

The Problem Based Learning Model And Learning Motivation On Results Study Word Woll Material At Slb-B Karya Mulia Surabaya

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Abstract

The aim of this research is to test the influence of *the Problem Based Learning* (PBL) model and learning motivation on results Studying *Word Woll Material*. This research used a *True Experimental Design* with a *pretest-posttest control group design*. The number of samples obtained was 90 students divided into 4 research classes, namely 45 students in Class 4 A and B SDLB-B as experimental samples and 45 students in Class 4 C and D SDLB-B as control samples. In carrying out statistical tests to test the hypothesis, in this case it will be carried out using the 2-way Anova analysis technique. Based on the data presentation and discussion above, several things can be concluded, as follows: (1) There are differences in results Learning *Word Woll material* between those taught using the *Problem Based Learning* (PBL) model, (2) There are differences in results Learning *Word Woll material* between those who have high learning motivation and those who have low learning motivation, and (3) There is an interaction between the learning model (*Problem Based Learning* (PBL) model) and learning motivation on the results Studying *Word Woll Material*.

Keywords: *PBL Model, Learning Motivation, Results Learning Word Woll Material*

Abstrak

Tujuan penelitian ini adalah untuk menguji pengaruh model Problem Based Learning (PBL) dan motivasi belajar terhadap hasil belajar Materi Word Woll. Penelitian ini menggunakan True Experimental Design dengan desain pretest-posttest control group design. Jumlah sampel yang diperoleh sebanyak 90 siswa yang terbagi dalam 4 kelas penelitian yaitu 45 siswa Kelas 4 A dan B SDLB-B sebagai sampel eksperimen dan 45 siswa Kelas 4 C dan D SDLB-B sebagai sampel kontrol. Dalam melakukan uji statistik untuk menguji hipotesis, dalam hal ini akan dilakukan dengan menggunakan teknik analisis Anova 2 arah. Berdasarkan penyajian data dan pembahasan di atas, dapat disimpulkan beberapa hal, sebagai berikut: (1) Terdapat perbedaan hasil belajar materi Word Woll antara yang diajarkan dengan model Problem Based Learning (PBL), (2) Terdapat perbedaan hasil belajar materi Word Woll antara yang diajarkan dengan model Problem Based Learning (PBL), (2) Terdapat perbedaan hasil Belajar Materi Word Woll antara yang mempunyai motivasi belajar tinggi dan yang mempunyai motivasi belajar rendah, dan (3) Terdapat interaksi antara model pembelajaran (model Problem Based Learning (PBL)) dan motivasi belajar terhadap hasil Belajar Word Woll Bahan.

Kata kunci: Model PBL, Motivasi Belajar, Hasil Belajar Materi Word Woll

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INTRODUCTION

Formal education is increasingly needed. This is because the family environment is unable to introduce children into the world of science which is increasingly developing rapidly, however the problems that occur in the world of education today are very complex both in terms of relevance, quality, quantity and others. In terms of quality, for example, many people think that the quality of our education is very low so efforts are needed to improve it (Abror, 2021; Ermayani, 2021; Yanti et al., 2021).

In accordance with the Law of the Republic of Indonesia no. 20 of 2003 concerning the National education system, the position of teacher as an educator is a professional position. reflects that Indonesian education aims to develop students' potential to become human beings who believe in and are devoted to God Almighty, are creative, independent and become responsible democratic citizens and implement one of human rights, namely the right to education. On that basis, Indonesia implements the principles of democratic education both horizontally (everyone has the right to education) and vertically (everyone has the right to the highest possible education according to their abilities) (Dzurrahmi et al., 2021; Hadiyanto et al., 2021; Ivan, 2021).

Teachers are the key and at the same time the spearhead of educational achievement and renewal, therefore teachers are in the middle namely organizing, guiding, directing, educating to achieve educational goals. The low quality of learning cannot be separated from the teacher's ability to carry out learning in the classroom (Aisiyah, 2021; Hadiyanto et al., 2021; Hasanah et al., 2021).

However, in reality the learning process carried out by teachers is still not running optimally, especially in the *WordWoll material lessons* at SLB-B Karya Mulia Surabaya. What often happens in schools is that learning *WordWoll material* is only oriented towards mastering the material as evidenced by learning outcomes in certain competencies. Teachers assume that the task of teaching is to transfer knowledge and book information, the task of students is to receive, remember and memorize information according to what is said. And teachers do this every day so that students feel bored in receiving learning and ultimately students are lazy in studying. And teachers rarely equip students with problem solving in long-term life (M et al., 2021; Nursita, 2021; Rosyada et al., 2021).

