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Problem Based Learning and Curiosity Models in Improving Learning Outcomes in Islamic Schools in Bekasi

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Abstract

This study aims to analyze the effect of Problem Based Learning model and Curiosity l on learning outcomes at the Bekasi Islamic School; to analyze the interaction between problembased learning and curiosity models on learning outcomes at the Bekasi Islamic School. The approach used quantitative research with a quasi-experimental design. Analysis methods include feasibility test, validity test, reliability test, normality test and different test with t test. The results showed that the problem based learning model and curiosity had an effect on learning outcomes at the Bekasi Islamic School. The conclusion were problem based learning model and curiosity improved learning outcomes at the Bekasi Islamic School.

Keywords: curiosity, learning outcomes, model, Problem Based Learning and Islamic schools

INTRODUCTION

The beginning of Islamic education in Indonesia is related to the beginning of the entry of Islam in the archipelago. Islamic education is interpreted as an effort to realize the understanding and practice of Islamic teachings to the people in Indonesia since the beginning of Islam came especially during the government. Islamic education is in fact very related to Islam. The government at that time was in a two-day education system. First, the Islamic education system that grows from the Islamic community itself. This is evident from two different patterns, namely synthesis with various patterns of education that vary and reject everything related to the west. Second, the education system regulated by the Dutch government so that there is no religious teaching in secular public schools (Idris, 2015).

Islamic education in the era after independence is still considered often contrary to the education system that grows and develops separately from each other (Sabarudin, 2015). The education system that initially can be reached by the upper classes only and the growth of education independently among the community in general. Records reveal that the government seeks to organize a national education system in accordance with legislation. Various policies in the education system are then published by the government. Government in the form of government regulations, laws and various policies of the minister of national education.

Bekasi is one of the growing areas of Islamic schools. There is a fairly interesting change regarding the trend of education in Indonesia. This is characterized by the birth of Integrated Islamic Schools. In the past, the model of educational institutions in Indonesia only knew three models of educational institutions, namely pesantren, madrasah, and school (public). The (public) school is an educational institution in Indonesia heritage of dutch colonists who teach the general sciences, namely the natural sciences, social sciences, and humanities. The number of Islamic schools in Bekasi in 2021 is explained below.

Tabel 1. Islamic Schools in Bekasi

Islamic School	Private	Country	Total
RA	306	1	307
MI	135	3	138
MTS	78	2	80
MAN	31	6	37
Total	550	12	562

Source: Kemendikbud Bekasi (2021)

Based on the development of Islamic schools in Bekasi, the Islamic education system continues to teach educational sciences adopted from the national education curriculum. It requires proper learning in school. Phenomena that often occur in learning include the weak implementation of the learning process carried out in schools. This resulted in students' learning outcomes in the lesson is still low. Learning outcomes are the most important part of learning. Gray (2017) defines student learning outcomes as essentially behavioral changes as learning outcomes in a broader sense spanning cognitive, affective, and psychomotor fields. Learning outcomes are the result of an interaction of learning and teaching (Sable, 2016) From the teacher's side, the teaching action ends with the process of evaluating learning outcomes. From the student side, learning outcomes are the end of teaching from the top of the learning process.

Learning outcomes are behavioral changes that occur in the life of an individual that go on and on. A change in behavior that occurs will cause changes and be useful for life or the next learning process. Changes in the results of the teaching and learning process can be shown in various forms such as knowledge, understanding and attitude through learning students can gain knowledge about the material in learning activities and gain an understanding of learning so that it can be applied to his life in the form of changes in attitudes and behavior in a better direction.

However, the reality of learning in school is different from what is expected. The learning process is just listening, doing tasks, and only focused on books so that learning in the classroom is very passive (Winoto and Prasetyo, 2020). This leads to a lack of interaction between teachers and students, or other students and students so that there is no effective learning and has an impact on low student learning outcomes. In addition, teachers are required to motivate students to be more active, creative, and innovative to various problems in the surrounding environment (Harefa, 2020). Teachers are also expected to be able to provide solutions in a problem based on their knowledge and understanding. The problem, if left unchecked, will have a bad impact on the learning process in the school. So, the solution that can be done is to apply a learning model that can make students actively involved in the learning process and solve problems.

