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# The Impact of Problem Based Learning Model for the Result of Social Subject Grade VIII in SMP Cinta Rakyat 3 Pematang Siantar Year 2022/2023

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ABSTRACT

The research used a quasi-experimental method with a Noneqivalent Control Group Design. This design consists of two stages, namely pretest and posttest. The sample in the research in class VIII-C was 32 students and VIII-D was 32 students. The research instrument used was the learning outcomes test. From the results of the analysis carried out in the experimental class, the average pretest score was 47.34 and posttest was 73.91. Meanwhile, in the control class the average pretest score was 38.59 and the average posttest score was 53.12. The results of hypothesis testing using the independent sample t-test obtained tcount 4.706 > ttable 1.295 and the significance was 0.000 <0.005 so it can be concluded that the learning outcomes of students taught using the problem based learning model are influential and good for use in learning.

**INTRODUCTION**

Abilities in understanding the material are definitely different from each other. So, not all students are able to understand the material quickly and accurately. The teacher's accuracy and ability in creating a conducive classroom atmosphere will have a big influence on student learning success. Because of these differences, an appropriate teaching model is needed so that the teacher's knowledge and knowledge can be channeled well and provide enjoyable learning for the students themselves.

A teacher's failure in learning activities is not solely because they do not understand the subject matter or materials. But also because teachers do not use different learning models and media are not used. Teachers often use conventional learning models, such as lectures, taking notes, or assignments. This causes students to feel bored and less enthusiastic about learning. As a result, student learning outcomes decrease. By using varied learning models and other teachers who have a sufficient level of creativity, student activity and creativity will increase.

There are more theories related to the subject of social studies that relate to individuals involved in economic activities. Making students want to know how to learn is the teacher's real job when presenting this material. not only provides a sufficient amount of information, but also gets students involved in information-seeking activities as much as possible. Given this phenomenon, it is appropriate that in learning economic activity actors must carry out innovation. Improvements are needed in the learning process so that the teaching and learning process can be carried out well and obtain optimal results by using the *problem based learning model*.

*The problem based* learning model is a learning approach that seeks to apply problems that occur in the real world as a context for students to practice how to think critically and gain skills in problem solving, as well as gaining important knowledge and concepts from the teaching material. being discussed.

Based on the results of observations that the author has made at Cinta Rakyat 3 Private Middle School Pematang Siantar on 20-21 July 2023 and information obtained from Mrs. Susi Susanti Gultom, S.Pd (Teacher who teaches at Cinta Rakyat 3 Private Middle School Pematang Siantar), the results Student learning is still relatively low. The reason for the low student learning outcomes is because in the process of delivering material, teachers still focus on ordinary lecture activities, which are monotonous, even boring. Most of the students at Cinta Rakyat 3 Pematang Siantar Private Middle School, the teaching and learning process takes place in class, and the student learning outcomes are less than optimal. It can be seen from the above student learning results obtained by class VIII students when taking the social studies exam that it is still low or that there are still many students who get scores below the Minimum Completeness Criteria (KKM), where the KKM set by the school for the social sciences subject is 75.

Meanwhile, the social studies teacher hopes that 95% of the 160 students will succeed in achieving a score above the KKM in the Mid-Semester Examination (UTS) in the social studies subject, but in reality, seen from the table above, many students failed the social studies subject exam, whereas students who passed the exam There were only 72 students in social studies or 45% and 88 students or 55% did not complete it. The results of the mid-semester assessment of class VIII students show that their learning outcomes are still low.

Based on the background of this problem, the researcher wants to study further to conduct research with the title The Influence of the ***Problem Based*** **Learning Model on Social Studies Learning Outcomes for Class VIII Students at Cinta Rakyat 3 Private Middle School Pematang Siantar FY 2022/2023** .

