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THE INFLUENCE OF PROBLEM BASED LEARNING ASSISTED BY MIND MAPPING ON STUDENT LEARNING OUTCOMES AND CREATIVE THINKING SKILLS IN CLASS VI SOCIAL STUDIES LESSONS

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Abstract
There are fundamental challenges in learning social studies, one of which is that teachers must use the right strategies, approaches, models and methods to make the learning process more effective. But in reality, teachers still use less varied learning models and methods. Thus resulting in the acquisition of learning outcomes and creative thinking skills of students is low. This study aims to determine the effect of learning outcomes and students' creative thinking skills on social studies lessons in class VI. The method used was quasi-experiment with nonequivalent Control Group Design. The population in this study were all 6th grade students of SDN Sukaraja 01 as many as 60 students. The sample of this study was 2 classes, namely experimental classes and control classes, each class consisting of 30 students. The data collection techniques used were tests and non-tests. Data analysis techniques using Normality Test, homogeneity test, and T test. The results of this study indicate that the problem-based learning model assisted by mind mapping can affect learning outcomes and creative thinking skills of students in social studies lessons. These results are supported by hypothesis testing with the results of the Independent Sample T-Test test showing a significance value (sig.2-tailed) of 0.000 which means <0.05. The results obtained can be concluded that the model and learning methods affect learning outcomes and students' creative thinking skills in social studies lessons in grade VI.
Keywords: *problem based learning; mind mapping; learning outcomes; creative thinking skills*

Abstrak
Tantangan mendasar dalam pembelajaran IPS salah satunya guru harus menggunakan strategi, pendekatan, model ,dan metode yang tepat agar proses pembelajaran lebih efektif. Namun kenyataannya, guru masih kurang menggunakan model dan metode pembelajaran yang bervariasi. Sehingga mengakibatkan perolehan hasil belajar dan keterampilan berpikir kreatif siswa tergolong rendah. Penelitian ini bertujuan untuk mengetahui pengaruh hasil belajar dan keterampilan berpikir kreatif siswa pada Pelajaran IPS di kelas VI. Metode yang digunakan adalah kuasi eksperimen dengan design nonequivalent Control Group Design. Populasi dalam penelitian ini seluruh siswa kelas VI SDN Sukaraja 01 sebanyak 60 orang. Sampel dari penelitian ini sebanyak 2 kelas , yaitu kelas eksperimen dan kelas kontrol yang masing-masing kelas terdiri dari 30 orang siswa. Teknik pengumpulan data yang digunakan yaitu Tes dan non tes. Teknik analisis data menggunakan menggunakan Uji Normalitas, uji homogenitas, dan Uji T. Hasil penelitian ini menunjukkan bawa model pembelajaran *problem based learning* berbantuan *mind mapping* dapat mempengaruhi hasil belajar dan keterampilan berpikir kreatif siswa pada pelajaran IPS . Hasil tersebut didukung oleh uji hipotesis dengan hasil uji Independent Sample T-Test menunjukkan nilai signifikansi (sig.2-tailed) sebesar 0,000 yang berarti < 0,05. Hasil penelitian yang diperoleh dapat disimpulkan bahwa model dan metode pembelajaran tersebut mempengaruhi hasil belajar dan keterampilan berpikir kreatif siswa pada pelajaran IPS di kelas VI.
Kata kunci: pembelajaran *problem based learning*;*mind mapping;* hasil belajar; keterampilan berpikir kreatif

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Introduction

Important capital in human life, especially the next generation of the nation is education. According to (Aeni, 2018) says that education is an unavoidable human need because education itself can improve human resources. Therefore, by having a fulfilling education, having a deep view or insight will be able to give birth to a superior successor to build a better country. Article 1 of Law Number 20 of 2003 on the national education system defines education as "a deliberate and planned effort to create a learning environment and learning process so that students can actively participate in developing their ability to have strength in spirituality, self-control, intelligence, noble character, and other traits needed by themselves." (Suwaib et al., 2020).

One of the goals of the 1945 Constitution of the Republic of Indonesia is to educate the nation. Education is a way that can be used to achieve this national goal. Activities for teaching and learning are a crucial component of the educational process in schools. To ensure that the learning process proceeds smoothly, education must be implemented in a structured manner. For education to be successful, the learning process must be put into practice. In the learning process, there is a role between teachers and students in fulfilling learning needs to achieve learning (Munawaroh, 2022).

Students' active participation in the learning process will have far greater influence than the method alone of teaching and learning activities that only involve teachers because of the lack of communication between students. Therefore, communication must be established between students in every learning process, namely by involving students in learning. Student activeness in learning is very important and more meaningful because students follow the learning is not boring and makes students happy so that learning outcomes can be easily improved (Prasetyo, 2017). In the 2013 curriculum, in addition to cognitive learning outcomes, one of the competencies that must be developed is the ability to think creatively. These 21st century skills consist of: *Communication* (communication), *critical thinking* (critical thinking), *Creative Thinking* (creative thinking), and *Collaboration* (collaboration) (Wulandari et al., 2019). But in fact, there are still students who lack understanding in the ability to think well. The ability to think creatively and the ability to remember students still lack understanding in learning, especially in social studies learning (Putri et al, 2023).