One model that can be used as a solution is the problem based learning model. Problem based learning is a learning model that begins with problems found in a work environment to collect and integrate new knowledge developed by students independently (Aslan, 2021; Seibert, 2020). This model also focuses on the activeness of students in solving problems (Bosica et al., 2021). Students are not only given learning materials in the same direction in conventional learning methods. With the problem based learning model, the learning process is expected to take place naturally in the form of student activities to strengthen the student's problem-solving skills and independent character, so that students are able to formulate, solve and interpret problems (Nookhonga, and Wannapiroon, 2015). The learning stage begins with the provision of problems, followed by identifying problems, learners have discussions to equalize perceptions about problems, then design solutions and targets to be achieved at the end of learning.

Some research findings that state that the use of problem based learning (PBL) learning models can improve the learning outcomes of school

students. Aidoo et al. (2016) investigate the influence of Problem Based Learning (PBL) on students' learning outcomes in South Africa. The research design is quasi-experimental with 101 students. The results showed that there were significant differences in student learning outcomes between the control group and the experimental group. That means PBL is an effective way to teach so as to improve students' critical thinking and problem-solving skills. Sari (2018) found that PBL improved positively and significantly in learning outcomes and there were significant differences in learning outcomes between groups taught using PBL and those taught using PjBL.

In addition to the learning model, there are other factors that can improve students' learning outcomes (curiosity) towards the subjects. Binson, (2009) explains that curiosity is the creation of a desire to learn more in the mind. According to Litman (2005) explained that curiosity is the desire to know and see or the desire to experience so the desire to experience this motivates search behaviors that want to get new information. Student curiosity can support the learning process optimally because the student's curiosity encourages students to do the learning process actively and will improve learning outcomes later. The effectiveness of implementing the PBL model will be more effective if students have curiosity about the lesson. This will lead to better student learning outcomes.

Curiosity (Curiosity) a student is an internal factor that influences the learning process in the classroom. Students are expected to love challenges, innovate and be creative in creating something that can pride themselves, family and country. Curiosity is the initial capital for students in the learning process. The existence of curiosity, will encourage students to learn so that the effectiveness of the PBL model of student learning

Based on the initial findings at several past schools in Bekasi, among others MTSn, MAN explained from some teachers explained that the curiosity of social class students as large still has low Curiosity. Although there are also students who have high Curiosity. It has an impact on students' learning activities on lessons. Low curiosity will not improve learning outcomes while high curiosity results in an increase in learning outcomes later. That is because the curiosity of students will make students more active in learning so that later it will have an impact on student learning outcomes.

Akcaberk and Gultekin (2011) found that high school students in Ankara and Aksaray who had a higher curiosity about would improve learning skills. That means Curiosity increases the effectiveness of learning models so that it affects learning outcomes. Rohmawati (2018) found that curiosity towards the learning outcomes of students of I Elementary School in Sendangadi Cluster, Mlati, Sleman, Yogyakarta. This research was conducted on students who have low Curiosity and high Curiosity so that it can be known the effectiveness of the application of the PBL model with the curiosity of students so that later it will affect learning outcomes. The interaction between the PBL model and the student's curiosity will affect the student's learning outcomes later.

Based on the findings showed that in learning activities carried out by teachers and students are less attractive so that it leads to non-optimal student learning outcomes. Referring to the writing, an interesting learning model such as PBL and Curiosity students are needed that support so that it affects student learning outcomes. The purpose of this study is 1) to analyze the effect of the PBL model on learning outcomes; 2) to analyze Curiosity's influence on learning outcomes and 3) to analyze the influence between PBL and Curiosity models on learning outcomes.

METHOD

The approach used in this study is quantitative with many numbers using tested hypotheses proven in research. Creswell (2014) describes quantitative approaches chosen as research approaches when the research objectives are to test theories, reveal facts, show relationships between variables and provide descriptions. This research uses pseudo-experimental design, an experimental design that does not allow researchers to control and manipulate all relevant variables. This study used a 2x2 level treatment design with PBL and curoisity-free variables and variables bound to student learning outcomes.

The study was conducted on students at Islamic schools in Bekasi who were randomly taken by

taking 4 Islamic schools from MTSN and MAN that had the lowest level of learning outcomes showed that students still had low learning outcomes due to under KKM. Research/Population participants are students who are administratively enrolled and active in learning at MTSN and MAN. Sampling in this study used purposive sampling techniques. Sampling technique using purposive sampling is a process of selecting samples with certain criteria (Creswell, 2014) namely:

1. Sample are students of class IX MTSN and MAN class X who have the lowest average learning outcomes among other classes.