## THEORETICAL FRAMEWORK

1. Learning outcomes

According to Susanto (2013: 5) that learning outcomes are changes that occur in students as a result of learning activities including aspects of knowledge, attitudes and skills. According to Rifa'I and Anni (2016:71) that learning outcomes are changes in behavior that students obtain after experiencing learning activities. Understanding learning outcomes from various expert opinions, it can be concluded that learning outcomes are changes in a person after experiencing the learning process, these changes involve aspects of knowledge (cognitive), attitudes (affective) and skills (psychomotor).

2. Instructional Media

A learning model is a procedure for organizing learning experiences to achieve certain learning goals and functions as a guide for learning designers and teachers in designing and implementing learning and teaching processes. According to Adi Suprihatiningrum (2013:142) a learning model is a conceptual framework that describes procedures for organizing learning experiences to achieve learning goals. The learning model functions as a teacher's guide in planning and implementing learning activities.

According to Shoimin (2014: 23), the purpose of a learning model is a conceptual framework that describes systematic procedures for organizing learning experiences to achieve certain learning goals, and functions as a guide for learning designers and teachers in planning learning activities.

3. Problem Based Learning Model

According to Wena (2013: 91) *problem based learning* (PBL) is a learning strategy that exposes students to practical problems as a basis for learning or in other words students learn through problems . *Problem based learning* (PBL) is a learning approach that presents contextual problems so that it stimulates students to learn. In a class that applies a problem-based learning model, students work in groups to solve real-world problems .

According to Arends (2013: 102) "PBL is designed primarily to help students develop their thinking, problem solving and intellectual skills; learn adult roles through various real or simulated situations; and become independent and autonomous students".

## METHODS

The type of research carried out is descriptive quantitative research. According to Sugiyono (2019:2) research methods are a scientific way to obtain data with certain goals and uses. In this research, researchers used quantitative research methods. Quantitative methods are methods based on the philosophy of positivism. This method is a scientific/scientific method because it meets scientific principles, namely concrete/empirical, objective, measurable, rational and systematic.

Based on the researcher's title "The Influence of the Problem Based Learning Model on Social Studies Learning Outcomes for Class VIII SMP PRIVATE CINTA

RAKYAT 3 Pematang Siantar FY 2022/2023." The location of this research was carried out at Cinta Rakyat 3 Pematangsiantar Private Middle School, precisely on Jl. Batik, Bane, District. North Siantar, Pematang Siantar City, North Sumatra. This research was carried out on class VIII students for the 2022/2023 academic year. This research will be carried out in August-October 2023 at Cinta Rakyat 3 Pematangsiantar Private Middle School Academic Year 2022/2023. The population in this study was class VIII A, VIII B, VIII C, VIII D, VIII E with a total of 160 students, so the total population used in this study was 80 people. The samples that will be used in the research are class VIII C as the experimental class and class VIII D as the control class.

## RESULTS & DISCUSSION

### Result

### Instrument Validity Test

The validity test in this study used SPSS version 22 and Ms. Excel 2007. The level used to test the validity of the instrument is 0.05 %. Based on the results of the validity test, the number of questions was tested , namely 25 questions.

The statement item is declared valid if the value of rcount ≥ rtable with a significance level of α = 0.05 . From the results of the validity test, it can be seen that the correlation between each question item and the total score of n = 31 shows that the r table is 0.355. This means that if the correlation value is more than 0.355 then the question is considered invalid.

