, pupils who did not finish their learning suffered a decline throughout the research methodology. Before the action was taken, the % of students who did not finish their education reached 67.8%. In cycle I, this number dropped to 54.83%; in cycle II, it dropped even further to 13%. The results of the accomplished learning demonstrate a considerable gain in information. Improving student learning outcomes can be accomplished through the utilization of Wordwall, which is an interactive learning media service. In addition, this is consistent with the findings of Sahronih et al. (2020), who found that the acquisition of student learning outcomes involving interactive media receives a higher average score than learning through non-interactive media. As an additional recommendation, the everyday contextual or surrounding environment should be considered when producing material content for the medium used.

CONCLUSION

Implementing word wall-assisted problem-based learning (PBL) models can boost student motivation and learning outcomes. This conclusion is based on the findings of classroom action research

conducted for two cycles. The results of learning motivation received from the entire population in cycle I were 61.69%, while the results gained in cycle II were 72.78%. It is evident from the findings. Therefore, it is included in the perfect criteria since it has achieved a success rate of at least 80 per cent with the success metrics.

Additionally, a rise in the average score and the percentage of students who could complete each cycle was also obtained. In the pretest stage, the average score of the students reached 44, and in cycle I, it increased to 70, and then it increased to 80 in cycle II. The percentage of students who were complete in the pretest reached 32.2%, but in cycle I, student completeness increased to 45.16%, and then it increased again in cycle II to 87%.

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