2. Students have low Curiosity levels and High Curiosity based on questionnaire results

The study participants/sample were students who had low Curiosity and high Curiosity. In the context of the study, the sample had similarities and differences in the dominant aspect of low curiosity. Based on the above description it can be concluded that sampling is done using pre tests in all classes IX and X and has relatively similar characteristics. The sample determination step is to choose a class that has the same characteristics such as age, level, number of students, and study time. In this technique, the selection of intervention groups and control groups is done randomly because the intervention is guidance that uses the principle of "guidance for all' so that each group has a low Curiosity level and high Curiosity.

The selection of samples was done by scattering questionnaires to measure curiosities from classes IX and X that had the lowest grades. After that, the selection of samples is done by choosing classes grouped in the most high curisoity levels and two classes and the most low curiosity levels there are two classes so that they are then grouped into 4 classes. Based on the existing population, the sample used is the number of students 137 people who will be tested early so that students will be selected who have low curiosity levels and high curiosity levels.

Each class is taken at random with a selected draw of 20 students per class so that the class group A1B1 (high Curiosity level students and and get treatment in the form of PBL models), A2B1 (students have low Curiosity and get treatment in the form of PBL models), A2B1 (students have high Curiosity and get treatment in the form of lectures) and A2B1 (students have low Curiosity and get treatment in the form of lecture models).

Data analysis techniques are conducted with average different tests. The data normality test uses shapiro wilk and homogeneity tests. The average different test uses independent t test sample, One Way Anova and Two Way Anova test.

RESULTS OF RESEARCH AND DISCUSSION

Based on the results of curiosity level students from four classes were randomly selected with a lottery system into 4 groups of students with low and high curiosity levels. The formation of the group is divided into four groups with 20 people for each group. The division of two groups with high curiosity levels was given PBL learning methods and lectures. While the two groups of low curiosity levels were given also PBL learning methods and lectures. The high curiosity group with the PBL (A1B1) method, the high curiosity group with lectures (A1B1), the low curiosity group with the PBL (A1B2) method and the low curiosity group with lectures (A1B1).

Before the intervention, a pre-test was given to see the student's learning outcomes for each group. Furthermore, after learning with two methods, namely PBL and lectures from groups with low curiosity levels and high curiosity. After that, a post test was given to find out the influence of the PBL and curiosity models on learning outcomes. The results of the data analysis are explained below.

This research is a quasi experimental experimental study conducted at the Islamic School in Bekasi, namely MTSN 1 and MAN 1 Bekasi School Year 2020- 2021. The data from pre-test and post-test results were conducted in four classes based on Curiosity levels and learning models provided in the intervention. Early student learning results obtained from pre-test grades are proficiency tests given to students before. Post-tests are conducted after students get treatment. Before taking the data, researchers conducted a trial of the problem instrument that will be used as a pre-test and post test problem.

The data description in this study provides an overview of the characteristics of the distribution of scores and research subjects for each of the subjects studied. This study took the subjects of as many as 80 respondents who took islamic school lessons in Bekasi which consisted of four classes selected based on Curiosity level on the spread of student questionnaires at the beginning of the study as the following picture.

The results of the study, which included a student Curiosity level overview based on questionnaires given to four classes were classified with high and low Curiosity levels. Curiosity level overview of Islamic School students in Bekasi before being given the PBL learning model can be seen from the questionnaire described table 2.

Table 2. Curiosity Level Frequency Distribution Of Early Pre-Test Students

Criteria	Class A		Class B		Class C		Class D	
High	22	59,46%	24	64,86%	13	35,14%	14	37,84%
Low	15	40,54%	13	35,14%	20	54,05%	26	70,27%
Total	37	100,00%	37	100,00%	33	100,00%	30	100,00%

Based on Table 2 it can be known that before being given the PBL learning model, an overview of curiosity level of Islamic School students in Bekasi. Grade 1 students have a high Curiosity rate of 22 people or 59.46% and a low Curiosity rate of 22 people or 59.46%. Grade 1 students have a high Curiosity rate of 24 people or 64.86% and a low Curiosity rate of 22 people or 35.14%. Grade 1 students have a high Curiosity rate of 13 people or 35.14% and a low Curiosity rate of 20 people or 54.05%. Graders have a high Curiosity rate of 14 people or 37.84% and a low Curiosity rate of 26 people or 70.27%.