**Table 1 Validity of Learning Media Questionnaire Items**

| Question Items | rcalculate with excel | *r* calculate with SPSS | *r* table | Decision |
|---|---|---|---|---|
| 1 | 0.424739443 | 0.425 | 0.3494 | VALID |
| 2 | 0.453054955 | 0.453 | 0.3494 | VALID |
| 3 | 0.44207474 | 0.442 | 0.3494 | VALID |
| 4 | -0.213126559 | -0.213 | 0.3494 | INVALID |
| 5 | 0,372009423 | 0,372 | 0,3494 | VALID |
| 6 | 0,099692116 | 0,1 | 0,3494 | TIDAK VALID |
| 7 | 0,402494754 | 0,402 | 0,3494 | VALID |
| 8 | 0,417846163 | 0,418 | 0,3494 | VALID |
| 9 | 0,421030222 | 0,421 | 0,3494 | VALID |
| 10 | 0,636672501 | 0,637 | 0,3494 | VALID |
| 11 | 0,080115165 | 0.08 | 0.3494 | INVALID |
| 12 | 0.44854898 | 0.449 | 0.3494 | VALID |
| 13 | 0.369574579 | 0.37 | 0.3494 | VALID |
| 14 | 0.362630393 | 0.363 | 0.3494 | VALID |
| 15 | 0.385723909 | 0.386 | 0.3494 | VALID |
| 16 | 0.248980664 | 0.249 | 0.3494 | INVALID |
| 17 | 0.455489799 | 0.455 | 0,3494 | VALID |
| 18 | 0,560823052 | 0,561 | 0,3494 | VALID |
| 19 | 0,336821349 | 0,337 | 0,3494 | TIDAK VALID |

| | | | | |
|---|---|---|---|---|
| 20 | 0,465134243 | 0,465 | 0,3494 | VALID |
| 21 | 0,452764746 | 0,453 | 0,3494 | VALID |
| 22 | 0,600485726 | 0,6 | 0,3494 | VALID |
| 23 | 0,710111636 | 0,71 | 0,3494 | VALID |
| 24 | 0.436976458 | 0.437 | 0.3494 | VALID |
| 25 | 0.412292863 | 0.412 | 0.3494 | VALID |

In calculating the test questions in the table with a total of 25 questions, the conclusion is that 20 questions were declared valid and 5 questions were declared invalid.

**Instrument Reliability Test**

For the questionnaire reliability criteria, if $r_{count} > r_{table}$ with a significant level ($\alpha = 0.05$ ) then the questionnaire is said to be reliable. However, if $r_{count} \leq r_{table}$ then the questionnaire is considered to have no reliability. If the *Cronbach Alpha value is* > 0.60 it is said to be reliable, but if the *Cronbach Alpha value is* < *0.60* it is said to be unreliable.

Based on the instrument reliability test on the questions carried out at Cinta Rakyat 3 Private Middle School, Pematang Siantar, calculations were carried out using *SPSS Version* 22 with the *Cronbach's alpha formula* . Reliability results were obtained with a coefficient of 0.770 in the attachment which is included in the high category based on the reliability coefficient of the questions in chapter III. So the conclusion is that the test is reliable.

**Test Difficulty Level**

**Table 2**
**Test Difficulty Level**

| Question | Range | Difficulty Level | Information |
|---|---|---|---|
| 1 | 0.71-1.00 | 0.84 | Easy |
| 2 | 0.31-0.70 | 0.56 | Medium |
| 3 | 0.31-0.70 | 0.69 | Medium |
| 4 | 0.31-0.70 | 0.69 | Medium |
| 5 | 0.71-1.00 | 0.78 | Easy |
| 6 | 0.31-0.70 | 0.59 | Medium |
| 7 | 0.70-1.00 | 0.72 | Easy |
| 8 | 0.70-1.00 | 0.72 | Easy |
| 9 | 0.31-0.70 | 0.50 | Medium |
| 10 | 0.31-0.70 | 0.53 | Medium |
| 11 | 0.71-1.00 | 0.72 | Easy |
| 12 | 0.71-1.00 | 0.72 | Easy |
| 13 | 0.31-0.70 | 0.56 | Medium |
| 14 | 0.70-1.00 | 0.75 | Easy |
| 15 | 0.70-1.00 | 0.81 | Easy |
| 16 | 0.70-1.00 | 0.72 | Easy |
| 17 | 0.70-1.00 | 0.78 | Easy |
| 18 | 0.31-0.70 | 0.41 | Currently |
| 19 | 0.31-0.70 | 0.63 | Currently |
| 20 | 0.31-0.70 | 0.63 | Currently |

| | | | |
|---|---|---|---|
| 21 | 0.31-0.70 | 0.66 | Currently |
| 22 | 0.31-0.70 | 0.50 | Currently |
| 23 | 0.31-0.70 | 0.69 | Currently |
| 24 | 0.31-0.70 | 0.59 | Currently |
| 25 | 0.31-0.70 | 0.69 | Currently |

