

THE INFLUENCE OF PROBLEM-BASED LEARNING ON THE ABILITY TO WORK TOGETHER AND SOLVE PROBLEMS OF STUDENTS IN CLASS XII MA AL HIDAYAH BANGKALAN PPKN SUBJECTS

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ABSTRACT

Keywords: problem-based learning; collaboration skills; problem-solving skills.

This study aims to 1) describe the effect of problem-based learning collaboration skills on students in PPKn Class XII MA Al Hidayah Bangkalan, 2) describe the effect of Problem-Based Learning on students' problem-solving skills in PPKn Class XII MA Al Hidayah Bangkalan. The method used is an experiment that compares the pre-test and post-test results using two groups selected, namely the experimental group and the control group. In line with objective 1), the results show that the problem-based learning model influences students' cooperative skills in civics. Based on the results of data analysis, which stated that there were significant differences in the cooperative skills of the two groups, it can be proven that the learning model influences students' collaboration skills. By objective 2), it was found that the problem-based learning model influenced the problem-solving abilities of students in Civics subjects. Based on the results of data analysis, which stated that there were significant differences in the problem-solving skills of the two groups, it can be proven that the learning model has an influence on students' problem-solving abilities. So it can be concluded that the Problem-Based Learning learning model increases collaboration skills and students' problem-solving skills in PPKn Class XII subjects MA Al Hidayah Bangkalan.



Introduction

The 21st century is known as the knowledge age that has lasted two decades. This era has the characteristics of transformation, fulfillment of life needs, and rapid and extraordinary increase in knowledge (Ajria, Ismanto, & Kristin, 2018). Especially in the world of education, there has been a paradigm shift and widespread application of science and technology. This change has implications for the implementation of the learning process in schools, which are required to adjust to the new paradigm by the demands of competence from the 21st century (Wijaya, Sudjimat, & Nyoto, 2016). Students must have a number of competency qualifications mapped by P21 (Partnership for 21st Century Learning), including skills, knowledge, and abilities in the fields of technology, media, and information, learning and innovation skills, and life and career skills (P21, 2015). This framework must be mastered by students in order to be successful in their careers and futures (Saputra, 2021).

The National Education Standards Agency (BNSP) has more clearly detailed several competencies or expertise that must be possessed by 21st Century Human

Resources (HR), including 1) critical thinking and Problem-Solving Skills; 2) Communication and Collaboration Skills; 3) Creativity and Innovation Skills; 4) Information and Communications Technology Literacy; 5) Contextual Learning Skills; 6) Information and Media Literacy Skills. Meanwhile, the competencies possessed by high school and college graduates are not entirely by these qualifications (Rohida, 2018). According to Human Development Index (HDI) data released by the United Nations Development Program (2020), Indonesia is ranked 107 with an Index of 0.718. The value of this index is lower than the world HDI data, which is at 0.7327. This can be interpreted that the quality of Human Resources (HR) in Indonesia is still below the average level of the quality of human resources in the world. Based on this, it is necessary to improve and improve the quality, one of which is through the education system in Indonesia. The current focus of Education refers to the development of skills and knowledge, education as a distributor and developer of noble characters, and the development of Education as a builder of the growth of a sense of nationality (Rugian, Tewal, & Taroreh, 2019).

One thing that is inseparable in the discourse of education in Indonesia is the Islamic Boarding School, which is the first and oldest education in Indonesia. The existence of pesantren underlies the current model and systems of education. Ki Hadjar Dewantara, in a writing, asserted that pesantren educational institutions are referred to as the ideal education system for education in Indonesia compared to the existing public school system (Mawaddah, Triwoelandari, & Irfani, 2022).

According to Article 2 PMA No. 18 of 2014, the implementation of pesantren education units aims to: 1) instill faith and devotion to Allah; 2) develop the competence of attitudes, knowledge, and skills of students to become experts in Islamic religious science and / or become Muslims who can practice Islamic teachings in their daily lives; and 3) personal development of karakul Karima

MA Al Hidayah is a formal school with private status under the auspices of the Al Hidayah Jangkebulan Bangkalan Islamic Boarding School Foundation, where the teaching and learning process in MA uses national education curriculum standards. In contrast, after school, all student activities are focused on pesantren activities under the complete control and supervision of Islamic boarding school caregivers.