The formation of the group is divided into four groups with 20 people for each group. The division of two groups with a high Curiosity level was given PBL learning methods and lectures. While the two groups of low Curiosity levels were given also PBL learning methods and lectures. The Curiosity group is high with the PBL method (A1B1), the High Curiosity group with lectures (A2B1), the low Curiosity group with the PBL method (A2B1) and the low Curiosity group with lectures (A2B1).

The learning results data consists of pre-test and post-test scores, where the pre-test is given before the treatment while the post-test is given after receiving treatment in four classes A1B1, A2B1, A1B2 and A2B2. Pre-test is done at the beginning of the meeting while the post-test is done at the end of the meeting. Here is the pre-test results data presented below.

Table 3. Distribution of Frequency of Student Learning Outcomes Pre Test Grades

Criteria	Class A1B1		Class A2B1		Class A1B2		Class A2B2	
0-50%	1	5%	5	25%	4	20%	12	60%
50%-100%	19	95%	15	75%	16	80%	8	40%
Total	20	100%	20	100%	20	100%	20	100%

Based on Table 3 it can be known that before being given the PBL learning model, an overview of the pre-test grade grades of Islamic School in Bekasi. Students of class A1B1 have a pre-test score of 0-50% as many as 1 person or 5% and a pre test score of 50%-100% as many

as 19 people or 95%. student. Class A2B1 has students of class A1B1 have a pre-test score of 0-50% as many as 5 people or 25% and a pre test score of 50%-100% as many as 15 people or 75%. student. Students of class A1B2 have a pre-test score of 0-50% as many as 4 people or 20% and a pre test score of 50%-100% as many as 16 people or 80. student. Students of class A2B2 have a pre-test score of 0-50% as many as 12 people or 60% and a pre-test score of 50%-100% of 8 people or 40%.

After students were treated with PBL learning models and lectures in each group with different Curiosity levels, an evaluation was conducted at the end of the treatment resulting in a post test score in Table 4.

Table 4. Post test Value Frequency Distribution

Category	Class A1B1		Class A2B1		Class A1B2		Class A2B2	
	Frek	%	Frek	%	Frek	%	Frek	%
0-50%	0	0%	9	45%	8	40%	9	45%
50% - 100%	20	100%	11	55%	12	60%	11	55%
Jumlah	20	100%	20	100%	20	100%	20	100%

Based on Table 4 it can be known that after being given the treatment of the PBL learning model, the student's post-test grade picture. Students of class A1B1 have a post test score of 0-50% as many as 0 people or 0% and post test scores of 50%-100% as many as 20 people or 100%. student. Class A2B1 has students of class A1B1 have post test scores of 0-50% as many as 9 people or 45% and post test scores of 50%-100% as many as 11 people or 55%. student. Students of class A1B2 have post test scores of 0-50% as many as 8 people or 40% and post test scores of 50%-100% as many as 12 people or 60%. Students of class A2B2 have post test scores of 0-50% as many as 9 people or 45% and post test scores of 50%-100% as many as 11 people or 55%.

The data normality test is conducted with the aim of finding out whether the pre-test and post test scores obtained from Class A1B1, Class A2B1 and Class A1B2 and class A2B2 come from normal distributed samples or not. The pair of null hypotheses and their counter-hypotheses are: H0 = the sample comes from a normal distributed population. H1 = sample comes from a population that does not normally distribute The statistical test used is the shapiro wilk test because the number of samples is less than 50 each by taking a signification (α) level of 0.05. The test criteria are H0 accepted if the signification value > 0.05, and H0 is rejected if the signification value < 0.05.

Based on the results of the normality test, the signification value of pre test and post test values in class A1B1 and class A2B1 > 0.05 so that the distribution of data is normal. While the pre test and post test values in classes A1B2 and A2B2 < 0.05 so that the distribution of data is not normal. If the data is normally distributed then it uses the t test but if the data is not normally distributed then use the Wilcoxon test.

PBL and Curiosity level learning models of deep learning outcomes through paired t-tests or paired t tests. Previously conducted a paired t test for each pre test and post test results of each class, namely class A1B1 and class A2B1. The results of the T Paired Sample PBL test in improving student learning outcomes can be seen in Table 5.