Based on table 2, it can be concluded that each question item has varying levels of difficulty. The smallest level of difficulty value is 0.41 found in question number 18. The highest level of difficulty value is 0.84 found in question number 1. This means that each question item is suitable to be tested on the research sample.

**Test the Discriminating Power of Questions**

**Table 3**
**Test the Discriminating Power of Questions**

| Question No | r count | Information |
|---|---|---|
| 1 | 0.425 | Good |
| 2 | 0.453 | Good |
| 3 | 0.442 | Good |
| 4 | 0.213 | Enough |
| 5 | 0.372 | Enough |
| 6 | 0.100 | Bad |
| 7 | 0.402 | Good |
| 8 | 0.418 | Good |
| 9 | 0.421 | Good |
| 10 | 0.637 | Good |
| 11 | 0.080 | Bad |
| 12 | 0.449 | Good |
| 13 | 0.370 | Enough |
| 14 | 0.363 | Enough |
| 15 | 0.386 | Enough |
| 16 | 0.249 | Enough |
| 17 | 0.455 | Good |
| 18 | 0.561 | Good |
| 19 | 0.337 | Enough |
| 20 | 0.465 | Good |
| 21 | 0.453 | Good |
| 22 | 0.600 | Good |
| 23 | 0.710 | Very well |
| 24 | 0.437 | Good |
| 25 | 0.412 | Good |

Based on the results of calculating the differentiating power of the questions, 15 questions were obtained in the good category, 7 questions in the fair category, 1 question in the very good category and 2 questions in the poor category. This means that each question item has a different distinguishing power.

So the results of the analysis on calculating the validity of test items, test reliability, level of difficulty of test items, and the differentiating power of test items, the conclusion is that this research instrument meets the requirements to be used in data collection.

**Descriptive Research Result Data**

**Data from pretest results for class VIII C and class VIII D**

**Table 4**

***Pretest* Result Data for Class VIII-C and Class VIII-D Middle School**

| Class | Average | The highest score | Lowest Value |
|---|---|---|---|
| VIII-C Middle School | 47.34 | 85 | 30 |
| VIII-D Middle School | 38.59 | 65 | 20 |

Based on the table above, it can be seen that the average initial ability of students before being given treatment in class VIII-C was an average of 47.34 with the highest score being 85 and the lowest score being 30. Meanwhile in class VIII-D the average initial ability of participants students' score was 38.59 with the highest score being 65 and the lowest score being 20.

**Posttest result data for class VIII C and class VIII D**

**Table 5**

***Posttest* Result Data for Class VIII-C and Class VIII-D Middle School**

| Class | Average | The highest score | Lowest Value |
|---|---|---|---|
| VIII-C Middle School | 73.91 | 90 | 45 |
| VIII-D Middle School | 53.12 | 65 | 30 |

Based on the table above, it can be seen that the average *posttest learning result* for class VIII-C is 73.91 with the highest score being 90 and the lowest score being 45. Meanwhile in class VIII-D the average *posttest result is* 53.12 with a score of The highest value is 65 and the lowest value is 30.