The learning process in pesantren-based schools has unique and different characteristics than schools in general. The characteristics of pesantren-based school learning include the school curriculum referring to the curriculum structure issued by the Ministry of Religious Affairs, with a load of general subjects plus religious lessons (Akidah et al.). If the study time of high school, in general, is five days with a period of 07.00 to 16.00 WIB, then the study time in pesantren-based schools is six days of study with a range of around 07.00-14.00 WIB and limited activities outside class hours as if due to dense activities in pesantren.

Pesantren-based schools are usually established with their own peculiarities. Some have peculiarities in accordance with the foundation that founded; some have peculiarities by the Islamic boarding school. For example, the Madrasah in the Madura area is attached to the characteristics of Nahdatul Ulama and so on. This distinctiveness has an impact on

the preparation of the curriculum developed referring to the distinctiveness and vision-mission of each institution. Another characteristic is the existence of dormitories or cottages as a place for students to live, which has a system of full control and supervision of all student activities. On the other hand, with the limited infrastructure and communication access in schools and Islamic boarding schools, access to information about students about the actual conditions of their surroundings is minimal, including access to up-to-date information about the state or news related to the practice of national and state life.

Pancasila and Citizenship Education (PPKn) is a subject that provides insight and competence of students in order to form attitudes, knowledge, and skills to become good citizens. In the global context of Pancasila and Civic Education, in addition to having to strengthen Pancasila Morals, it must also equip students with various life skills as global citizens. To be a good citizen and to be able to contribute optimally to the dynamics of life, several competencies and skills are needed that are in line with 21st century skills, including the ability to work together and solve problems. Students need to have the ability to work together and solve problems in PPKn subjects, because the substance of these subjects is related to the practice of national and state life.

Meanwhile, the reality that occurred at MA Al Hidayah Bangkalan was not in accordance with the ideal conditions as described above. To find out the actual conditions in PPKn learning, researchers made observations and conducted interviews with one of the PPKn MA Al Hidayah subject teachers, Ibu Syarifah, S.Pd. Based on observations and interviews, the teaching and learning activities process is still dominated by the use of lecture models or direct instruction. Similarly, the activities of students in learning PPKn subjects, some of which are less concentrated and quickly feel tired, so they ignore the teacher's explanation. Some obstacles that are often experienced in the learning process include some students having difficulty understanding the material, the many problems of sleepy students in the middle of learning due to the dense activities of students outside learning, and the lack of updates of students on issues and problems of nation and state due to limited facilities and facilities, especially for students who are in pesantren (Aspridanel, Jalmo, & Yolida, 2019).

Researchers also collected observational data through questionnaires given to 20 students to determine students' responses and impressions of PPKn subjects. The questionnaire results showed several findings, including that most students considered PPKn boring, rote and rote material about historical figures, and less attractive. The obstacles experienced by students are boredom and sleep during the learning process. Students expect PPKn learning to be carried out with interesting methods to make it easier to understand the material. Some of the students also expect group learning activities.

Based on the problems explained in this background, it is necessary to use the suitable learning model so that teaching and learning activities in PPKn subjects run effectively and improve the ability to work together and solve student problems. For this reason, it is necessary to apply Problem-Based Learning based on pesantren as a

development of learning models that present contextual problem solving, thus stimulating students to learn to solve contextual problems.

The goals to be achieved based on the problem formulation and background above are:

1. To describe the influence of Problem Based Learning on the ability to work with students in Class XII MA Al Hidayah Bangkalan PPKn subjects
2. To describe the influence of Problem Based Learning on the problem solving ability of students in Class XII MA Al Hidayah Bangkalan PPKn subjects

Research Methods

Based on the problems studied in this study, the type of research used by researchers is experimental research (Experimental Research), which is a research method used to look for the effect of certain treatments on others under controlled conditions (Sugiyono, 2014: 72). The experimental research design itself is intended to find out whether the solution used is appropriate to influence certain results (Creswell & Creswell, 2017). Through the basic topic raised by the researcher, namely questions about the relationship between variables that will be answered through this study, then the researcher determines that this research uses a quantitative approach. Where the quantitative approach in this case is an approach used to test objective theories by testing the relationship between variables, and the variables in this approach are obtained through instruments with numerical data so that they can be measured using research procedures. Through this statement, in this study the data obtained in statistical form will then be processed using statistical formulas to obtain conclusions.