Table 5. Test Results t Paired Sample

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Post A1B1 - Pre-A1B1	4,650	3,924	0,877	2,814	6,486	5,300	19	0,000
Pair 2	Post A2B1 - Pre-A2B1	-0,200	3,694	0,826	-1,929	1,529	-0,242	19	0,811

Table 5 shows that the results of the t Paired Sample from the pre test or post test of class A1B1 are significant differences. Because of the significance of the < 0.05, the PBL learning model used was effective in improving learning outcomes in groups of students with high Curiosity levels at $\alpha = 0.05$. The significance value of t calculated from the results of the class A1B1 pre test indicates a significant difference between the pre test and post test results by comparing the significance of the t count by 0.000 < 0.05. That means the PBL learning model has an effect on students' learning outcomes at a high Curiosity level.

The results of the t Paired Sample from the pre test or post test of class A2B1 did not differ significantly. Because of the significance of the > 0.05, the lecture learning model used was not effective in improving historical learning outcomes in groups of students with high Curiosity levels at $\alpha = 0.05$. The significance value of t calculated from the A2B1 class pre test results indicates the absence of a significant difference between the pre test and post test results by comparing the significance of the t count by 0.000 < 0.05. That means the learning model with lectures affects students' learning outcomes at a high Curiosity level.

The Wilcoxon test was conducted on data that was not normally distributed in this case the class A1B2 and class A2B2 groups. Paired test results for abnormal data described Table 6

Table 6. Wilcoxon Test Results

Information	Pre-A1B2 - Post A1B2	Pre-A2B2 - Post A2B2
Z	-1,704[a]	-3,387[a]
Asymp. Sig. (2-tailed)	0,088	0,001

Table 6 shows that wilcoxon test results from pre test or post test of class A1B2 are significant differences. Because of the significance of the Z count > 0.05, the PBL learning model used was ineffective in improving learning outcomes in groups of students with low Curiosity levels at $\alpha = 0.05$. The significance value Z count from the class A1B2 pre-test results indicates the absence of a significant difference between the pre test and post test results by comparing the significance of the calculated Z by 0.088 > 0.05. That means the PBL learning model is not against students' learning outcomes at low Curiosity levels.

Wilcoxon test from pre test or post test of class A2B2 there is a significant difference. Because of the significance of the Z count < 0.05, the lecture learning model used was effective in improving learning outcomes in groups of students with low Curiosity levels at α = 0.05. The significance value Z calculated from the results of the class A1B2 pre test showed a significant difference between the pre test and post test results by comparing the significance of the calculated Z by 0.001 < 0.05. That means the lecture learning model has an effect on students' learning outcomes at a low Curiosity level.

The results of hypothesis testing are described below.

a. Influence of PBL Model on Learning Outcomes

The effect of the PBL model on learning outcomes is based on the t Independent Samples Test by testing different N-gain percent of the inquiry method with the lecture method at high and low Curiosity levels. This hypothesis test was conducted with the results of different tests of two groups of both groups of students with high and low Curiosity levels with the results of two methods, namely PBL learning methods and lectures such as Table 7.

Table 7. Independent Results two test sample

Group	*Mean different*	t count	*p value*	Information
A1B1-A2B1	60,620	5,220	0,000	Significant
A1B2- A2B2	22,957	-3,909	0,000	Significant

Independent Two Test Sample results showed that there was a difference in learning outcomes from the high Curiosity group with the PBL (A1B1) method and the high Curiosity group with the lecture method (A2B1) with a p value of 0.000 < 0.05 meaning there was a difference in student learning outcomes with high Curiosity with PBL methods and lecture methods. The average results of the study results of both groups showed positive differences where the learning outcomes of students with high Curiosity levels with higher PBL than the learning outcomes of students with high Curiosity levels with lecture methods.

The test results showed that there were differences in learning outcomes from the low Curiosity group with the PBL (A1B2) method and the low Curiosity group with a lecture (A2B2) with a p value of 0.000 < 0.05. That means there are differences in student learning outcomes with low Curiosity with the PBL method and the lecture method The average learning outcomes of both groups showed there were positive differences where the learning outcomes of students with low Curiosity levels with PBL were higher than the learning outcomes of students with low Curiosity levels with lecture methods.