**Data on Improving Student Learning Outcomes**

**Table 6**

**Data on Improving Learning Outcomes for Class VIII-C and Class VIII-D Middle School students**

| Class | Average | | Enhancement |
|---|---|---|---|
| | ***Pretest*** | ***Posttest*** | |
| VIII-C Middle School | 47.34 | 73.91 | 11,621 |
| VIII-D Middle School | 38.59 | 53.12 | 9,899 |

Data on improving student learning outcomes for class VIII-C and class VIII-D SMP are presented as follows:

**Figure 1**

**Bar diagram of increasing student learning outcomes**

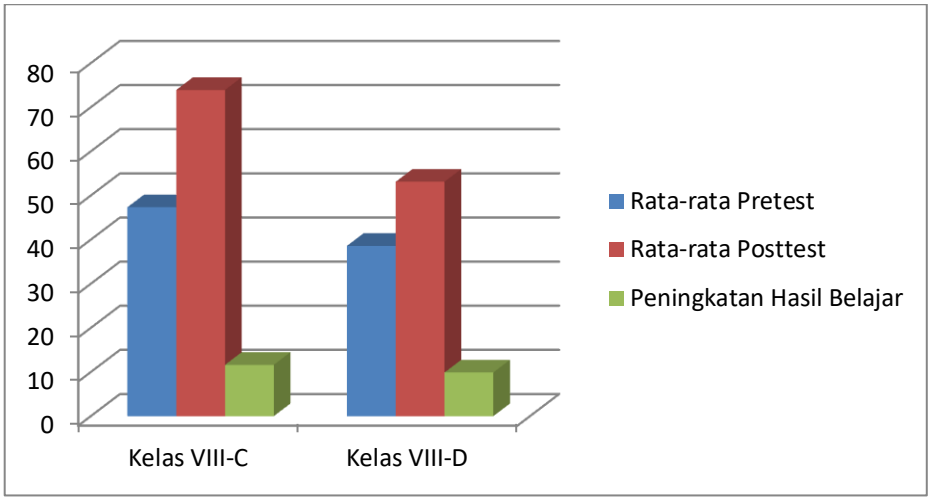
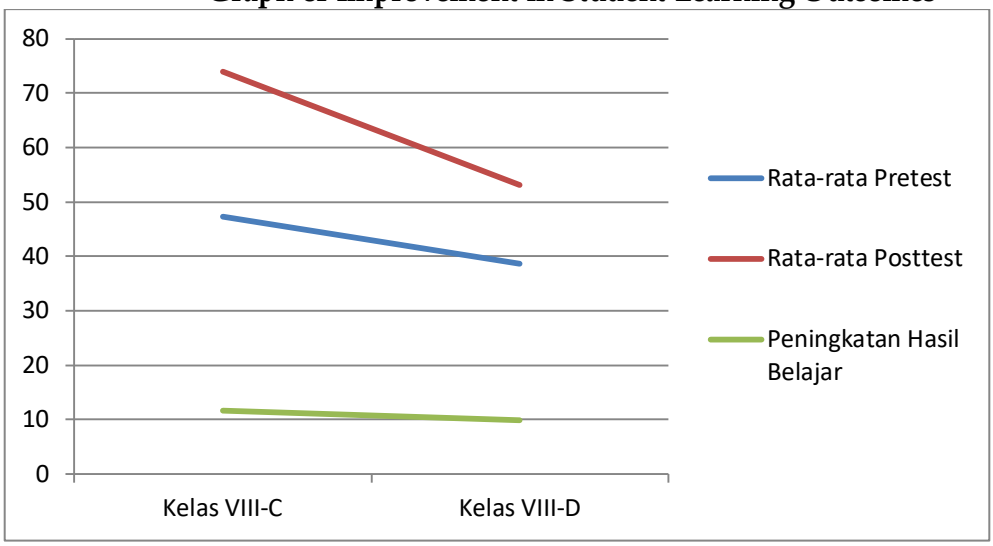



**Figure 2**
**Graph of Improvement in Student Learning Outcomes**




Based on the data above, it can be seen that the average learning outcomes of students in class VIII-C (experimental class) have increased by 11,621 and the average learning outcomes for class VIII-D (control class) have increased by 9,899. Based on this table, the learning outcomes of student economic activity actors in the *problem based learning group* are better than the learning outcomes of student economic activity actors in the conventional learning group.