One of the main problems in learning social studies is that teachers must use the right strategies, approaches, models and methods to make the learning process more effective. However, the reality that occurs in schools is that teachers more often use conventional methods, focusing on available textbooks, and teachers are less varied in using learning models and methods. During the learning process, students do not actively express their opinions and do not dare to ask questions. As a result, learning becomes meaningless as students are not asked to construct their own knowledge. In addition, they face difficulties in remembering too much material (Nur Hasanah dan Sucahyo Mas'an Al Wahid, 2021). The limited knowledge they can get will cause a lack of creative thinking skills possessed by students and this will also have an impact on learning outcomes that have not reached the Maximum Completeness Criteria (KKM) (Novellia, 2018).

The results of pre-research conducted on the problems of social studies learning in elementary schools in the results obtained: (1), In social studies subjects in elementary school teachers rarely provide opportunities for discussion so that it will cause low understanding and creative thinking

of students. (2) Learners are difficult to understand because of the large number of social studies material related to history, one of them material efforts to defend the independence of Indonesia. (3), Many students are bored when IPS Learning material is taught because the application of learning methods is not appropriate, so it needs strategies and methods that are fun and appropriate so that the subject matter received by students quickly absorb easily. and (5) Students are lazy to take notes because they are bored with the learning.

This is in line with Hanifah's study in (oktiani et al, 2017) said that the obstacles in learning are the methods used are not packaged in an interesting way and usually the teacher only uses learning methods more inclined to the transfer of material alone, making students bored. As a result, it raises the assumption of people's minds, especially students that social studies lessons are boring subject matter, less challenging, tedious fields of study, thus making students less interested in learning more about social studies (Hanifah, 2008). This requires teachers to be more creative in the teaching and learning process because teachers are the foundation of the learning process. Teachers must also be able to build a conducive classroom so that it will produce more meaningful social studies lessons. Social studies learning must be designed in advance by considering the characteristics of students, facilities and infrastructure, learning tools, learning models, and materials provided. This must be done so that teaching and learning activities can take place consistently and help students understand the content of social studies lessons and find their own knowledge. Students must participate in social studies learning to achieve the learning objectives (Mulyana et al., 2016). Because each learning model directs educators in creating learning that supports students in achieving their learning goals (Aeni, 2016).

Therefore, teachers must be able to choose appropriate learning models and methods so that students better understand each lesson taught and can achieve learning objectives. One of the efforts that can be made to work on the problems described above is by using the *Problem Based Learning* (PBL) learning model. The PBL model is a learning model that requires students to actively participate in the learning process, both individually and in groups, so that they can solve problems given by the teacher and organise their knowledge based on their own experience (Suwaib et al., 2020). According to (Cheng & Carolyn Yang, 2023) stated that the PBL model is an innovative model and can increase student understanding and students will actively participate when learning. By using this model, students can use their experience in solving problems to influence the results in learning (Mardani et al., 2022). To improve the quality of learning, learning models can be used better if combined with appropriate learning methods. The *Mind Mapping* method is one that can be used in conjunction with this model.

Mind Mapping is one way that seeks learners to be able to explore ideas creatively. These mind maps help them remember and allow them to structure thoughts and facts (Hidayati et al., 2021). *Mind mapping* is learning by A creative way of taking notes designed to explain and explore the thinking and learning power of the brain, helps students easily generate ideas and is easier to understand because it can be arranged with pictures, lines, colors, etc. This will improve students' creative thinking skills (Rizkiyani & Kristin, 2022). Creating mind mapping can help students become more active in the learning process because it can help them solve problems in terms of understanding, thinking skills, and memory. Social studies learning using *mind mapp* is expected to improve memory and creative thinking skills. Thus, students learn not only listening to the teacher, they also need to participate actively and creatively in developing the material learnt during the learning process (Putri et al, 2023).

These learning models and methods are innovative, interesting and fun as well as student-centred learning. Students must actively participate in the learning process so that they can absorb and understand the subject matter. This active, innovative, interesting and fun learning can also

make social studies learning meaningful, improve learning outcomes, and improve students' creative thinking skills because every learning process involves students. Creative thinking skills are very influential on learning outcomes (Cintia et al., 2018).