In this study, researchers must create certain conditions for the necessary data to appear. The attempt to create conditions for the necessary data to appear is called treatment. So the purpose of experimental research is to determine the effect of a treatment on a condition by comparing other groups, in accordance with the purpose of this research design, which is to determine the influence of Problem Based Learning to improve the ability to work together and solve problems of students.

In this study design used two sample groups, including the experimental group and the control group. To prove that the solution used correctly affects the results, namely by giving special treatment to the experimental group and the control group without being given special treatment then determining the results of the two groups. In this study, there were two class groups, namely the experimental class and the control class. In the experimental class, treatment will be given using the Problem Based Learning learning model and in the control class using the Direct Instruction learning model.

Research Subjects

The subject of research is a person, place, or object observed in the context of seasoning as a target (subject) who is in an area and meets certain conditions related to the research problem. The subjects in this study are MA Al Hidayah class XII social studies students who are obtaining PPKn subjects on the subject of Cases of Violation of

Rights and Denial of Obligations of Citizens. Students in the class were divided into two groups, namely the experimental group and the control group, with a total of 22 students.

Students who applied Problem Based Learning were experimental groups, while for control groups without using Problem Based Learning was a direct learning model / direct instruction. The learning materials for the two classes are the same, namely Cases of Violation of Rights and Denial of Obligations of Citizens.

Data Collection Techniques and Research Instruments

The selection of data collection methods is based on the characteristics of variables. Data collection in this study aims to obtain values from each variable, including Problem Based Learning, the ability to work together, and problem-solving. To obtain data on each variable, different assessment instruments are needed according to what each variable needs. Data collection techniques in this study are observation and tests. Then the measurement scale used in this study uses an interval scale. The following are the assessment instruments used in this study.

Data Analysis

1. Test Validity and Reliability of Instrument

The instrument validity test determines the validity of the question item or whether or not an instrument is valid. The principle of validity is the principle of instrument reliability in collecting data through observation or measurement. A valid instrument is an instrument that can measure precisely what you want to measure. In this study, an instrument validation test was used using the product moment correlation formula. The validity formula is as follows:

$$r_{xy} = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{\{N\sum X^2 - (\sum X)^2\} \{N\sum Y^2 - (\sum Y)^2\}}}$$

Information:

r_{xy} = Correlation Coefficient

$\sum X$ = Item Score Count

$\sum Y$ = Total score count

N = Number of Respondents

While a reliable instrument is an instrument that produces relatively stable data when applied to the same object. To calculate the reliability of the test is carried out using the Alpha formula, namely:

$$r_{11} = \frac{n}{n-1} \left(1 - \frac{\sum \sigma_i^2}{\sigma^2} \right)$$

Information:

r_{11} = Reliability coefficient

n = The number of question items

$\sum \sigma_i^2$ = The number of variances in the score of each item
= Variance of total question scores

2. Pre-Requisite Test

a. Normality Test

The Normality Test is an analysis in research that shows whether the data obtained is distributed normally or not. Chi squared (X^2) of one sample is a statistical technique used to test hypotheses when the population consists of two or more classes where the data is nominal. The sample is large (Sugiyono, 2017: 107).

The formula of Chi squared (X^2) is as follows:

$$X^2 = \sum \frac{(f_o - f_h)^2}{f_h}$$

Information:

X^2 = Chi Kuadrat

f_o = Observed Frequention

f_h = Expected frequency

b. Homogeneity Test

To find out whether the two subjects came from a population that had homogeneous variance or not, the developers used the variance homogeneity test.

Results and Discussion

In this chapter, researchers will present data obtained through field research based on the formulation of problems that have been described in Chapter I. Which in this study, there are two problem formulations, including: 1.) Is there an influence of the problem-based learning model on the ability to work together in PPKn work subjects in class XII MA Al Hidayah Bangkalan students? 2.) Is there an influence of the problem-based learning model on problem-solving skills in PPKn work subjects in class XII MA Al Hidayah Bangkalan students.