Based on the results of the Independent Two Test Sample both learning methods with a high level of Curiosity showed that there were differences in learning outcomes with the PBL method and the lecture method. That means hypothesis one that states that the PBL model has an effect on students' learning outcomes, is proven.

a. Curiosity-Level Influence on Learning Outcomes (Hypothesis Two)

Curiosity's level of influence on learning outcomes is based on the t Independent Samples Test by testing learning outcomes by comparing high and low Curiosity levels with PBL and lecture methods. This hypothesis test was conducted with the results of different tests of two groups of both groups of students with high and low Curiosity levels such as Table 8.

Table 8. Independent Results two test sample

Group	*Mean different*	t count	*p value*	Information
A1B1 - A1B2	55,345	7,773	0,000	Significant
A2B3 - A2B2	28,232	2,592	0,013	Significant

Table 8 shows that differences in learning outcomes from the high Curiosity group (A1B1) and the low Curiosity group (A1B2) with the PBL method with a p value of 0.000 < 0.05 mean there is a difference in student learning outcomes with high and low Curiosity with social inquiry methods. The average study results of the two groups showed positive differences in high and low Curiosity levels with the PBL method. The learning outcomes of students with high Curiosity levels rather than the learning outcomes of students with low Curiosity levels showed significant differences. It was explained that curiosity's recall had an effect on students' learning with the PBL method.

The test results showed that there was a difference in learning results from the high Curiosity group with the lecture method (A2B3) and the low Curiosity group with the lecture method (A2B2) with a p value of 0.013 < 0.05. That means there are differences in student learning outcomes with High and Low Curiosity with lecture methods The average test results of both groups showed positive differences where the learning outcomes of students with high and low Curiosity levels with lecture methods proved significant.

Based on the results of the Independent Two Test Sample test, curiosity levels are high and low proved to be significant differences both with the PBL method and the lecture method. That suggests hypothesis two that suggests curiosity levels have a proven effect on students' learning outcomes.

b. The Effect of PBL and Curiosity on Learning Outcomes

The influence between PBL and Curiosity on learning outcomes is done with one way Anova. The results of the One Way Anova test are described in Table 9.

Table 9. One Way Anova Results

Table	*Sum of Squares*	*Df*	*Mean Square*	F	Sig.
Between Groups	45694,371	3	15231,457	17,987	0,000
Within Groups	64358,686	76	846,825		
Total	110053,057	79			

Table 9 explains that a calculated F value of 17.987 with a significant rate of 0.00 < 0.05 means hypothesis three that show that PBL and Curiosity have a significant effect together on learning outcomes, is proven to be true. The results of Anova's one way test showed that PBL and Curiosity were against the learning outcomes of Islamic School students in Bekasi.

c. Interaction Between PBL and Curiosity On Learning Outcomes

The interaction between PBL and Curiosity on learning outcomes is explained by the results of Anova's two ways described in Table 10.

Table 10. Two Way Anova Results

F	df1	df2	Sig.
11,638	3	76	0,000

Table 10 explains that the calculated F value of 11.638 with a significant rate of 0.00 < 0.05 means hypothesis four which indicates that there is an interaction between PBL and Curiosity towards learning outcomes. Two Way Anova's test results showed that PBL and Curiosity's interlation of student learning outcomes proved significant so the fourth hypothesis was proven.

Based on the results of the test, it can be explained a more detailed discussion about the following research haisl.

1. Influence of PBL Learning Model on Learning Outcomes

Based on the results of hypothesis testing shows that both learning methods with high Curiosity levels show that there are differences in learning outcomes with the PBL method and the lecture method. That means hypothesis one that states that the PBL model has an effect on students' learning outcomes, is proven. This is explained by differences in learning outcomes from the high Curiosity group with the lecture method (A2B3) and the low Curiosity group with the lecture method (A2B2). That means there are differences in student learning outcomes with High and Low Curiosity with lecture methods The average test results of both groups showed positive differences where the learning outcomes of students with high and low Curiosity levels with lecture methods proved significant.

The results of this study are in accordance with the opinions of Aidoo et al. (2016) and Sari (2018) which revealed that the PBL model then the feelings arising from within students to learn will become more open and interesting learned by them. Learning is a lifelong activity that involves physical and emotional sense that can be formed and achieve success when done happily. PBL is one of the learning strategies that help students to think critically and creatively in accordance with the purpose of learning because it emphasizes to the student experience to solve social problems through problem-solving steps and procedures so as to improve learning outcomes So that they actively use the brain, either find the main idea, solve the problem, or apply what they just learned to one problem that exists in real life.