Wordwoll material is an abstract concept. So, if in the process of learning *WordWoll Material*, the teacher only uses conventional methods to convey the abstract concept of *WordWoll Material*, *making it difficult for students to understand the material*. This is because students still think concretely. As a result, *WordWoll* material is one of the subjects that is considered difficult because student learning outcomes are still lacking (Alifia & Pradipta, 2021; Aritonang & Safitri, 2021; Wahyu Wijayanti, 2021).

Therefore, the role of the teacher is highly demanded to be able to change the educational vehicle to be better, innovative, creative and fun in the learning process. Teachers are not the only ones either learning resources, but as a facilitator, changing, directing to form a better and more advanced national character (Arini, 2021; Khusna et al., 2021; Puspaningtyas & Ulfa, 2021).

The government has carried out solving educational problems with current conditions in the field with various reforms, including by holding training, education and training and increasing teacher competency, procuring books and learning tools, etc. Therefore, teachers are expected to be able to improve the quality of education by selecting and using learning models according to student characteristics, basic competencies, learning objectives to be achieved and the material to be taught (Abror, 2021; Ivan, 2021; Munawwir & Nur Hanip, 2021).

One learning model that can be developed to place students at the center of learning is the application of *the Problem Based Learning (PBL) model*. *The Problem Based Learning* model is a learning model that is suitable for achieving the learning objectives of *WordWoll Material*, namely being able to solve problems creatively (Abdalla et al., 2021; Fradila et al., 2021; Indah & Nuraeni, 2021).

Besides that, the *Problem Based Learning model* is a learning concept that helps teachers link the material they teach with real world situations, and encourages students to make connections between the knowledge they have and its application in their lives as members of the family and society (Et al., 2021; Kuo et al., 2021; Syamina et al., 2021). With this concept, learning outcomes are expected to be more meaningful for students. The learning process takes place naturally in the form of student work and experience activities, not a transfer of knowledge from teacher to student. Learning strategies are more important than results.

Learning motivation is a physiological and psychological condition found in students which encourages them to carry out certain activities to achieve a certain goal (Alifia & Pradipta, 2021; Fitriati et al., 2021; Nurwahidah et al., 2021). Apart from that, learning motivation is the most important thing in a teaching and learning process, because learning motivation is an encouragement or driving force for individuals to achieve success and in students' behavior they will be directed in behaving in accordance with their abilities in developing knowledge and skills, and learning motivation is seen as as one of the factors that is very necessary in determining whether or not educational goals are achieved, especially if the individual concerned has abilities that are not very encouraging, then without motivation it is difficult to expect good learning results (Nurwanti, 2021; Susana et al., 2021; Wijayanti et al., 2021).

METHOD

This research is experimental research, namely the research aims to determine differences in learning outcomes from the influence of the *Problem Based Learning model*, and student learning motivation on the learning outcomes of class IV students in the *WordWoll Material* study field at SLB-B Karya Mulia Surabaya.

The research was designed using two groups of students, the first group used the *Problem Based Learning model*, the second group used conventional learning. The placement of individuals into the two groups is carried out as is (according to class). Thus, this research is considered a quasi-experiment. Because not all influencing variables can be strictly controlled, such as experimental research in a laboratory, purely random grouping of subjects is not possible.

The subjects in this research were all SLB-B Karya Mulia Surabaya students. Those used as samples or data sources in the research were SLB-B Karya Mulia Surabaya students for the 2024-2025 academic year. So the grouping of research subjects can be in the form of an experimental

group, namely SLB-B Karya Mulia Surabaya students in class IV A and B, while the control group is class IV students in class C and D.

Data collection techniques use observation and tests (*pretest* and *posttest*). A test is a set of tools that contain tasks that must be carried out or a number of questions that must be answered by students to measure the level of understanding and mastery of the required coverage of material and in accordance with certain learning objectives. Basically, tests are a measuring tool that is often used in learning assessment.

The data analysis approach used is a causal statistical approach data Which obtained in form data quantitative. Condition The main thing in analysis is changing the established working hypothesis to a null hypothesis. The hypothesis itself is a temporary answer to an answer whose truth has been determined and needs to be supported by research data. Hypothesis testing uses two-way analysis of variance (ANOVA) using SPSS statistics Version 25.00.

The author can describe the two-way ANOVA analysis design as follows.