The data from this study were obtained with research instruments in the form of observation and written tests. Through the written test instrument, researchers obtain student problem-solving data with ordinal data types. Data on the ability to work with students is obtained through observation instruments, then this written test is carried out twice, namely before learning and after learning. The pre-test is conducted to determine that the initial ability of learners between the control group and the experimental group is the same. Then a post-test was conducted to see if there was a significant difference

between the ability to work together with the control group and the experimental group after learning. Then, to answer the research hypothesis, the data that has been obtained is carried out data analysis using the T-test formula with the help of the SPSS 26 application.

Research Instrument Validity Test

Before data collection, researchers tested the validity of assessment instruments with construct validity. The validity of this construct was carried out by conducting instrument tests on 10 students outside of the research subjects. The validity test results are calculated using the SPSS 26 application and comparing the results of the r count in the application with the r table in the product moment distribution table. If r is calculated $>$ from r table, it can be decided that the question items in the instrument are valid and can be used in data collection.

The following are the results of the construct validity test of the written test instrument with 20 questions.

Table 1
Results of the Second Construction Validity Test of the Written Test Instrument

No. Item	r_{xy}	r_{tabel}	Information
1	0,483	0,444	Valid
2	0,476	0,444	Valid
3	0,517	0,444	Valid
4	0,443	0,444	Valid
5	0,545	0,444	Valid
6	0,483	0,444	Valid
7	0,443	0,444	Valid
8	0,461	0,444	Valid
9	0,062	0,444	Invalid
10	0,517	0,444	Valid
11	0,443	0,444	Valid
12	0,200	0,444	Invalid
13	0,230	0,444	Invalid
14	0,476	0,444	Valid
15	0,494	0,444	Valid
16	0,066	0,444	Invalid

No. Item	r_{xy}	r_{tabel}	Information
17	0,570	0,444	Valid
18	0,066	0,444	Invalid
19	0,230	0,444	Invalid
20	0,266	0,444	Invalid

Table 2
Results of the Second Construction Validity Test of the Written Test Instrument

No. Item	r_{xy}	label	Information
1	0,483	0,444	Valid
2	0,476	0,444	Valid
3	0,517	0,444	Valid
4	0,443	0,444	Valid
5	0,545	0,444	Valid
6	0,483	0,444	Valid
7	0,443	0,444	Valid
8	0,461	0,444	Valid
9	0,578	0,444	Valid
10	0,517	0,444	Valid
11	0,443	0,444	Valid
12	0,443	0,444	Valid
13	0,614	0,444	Valid
14	0,476	0,444	Valid
15	0,443	0,444	Valid
16	0,443	0,444	Valid
17	0,570	0,444	Valid
18	0,445	0,444	Valid
19	0,578	0,444	Valid

No. Item	r_{xy}	label	Information
20	0,476	0,444	Valid

Based on the results of the construct validity of the question items, it can be concluded that the question items in the test instrument are valid and can be used for research data collection.

Research Instrument Reliability Test

In addition to testing the validity of research instruments, they must be tested for reliability. By adjusting to Chapter III, the results of this reliability test are then seen on a range scale according to Sugiyono to determine the level of reliability. The following are the results of the reliability test of the written test research instrument.

Table 3
Written Test Instrument Reliability Test Results

Reliability Statistics	
Cronbach's Alpha	N of Items
.908	20

Based on the results of the reliability test by comparing on the range scale according to Sugiyono, 0.908 is included in the coefficient interval 0.8-1.00 which is included in the very reliable scale. So it can be said that the written test instrument used in this study is reliable for use in data collection.

After the data collection instrument is known to be valid and reliable, the researcher can proceed to the data collection stage. This data collection was carried out in accordance with the research design that had been designed by researchers in Chapter III. The following is a presentation of data obtained by researchers through research activities

Student Cooperation Data

In this study, the ability to work together students was assessed using observation instruments. This assessment of students' ability to work together is only given before and after learning.