The test results explained that the implementation of learning using the PBL learning model affects students' learning outcomes. This was seen by differences in student learning outcomes in two groups of students who used the PBL method and lectures. It can be interpreted, that when students follow learning activities using learning models that are different from learning outcomes with lecture methods.

There was a difference in learning outcomes between classes of students using the PBL and Curiosity learning models on lessons, accepted. So it turns out that the learning outcomes of students who use the PBL and Curiosity learning models are higher than students who use lecture learning models This shows that the PBL and Curiosity learning models have an effect on learning outcomes. Current conditions, there are still many teachers who use simple learning models that are less attractive to students in following learning, resulting in low student learning outcomes. In order for the learning of charging systems more attractive and can improve the ability of students, an interactive learning model is needed and a teacher must be able to use the media. The use of PBL learning models and curiosity enhancements, will make students interested in taking lessons, because it suits the characteristics it has. Students' interest in following the learning process will help students receive the material delivered and will help students to be more diligent in learning, so that their learning outcomes also increase.

2. Curiosity's Influence on Learning Outcomes

The test results showed that hypothesis two that stated that curiosity levels had an effect on haisl learning, proved to be true. It was based on positive differences between students' learning outcomes with high and low Curiosity levels well with the PBL method and the lecture method proved significant. These results explain that curiosity has an effect on learning outcomes. These results are in line with research by Akcaberk and Gultekin (2011) and Rohmawati (2018) who found that curiosity can improve learning outcomes.

Curiosity (Curiosity) a student is an internal factor that influences the learning process in the classroom. Students are expected to love challenges, innovate and be creative in creating something that can pride themselves, family and country. Curiosity is the initial capital for students in the learning process. The existence of curiosity, will encourage students to fulfill their curiosity. For the sake of fulfilling his curiosity that is what will lead students to the process of searching and finding. Efforts that students can do in the process of searching include asking directly to the teacher, discussing with friends and looking for some material in several other book sources besides handbooks or the internet.

With the increase in student curiosity, it can be expected to improve student learning outcomes. Curiosity is an important component in the learning process basically emphasizes students in order to find out what they will learn and what they learn based on the activities guided by the teacher that is why the development of curiosity in learning is needed for students to improve learning outcomes.

3. Influence Between PBL and Curiosity Models on Student Learning Outcomes

Test results with One Way Anova showed that hypothesis three, which showed that PBL and Curiosity had a significant effect together on learning outcomes, proved acceptable. The results of Anova's one way test showed that PBL and Curiosity were against the learning outcomes of Islamic School students in Bekasi

The PBL model and curiosity are related in improving learning outcomes. The linkage is that if students apply the inquiry model in learning and use high curiosity in the classroom, especially in lessons, it will increase the level of understanding and quality of student learning in teaching and learning activities. With the improvement of understanding and quality of student learning, it can improve student learning outcomes on lessons.

The PBL model in learning in students can make student learning more effective and efficient, both inside and outside the classroom, so as to improve the quality of students in learning. In addition, by increasing curiosity, students can increase and unleash the potential that exists within him to be used in learning. Students who have high curiosity, tend to continue to seek information and learn about a lesson or certain things, it will increase students' activities and desires in learning and can improve students' learning outcomes in lessons. Based on such exposure, it can be suspected that the PBL model and curiosity affect student learning outcomes. Basically, learning outcomes can be affected by various factors. But this time, researchers only focused on the PBL model and curiosity (Curiosity) and in the context of learning outcomes that already exist in teaching and learning activities in schools. Based on the description, it is suspected that the PBL model and curiosity have a positive effect on students' learning outcomes.

CONCLUSION

Based on the results of the data analysis, it can be concluded that 1) PBL learning model affects student learning outcomes at Islamic Schools in Bekasi; This is evidenced by a significant difference between groups using the PBL model and groups using the lecture method; 2) Curiosity affects the learning outcomes of classroom students at the Islamic School in Bekasi. This is explained by significant differences in the learning outcomes of students who have high curiosity levels and low curiosity with PBL learning models and 3) PBL and Curiosity models affect student learning outcomes at the Islamic School in Bekasi. This is evidenced by differences in learning outcomes from groups with high and low curiosity levels with PBL models and lectures.

Suggestions that can be submitted in this study include 1) Achievement of learning outcomes with the use of learning models that are as expected, recommended in the application of a

learning model; 2) Further research so that the application of learning models uses analytical tools that accommodate influences such as multiple linear regression and SEM.

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