Table 1. 2 x 2 Factorial Experimental Design

Independent Variable	Learning Model (X)	
	PBL model	Conventional
Dependent variable		
Moderator Variables		
High (Y1)	X 1.Y 1	X 2.Y 1
Low (Y2)	X 1.Y 2	X 2.Y 2

RESULTS AND DISCUSSION

The significance test in this study used the 2 Way Anova test, with the following results. The descriptive results of the two classes are as follows.

Table 2. Descriptive Results Learning *Word Woll Material*

Descriptive Statistics				
Dependent Variable: Learning Results Wordwall Material				
Learning Model	Learning Motivation	Mean	Std. Deviation	N
Model PBL	high	76.4103	4.28411	39
	low	80.0000	.00000	6
	Total	76.8889	4.16818	45
Convensional Method	high	61.2308	2.19403	39
	low	51.1667	2.71416	6
	Total	59.8889	4.11882	45
Total	high	68.8205	8.35377	78
	low	65.5833	15.16850	12
	Total	68.3889	9.48884	90

From table 2 it can be seen that there is a difference in the average results Learn *Word Woll material* in each class using *the Problem Based Learning (PBL)* model and conventional methods for students with high motivation and low motivation. Statistical data from SPSS 25 calculation results

between learning methods, learning motivation and results Learning *Word Woll Material* with a total of 90 students, the following results were obtained: (1) Results Learning *Word Woll Material* against the *Problem Based Learning* (PBL) model, an average (*mean*) of 76.8889 and a standard deviation of 4.16818 were obtained. Meanwhile, the conventional method obtained an average (*mean*) of 59.8889 and a standard deviation of 4.11882, (2) High learning motivation in the *Problem Based Learning* (PBL) model was obtained N: 39 and low learning motivation was obtained N : 6. Meanwhile, high learning motivation in the conventional method was obtained N.39 and low learning motivation was obtained N: 6, and (3) Results Learning *Word Woll Material* those with high learning motivation obtained N: 78 and low learning motivation obtained N: 12.

After carrying out the prerequisite tests, a 2-way Anova test was then carried out, to determine the interaction of the *Problem Based Learning* model and students' motivation. The results of the two-way Anava test are as follows.

Table 3. Way Anova Test Results

Tests of Between-Subjects Effects

Dependent Variable: Learning Results Wordwall Material

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	7096.197 ^a	3	2365.399	221.790	.000
Intercept	187869.696	1	187869.696	17615.492	.000
Method	5036.534	1	5036.534	472.248	.000
Motivation	108.985	1	108.985	10.219	.002
Method * Motivation	484.712	1	484.712	45.449	.000
Error	917.192	86	10.665		
Total	428947.000	90			
Corrected Total	8013.389	89			

a. R Squared = .886 (Adjusted R Squared = .882)

Based on the table above, it can be explained that: (1) The significance value is smaller than $\alpha < 0.05$, namely 0.000, so it can be explained that there is an influence on the results Learning *Word Woll material* between the *Problem Based Learning* (PBL) model applied to grade 4 students, (2) The significance value is smaller than $\alpha < 0.05$, namely 0.002, so it can be explained that there is an influence on the results Learning *Word Woll Material* among students who have motivation high learning and students who have low motivation in grade 4 students, and (3) The significance value of the interaction between factor A (*Problem Based Learning* (PBL) model) and factor B (high motivation and low motivation) with a significant level of 0.000, comparison with F table and significance level $\alpha = 0.05$, so it can be explained that factor A (*Problem Based Learning* (PBL) model) and factor B (high learning motivation and low learning motivation) have an influence on the results Studying *Word Woll Material*. This means that there is an interaction between the *Problem Based Learning* (PBL) model and learning motivation on results Studying *Word Woll Material*.

Based on the calculation results above, it can be explained that the hypothesis proposed by H_0 is rejected or H_1 is accepted. This means there is a difference in results Learning *Word Woll material* and a significant interaction between the test results of students who use *the Problem Based Learning* (PBL) model and who have high learning motivation and those who have low learning motivation.

Discussion

1. the Problem Based Learning (PBL) model

Based on the results of calculations and test results carried out in each class, it can be explained that students' learning outcomes at the start of learning have the same abilities, where the average learning outcomes are the same. After treatment using the *Problem Based Learning* (PBL) model, there were differences in results Learning *Word Woll material* is significant, there is an increase in results Studying *Word Woll Material*.