The following is the acquisition of observations of students' cooperative abilities carried out based on control groups and experiments.

Table 4
Ability to Work Together Pre-Test Students

No	Control Class	Experimental Class
1.	35	30
2.	30	60
3.	25	55
4.	35	50
5.	40	70
6.	65	55
7.	65	50
8.	50	35

No	Control Class	Experimental Class
9.	70	25
10.	65	40
11.	40	35
Mean	47,273	45,91

Based on the results of the pre-test, the average control group was 47.273, and the experimental group was 45.91. By looking at the average pre-test results of each group, it can be seen that each group has almost the same average. However, to further ensure that each group gets a pre-test value that is not significantly different, it is necessary to test with a t-test.

After learning with different models between the control group and the experimental group, it is necessary to do a post-test which is then analyzed to prove the hypothesis in this study. The following are the post-test results in each research group.

Table 5
Ability to Work Together Post-Test Students

No	Control Class	Experimental Class
1.	55	90
2.	50	90
3.	45	85
4.	50	75
5.	85	95
6.	90	100
7.	95	85
8.	70	90
9.	80	75
10.	80	70
11.	55	55
Mean	70,18	83,72

Based on the post-test results, the average control group was 70.18, and the experimental group was 83.72. By looking at the average post-test results of each group, it can be seen that between the control group and the experimental group has a fairly far average difference. After learning with different models between the control group and the experimental group, it is necessary to analyze to prove the hypothesis with a t-test.

Student Problem-Solving Ability Data

In this study, two written tests were conducted, namely pre-test and post-test. The purpose of the pre-test is to find out that the initial ability of learners between the control group and the experimental group is the same. To ensure that there is no difference in the pre-test results, it is necessary to test with a t-test by looking at the significance of the difference in results between the two groups. If insignificant results are obtained, then it can be ascertained that the initial abilities of both groups are the same. The following are the pre-test results of each group in the study.

Table 6
Learners' Pre-Test Problem Solving Ability

No	Control Group	Experimental Group
1.	65	55
2.	55	65
3.	60	65
4.	65	70
5.	50	75
6.	65	60
7.	65	65
8.	75	60
9.	70	70
10.	65	65
11.	70	65
Mean	64,09	65

Based on the results of the pre-test, the average of the control group was 64.09, and the experimental group was 65. By looking at the average pre-test results of each group, it can be seen that each group has almost the same average. However, to further ensure that each group gets a pre-test value that is not significantly different, it is necessary to test with a t-test. After learning with different models between the control group and the experimental group, it is necessary to do a post-test which is then analyzed to prove the hypothesis in this study. The following are the post-test results in each research group.

Table 7
Students' Post-Test Problem Solving Skills

No	Control Group	Experimental Group
1.	75	80
2.	70	75
3.	80	75
4.	75	80
5.	65	65
6.	65	85
7.	70	80
8.	75	90
9.	70	75
10.	70	80
11.	80	80
Mean	72,27	78,63

Based on the post-test results, the average control group was 72.27, and the experimental group was 78.63. By looking at the average post-test results of each group, it can be seen that between the control group and the experimental group has a fairly far average difference. Then the data that has been presented will be analyzed data to make a decision whether the research hypothesis can be accepted or rejected.

Data Analysis and Interpretation

After the research data is presented in the previous section, then the researcher will analyze each data to then be used in making decisions whether the research hypothesis can be accepted or rejected. Before conducting hypothesis testing, it is necessary to conduct prerequisite tests first to ensure that the research data is normal and homogeneous. The purpose of this prerequisite test will later be used to decide whether the data can be processed using parametric statistical tests or must use non-parametric statistical tests. The following are the results of processing research data obtained by researchers with the help of SPSS 26.

1. Pre-test normality test results of cooperating ability

The results of the normality test on the ability to work with students in the pre-test with the help of SPSS with the shapiro-wilk normality test are as follows.

Table 8
Normality Test Pre-Test Ability to Work Together

Group		Shapiro-Wilk		
		Statistic	df	Sig.
Pre-test	Control Group	.885	11	.119
	Experimental Group	.963	11	.807

Through the results of these calculations, the value of Sig. control group = 0.119 > 0.05, and the value of Sig. experimental group = 0.807 > 0.05. So it can be stated that the pre-test data on the ability to cooperate with learners, both the control group and the experimental group, are normally distributed.