**Data Normality Test**

**Figure 1. Normal Probability P-Plot Curve**

Based on the test results of the p-plot graph, it shows the conclusion that the data is spread around the diagonal line, so the data is declared normal. This can be seen in figure 1 above.

**Table 7**
**Normality Testing**
**Tests of Normality**

| | Class | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|---|
| | | Statistics | Df | Sig. | Statistics | df | Sig. |
| Student learning outcomes | Pretest Experiment | ,110 | 32 | ,200 * | ,933 | 32 | ,046 |
| | Experiment Posttest | .137 | 32 | .133 | ,954 | 32 | ,183 |
| | Control Pretest | .136 | 32 | .140 | .934 | 32 | .050 |
| | Posttest Kontrol | .144 | 32 | .089 | .955 | 32 | .204 |

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Based on the table data, it shows that the significance value (sig) based on mean is greater than the value α = 0.05 . Table 4.10 obtains calculations using *SPSS version* 22, it is known that the experimental *pretest ( problem based learning* ) for class VIII-C has 0.200 > 0.05, and the experimental *posttest* ( *problem based learning* ) has a significance value of 0.133 > 0.05. Meanwhile, the control class VIII-D had 0.140 > 0.05, and the control *posttest* had 0.089 > 0.05. From calculations using *SPSS version* 22, it can be seen that *the pretest* and *posttest* of the experimental class and control class which were used as research samples have a normal distribution of data, because the *pretest* and *posttest scores* of the experimental class and the *pretest* and *posttest scores* of the control class are > from the significance test level, namely 0.05 so the data is normally distributed.

**Multicollinearity Test**

**Table 5 Multicollinearity Test Results**

**Coefficients [a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 20,190 | 9,547 | | 2,115 | ,037 | | |
| | Instructional Media | ,420 | ,090 | ,409 | 4,636 | ,000 | ,949 | 1,053 |
| | Critical Thinking Ability | ,207 | ,086 | ,213 | 2,414 | .017 | ,949 | 1,053 |

a. Dependent Variable: Learning Achievement

The assumption of Tolerance and Variance Inflation Factor (VIF) can be stated that if VIF > 10 and Tolerance value < 0.10 then multicollinearity occurs, and if VIF < 10 and Tolerance value > 0.10 then multicollinearity does not occur. Based on table 5, Tolerance > 0.10 and Variance Inflation Factor (VIF) < 10, it can be concluded that there are no symptoms of multicollinearity in the data.

**Data Homogeneity Test**

**Table 6**
**Homogeneity Testing**
**Test of Homogeneity of Variance**

| | | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|---|
| Hasil Belajar Siswa | Based on Mea | .564 | 1 | 62 | .456 |
| | Based on Median | .499 | 1 | 62 | .483 |
| | Based on Median and with adjusted df | .499 | 1 | 59.648 | .483 |
| | Based on trimmed mean | .613 | 1 | 62 | .437 |

Based on the results of data testing using *SPSS version* 22, the Sig value = 0.456. In this case, it means that the sig value is greater than the α value, where 0.456 > 0.05 . So it can be concluded that the data from both the experimental class and the control class are homogeneous so that there is no difference between the two and the existing data can be said to be normal and have the same variance . Each class has similarities between students who excel and also students who are poor or slow in learning.

**Hypothesis test**

**Table 7**
**Hypothesis Testing for Experimental Class and Control Class**
**Independent Samples Test**

| | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | |
|---|---|---|---|---|---|---|---|---|
| | F | Sig. | T | Df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |

| | | | | | | | | | Lower | Upper |
|---|---|---|---|---|---|---|---|---|---|---|
| Hasil Belajar Siswa | Equal variances assumed | .564 | .456 | 4.706 | 62 | .000 | 12.500 | 2.656 | 7.190 | 17.810 |
| | Equal variances not assumed | | | 4.706 | 61.386 | .000 | 12.500 | 2.656 | 7.189 | 17.811 |

*SPSS version 22* results , it shows that the significance of the $t_{table}$ is 0.05 and the total sample size is 64-2 = 62 students with a $t_{table}$ of 1,295. Based on the *independent sample t-test* , $t_{count} > t_{table}$ (4,706 > means the alternative hypothesis (Ha) is accepted. By testing the hypothesis it can be concluded that there is a significant difference in learning outcomes between classes that use *the problem based learning* model and classes that use the model. conventional learning on material about actors in economic activities in class VIII SMP Private Cinta Rakyat 3 Pematang Siantar.