This illustrates that learning using *the Problem Based Learning* (PBL) model provides motivation for students to learn and improve results Studying *Word Woll Material*. Furthermore, students who still used conventional methods did not have a significant average difference in results Study *Word Woll material*, either before learning or after learning. This can be explained that little material can be absorbed in conventional methods, in contrast to the *Problem Based Learning* (PBL) model, where almost all material can be absorbed by students, because students are directly involved in the problems given, when students study, do assignments and interpret it, so that students can better master the material (Mulyadi, 2023; Sari et al., 2022; Syamina et al., 2021). The average difference between classes with the *Problem Based Learning* (PBL) model has a significant difference, this is indicated by the significance value of the difference between the two learning methods below 0.05. Apart from that, calculations using 2-way variance analysis show that the FA value (F calculated for *the Problem Based Learning* (PBL) model factors) results are greater than the F table, meaning that there is an influence on the results. Learning *Word Woll material* using the *Problem Based Learning* (PBL) model.

The results of this calculation show that the proposed hypothesis is acceptable, where there are differences in results Learning *Word Woll material* among those taught using *the Problem Based Learning* (PBL) model.

2. Difference in Results Learning Word Woll Material with High Learning Motivation and Low Learning Motivation

Students in the learning process are very likely to have different levels of learning motivation, where students have high motivation and some have low motivation, the differences in motivation that these students have have their own influence on the results. Learning *Word Woll Material* for students. This is also shown by the average difference test, where the results are Result Learning *Word Woll material* (students with high motivation and students with low motivation) with different learning models, *the Problem Based Learning* (PBL) model, obtained different results between students who had high and low motivation both in the *Problem Based Learning* (PBL) model.

Learning motivation is the overall driving force within students which gives rise to learning activities, which ensures the continuity of learning activities and which provides direction to learning activities so that the goals desired by the learning subject can be achieved (Nation et al., 2023; Nitbani, 2022; Savira et al., 2021). Motivation is a change in energy within a person which is characterized by the emergence of *feelings* and is preceded by a response to a goal. The definition above contains three important elements: (1) That motivation initiates a change in energy in each individual human being, (2) Motivation is characterized by the emergence of feelings, *feelings*, and affection in a person, and (3) Motivation will be stimulated because of the existence of a goal. (Efendi, 2017; Gunawan et al., 2022; Y et al., 2021). A person's desire to achieve success, a person's desire to involve oneself in a task, and a person's desire to succeed in carrying out a difficult task are challenges in achieving a result. Studying *Word Woll Material*. Results Learning *Word Woll material* will be optimal if there is the right motivation. That motivation to learn is to complete a job successfully, to achieve results Learn the desired *Word Woll material*.

In addition, by using 2-way analysis of variance, the FB value (F calculated for high levels of student motivation and low student motivation) was obtained. The result was that FB was greater than F_{table} , thus giving the meaning that there was an influence on the results. Learning *Word Woll material* between students who have high learning motivation and students who have low motivation in grade 4 students. This shows that the second hypothesis can be accepted, meaning that there are differences in results Learning *Word Woll material* between those who have high learning motivation and those who have low learning motivation.

3. Interaction of Learning Media and Student Learning Motivation

Calculations using 2-way analysis of variance are also used to determine the interaction between factor A (*Problem Based Learning* (PBL) model) and factor B (students with high motivation and students with low motivation).

Based on further calculations of the interaction between the two, *the Problem Based Learning* (PBL) model with students who have high motivation and low motivation, it can be explained that using 2-way analysis of variance there is a significant interaction. This is indicated by the level of significance being less than 0.05 (5%), so it can be concluded that there is an interaction between learning media and students' motivation. This means that there is an interaction between the *Problem Based Learning* (PBL) model and motivation learning towards Results Studying *Word Woll Material*.

Based on the description above, it can be explained that students with high motivation using the *Problem Based Learning* (PBL) model have results Learning Material *Word Woll* is high compared to Results Learning *Word Woll Material* for students who have low motivation. Students with high motivation using *the Problem Based Learning* (PBL) model have results Learning Material *Word Woll* is high compared to Results Learning *Word Woll Material* for students who have low motivation. It was further explained that using appropriate learning media (in this case the *Problem Based Learning*

(PBL) model) and high learning motivation possessed by students will improve results. Studying *Word Woll* material.

CONCLUSION

Based on the data presentation and discussion above, several things can be concluded, as follows: (1) There are differences in results Learning *Word Woll material* between those taught using the *Problem Based Learning* (PBL) model, (2) There are differences in results Learning *Word Woll* material between those who have high learning motivation and those who have low learning motivation, and (3) There is an interaction between the learning model (*Problem Based Learning* (PBL) model) and learning motivation on the results Studying *Word Woll Material*.

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