2. Pre-test homogeneity test results of cooperative ability

After the normality test is carried out, then the next prerequisite test is the homogeneity test. The homogeneity test is used to see if the data used has the same variance or not. The following are the results of the homogeneity test of student pre-test data.

Table 9
Pre-Homogeneity Test Ability to Work Together

		Levene Statistic	df1	df2	Sig.
Nilai pre-test	Based on Mean	.854	1	20	.366
	Based on Median	.298	1	20	.591
	Based on Median and with adjusted df	.298	1	18.716	.592
	Based on trimmed mean	.845	1	20	.369

Based on the results of the pre-test homogeneity test with the help of the SPSS application, the value of $\text{Sig.} = 0.366 > 0.05$, it can be concluded that the pre-test data can be said to be homogeneous. After the normality test and homogeneity test on the pre-test data, then a t-test can be carried out to see the significance of the difference in pre-test results between the control group and the experimental group.

3. Test results t-test pre-test ability to cooperate

Before conducting trials of the application of the model in learning activities, it is necessary to do a post-test to determine that the initial ability between the control group and the experimental group is the same. The following is a post-test calculation between groups with a t-test.

In this section will be presented the results of empirical research that has been carried out by researchers, by connecting to theories that have been studied before. This presentation aims to explain how research questions are answered and hypotheses are proven after research data analysis. In this study, the basic concept underlying data analysis is the relationship between research variables. Back to Chapter III which was previously explained that to prove the relationship between variables, data analysis with the T-test was used. In accordance with the previous research design that the research subjects will be given an initial test to find out that the ability of students between the experimental group and the control group is the same before the research is carried out. Which can eliminate possible factors that cause an increase in the ability to work with students in addition to research treatment factors.

The Effect of Problem Based Learning on the Ability to Work Together with MA Al Hidayah Students

The learning model is an important part of the implementation of learning. With the use of appropriate learning models, it can help students understand the material better. In this study, researchers used two different learning models on the same material to see the influence between models on the material. The models used in this study are the Problem Based Learning model and the Direct Instruction learning model. In direct learning, students are taught subject matter by teachers in class with a Direct Instruction learning model in the form of lectures, or reading and observing, then doing tasks for reinforcement at home in the form of homework. Problem Based Learning learning model, students are given problems which are then solved in groups by reading the resources needed, then conveying the results of group discussions in class.

The learning process with the Problem Based Learning model requires students to independently explore information and improve their abilities independently. In this study, teachers can hone students' independent learning skills by looking at the ability to work with students after learning in a Problem Based Learning manner. Based on the results of data analysis conducted by researchers through field research on the application of Problem Based Learning to the ability to work together carried out by researchers, obtained $\text{Sig. (2-tailed)} = 0.049 < 0.05$ which means there is a significant difference between the ability to work together students in the control group with students in the experimental group. So based on the results of this study, the first hypothesis was

accepted by the results of this research in accordance with existing theories, namely the Problem Based Learning model is a learning model based on many problems that require authentic investigation, namely investigation that requires real solutions to real problems. Research from (Fitriyani, Jalmo, & Yolida, 2019) shows that problem-based learning models can improve the ability to work together in high school students. The results of the data analysis in collaboration obtained in the experimental class were higher than those of the control class.

The Effect of Problem Based Learning on the Problem Solving Ability of MA Al Hidayah Students

The learning model is an important part of the implementation of learning. With the use of appropriate learning models, it can help students understand the material better. In this study, researchers used two different learning models on the same material to see the influence between models on the material. The models used in this study are the Problem Based Learning learning model and the Direct Instruction learning model. In direct learning, students are taught subject matter by teachers in class with conventional learning models in the form of lectures, group discussions, or reading and observing, then doing tasks for reinforcement at home in the form of homework. Problem Based Learning learning model, students are given problems which are then solved in groups by reading the resources needed, then conveying the results of group discussions in class.