**Discussion**

Study Which done in JUNIOR HIGH SCHOOL Private Love the People 3 Pematang Siantar This involving two classes, namely the experimental class and the control class. Before giving The treatments from both classes were given *a pretest* first to find out students' initial abilities. The average value for the experimental class is 47 .34 And For control class is 38.59.

After knowing the initial abilities of students in both classes, a meeting was held furthermore student given learning Which different. Student on class experiment taught with use model learning *problem based learning* And on student class control No with use model *problem based* learning but rather uses a learning model conventional. After being given different treatment in the experimental class and class control, on end meeting after material finished taught, student given a posttest to determine student learning outcomes. As for the average value *posttest* on class experiment is 73 .91 whereas class control is 53.12 .

Based on the average posttest scores for the two classes, it can be seen that the average The experimental class *posttest* score was higher than the average *posttest score* control class using the *t test* to prove whether there is an influence Which significant And variation from results learning.

From the results obtained in inferential analysis, it illustrates the existence of the influence of the *problem based* learning model on students' social studies learning outcomes at Cinta Rakyat 3 Private Middle School Pematang Siantar. This can be seen in testing hypothesis using the *independent sample t-test* , where the data is tested that is results *posttest* from second class. Based on results Study Which obtained from this test, it can be concluded that student learning outcomes increase after used model *problem based* learning compared without using models learning *problem based learning* .

In hypothesis testing using the *independent sample t- test test* with the data tested are the results of the posttest for the experimental class and class control with use level

significant 5 % or = 0 .05 . Obtained *t* count is 4,706, so it is known that *t* count > *t* table (4,706 > 0.05 ) , which means hypothesis alternative accepted. With This show that (1) there is difference results Study student use model learning *problem based learning* with model learning conventional, (2) results Study student using a *problem based learning model* is better than results Study student with use model learning conventional. Matter This is known from the average test scores on student learning outcomes using the model *problem based learning* is higher than the average student learning achievement test score using a conventional learning model for class VIII SMP students Private Love the People 3 Pematang Siantar.

## CONCLUSIONS AND RECOMMENDATIONS

*Problem based learning* model has an influence on student learning outcomes, because during the learning process there are elements of games that are carried out on students, so that it can foster competition between students and learning in the classroom. could be more interesting.

This conclusion is based on facts from the results of research conducted by researchers in the experimental class (VIII-C) which resulted in an increase in learning outcomes of 11.621 with an average *pretest score* = 47.34 and an average *posttest score* = 73.91. Meanwhile, in the control class (VIII-D), an increase in learning outcomes was obtained by 9.899 with an average *pretest score* = 38.59 and an average *posttest score* = 53.12. This means that there is a significant difference between improving the learning outcomes of class VIII-C students using *the problem based learning model* and class VIII-D who study using the conventional learning model.

## FURTHER STUDY

It is hoped that the *problem based learning* model can be used as an alternative in providing variations in learning.

For schools, especially school principals as leaders, it is hoped that they can provide support to educators in choosing the right learning model.

*The problem based learning* model should adapt it to the implementation process, especially in terms of time allocation, supporting facilities in the form of learning media, and the characteristics of students at the school where this learning model is applied.

## ACKNOWLEDGMENT

The author realizes that in writing this thesis, there are still many shortcomings. For this reason, with all humility the author hopes for suggestions and constructive criticism for the perfection of writing this thesis research proposal in the future so that it can provide direction to the author in the next steps of writing.

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