The learning process with the Problem Based Learning model requires students to independently explore information and find solutions to problems given by the teacher. In this study, teachers can hone students' problem-solving skills after learning in a Problem Based Learning manner. Based on the results of data analysis conducted by researchers through field research on the application of Problem Based Learning to problem solving abilities carried out by researchers, obtained Sig. (2-tailed) is $0.018 < 0.05$ which means there is a significant difference between the ability to work together students in the control group with students in the experimental group. So based on the results of this study, the first hypothesis was obtained to accept the results of this research in accordance with existing theories, namely According to (Ilmiyatni, Jalmo, & Yolida, 2019), the problem-based learning model is a learning model based on many problems that require authentic investigation, namely investigation that requires real solutions to real problems. Based on research conducted by Thompson (2018) in shows that problem-based learning can advance critical thinking skills through learning problems. Critical thinking can foster an impetus in conceptualizing problems. The results of problem solving data analysis obtained in the experimental class were higher than those of the control class.

Conclusion

The problem-based learning model has an influence on the ability to work with students in PPKn subjects. Based on the results of data analysis which states that there are significant differences in the ability to work together between the two groups, it can be proven that the learning model has an influence on the ability to work with students. The Problem Based Learning learning model has an influence on the problem-solving ability of students in PPKn subjects. Based on the results of data analysis which states that there are significant differences in the problem-solving ability of the two groups, it can be proven that the learning model has an influence on the problem-solving ability of students

Bibliography

- Ajria, Naila Filahatin, Ismanto, Bambang, & Kristin, Firosalia. (2018). Peningkatan Kerjasama dan Hasil Belajar Tematik Melalui Model Pembelajaran Problem Based Learning. *Naturalistic: Jurnal Kajian Dan Penelitian Pendidikan Dan Pembelajaran*, 3(1), 254–286. <https://doi.org/10.35568/naturalistic.v3i1.274>
- Aspridanel, Almira, Jalmo, Tri, & Yolida, Berti. (2019). Penggunaan Problem Based Learning Dalam Meningkatkan Keterampilan Kolaborasi dan Berpikir Tingkat Tinggi. *Jurnal Bioterdidik: Wahana Ekspresi Ilmiah*, 7(2), 24–34.
- Creswell, John W., & Creswell, J. David. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Fitriyani, Dwi, Jalmo, Tri, & Yolida, Berti. (2019). Penggunaan problem based learning untuk meningkatkan keterampilan kolaborasi dan berpikir tingkat tinggi. *Jurnal Bioterdidik*, 7(3), 77–87.
- Ilmiyatni, Fatynia, Jalmo, Tri, & Yolida, Berti. (2019). Pengaruh problem based learning terhadap keterampilan kolaborasi dan berpikir tingkat tinggi. *Jurnal Bioterdidik: Wahana Ekspresi Ilmiah*, 7(2), 35–45.
- Mawaddah, Redha, Triwoelandari, Retno, & Irfani, Fahmi. (2022). Kelayakan Lks Pembelajaran Ipa Berbasis Stem Untuk Meningkatkan Keterampilan Kolaborasi Siswa Sd/Mi. *Jurnal Cakrawala Pendas*, 8(1), 1–14.
- Rohida, Leni. (2018). Pengaruh era revolusi industri 4.0 terhadap kompetensi sumber daya manusia. *Jurnal Manajemen Dan Bisnis Indonesia*, 6(1), 114–136.
- Rugian, Marcella S., Tewal, B., & Taroreh, Rita N. (2019). Pengaruh Kompetensi Sumber Daya Manusia dan Inovasi Terhadap Keunggulan Bersaing Rumah Kopi Modern di Manado. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, 7(4). <https://doi.org/10.35794/emba.v7i4.26575>
- Saputra, Hardika. (2021). Pembelajaran berbasis masalah (problem based learning). *Jurnal Pendidikan Inovatif*, 5(3).
- Wijaya, Etistika Yuni, Sudjimat, Dwi Agus, & Nyoto, Amat. (2016). Transformasi pendidikan abad 21 sebagai tuntutan pengembangan sumber daya manusia di era global. *Prosiding Seminar Nasional Pendidikan Matematika*, 1(26), 263–278.