Previous research on *problem based learning* models assisted by *mind mapping* can be used as a reference in this study. Such as research from (Sumarta, 2017) The findings demonstrated a substantial difference in students' learning outcomes and creative thinking skills thought in biology classes at SMK when using a problem based model supported by *mind mapping*. There are differences in the problem-based learning model assisted by mind mapping conducted by researchers in previous studies in the form of material aspects, education levels and research instruments. What was done by researchers on social studies material in grade VI and the instrument for learning outcomes used by researchers was a test before and after learning while creative thinking skills were in the form of a creative thinking skills rubric which used LKPD during the learning process. During the learning process students make *mind mapping* individually and concluded in groups. This stimulates students to remember learning material, actively participate, learning is not boring, and can increase student creativity. While previous research on learning outcomes and creative thinking skills was only tested before and after learning. Then the research from (Ni Putu Eva Adelina Ariswati et al., 2017) The social studies learning outcomes of pupils receiving instruction using *Problem Based Learning* (PBL) differ from one another learning model assisted by question card media with students who are not given the treatment. There is a hypothesis test which is known that tcount = 3.58> ttable = 2.00 means H0 is rejected and H1 is accepted. In contrast to previous research, the research that will be conducted by researchers not only measures learning outcomes but by measuring creative thinking skills as well as previous research using question card media while what will be done is the mind mapping method to develop student creativity.

Unlike the research that has been described previously, the novelty in this study is: students make mind mapping in groups made on cardboard. Then students conclude it on HVS paper with different historical texts so that they do not cheat on each other. This will make students think at a higher level, increase student creativity and also have an impact on learning outcomes because making *mind mapping* will foster memory of each material that has been made.

As described above, researchers have an interest in conducting learning by using a *problem based learning* model assisted by *mind mapping* which is student centred learning which is also easier to understand the material and can hone creative thinking skills. So the researcher will carry out a study entitled " The Influence Of Problem Based Learning Assisted By Mind Mapping On Student Learning Outcomes And Creative Thinking Skills In Class VI Social Studies Lessons".

The goals of this study are to apply problem based learning assisted mind mapping to ascertain the impact of students' creative thinking abilities in social studies class VI as well as the effect of student learning outcomes.

Research Methods

Quantitative is the approach used in this research. While experimentation is the method used. The experimental method according to (Sugiyono, 2018) is a research method used to determine the effect of certain treatments. The experimental design in this study is a quasi-experiment with the form of a nonequivalent control group design. The purpose of the quasi-experimental method is how the independent variable variables affect the dependent variable (Sugiyono, 2018). Therefore, researchers want to know whether or not there is an effect of the *problem based learning* model assisted by *mind mapping* on learning outcomes and students' creative thinking skills in social studies lessons in grade VI. This experimental research consists of 2 classes,

namely control and experimental classes. The two classes received different treatments: the control class received traditional methods for the *discovery learning* model, while the experimental class received the *problem based learning* model with *mind mapping* assistance.

This study was carried out in November of the 2023/2024 academic year in class VI, odd semester, at SDN Sukaraja 01. The sampling was carried out using non-probability sampling technique with purposive sampling technique.The selection of samples with specific considerations is known as the purposive sampling technique. A non-random selection was done in order to use the elementary school as a control and experimental class because there are two rombel schools there, VI A and VI B.

The population used by researchers in this study were all grade VI students of SDN Sukaraja 01, totalling 60 students with a sample of class VI A as the control class and VI B as the experimental class. The experimental and control classes each consisted of 30 students.

Before carrying out the research, there are several things that need to be prepared including: (1) determine the research implementation schedule. (2) making lesson plans as well as teaching materials. (3) making research instruments in the form of tests and student response questionnaires as well as teachers who have been evaluated by the supervisor. (4) test the instrument to students and then perform data processing. the instruments used are pretests and postests to measure student learning outcomes in social studies lessons both in the control class and in the experimental class. In addition to pretests and postests, the creative thinking skills rubric instrument is used to measure creative thinking skills from the results of student worksheet activities or LKPD. LKPD in the experimental class students made a mind mapp with the scope of the material "Efforts to defend Indonesian independence" while the control class students made a resume. The results of the two, assessed through the rubric of creative thinking skills that have been made. To see the value category of creative thinking skills can be seen in the table category below.

Table 1. Creative thinking skills value category

Value	Information
90-100	Very Creative
75-89	Creative
60-74	Enough
45-59	Less Creative
< 44	Very Creative

Test validity and reliability using SPSS version 27. (5) Next, the research was carried out by giving pretest and posttest questions to students as well as students and teachers filling out questionnaires after making mind mapping. (6) The last stage is the calculation stage of the data collected by conducting normality, homogeneity and hypothesis testing using the independent sample t-test.

The IBM SPSS statistical application is used in calculating hypothesis testing to facilitate and answer problem formulation. Before testing the hypothesis, normality and homogeneity tests were first conducted. The results of the validity and reliability tests show that the instrument can be used and is suitable for use in research. A test called validity seeks to ascertain whether a measurement device is legitimate or not. Reliability can be used to assess if a measuring device is consistent enough to hold up over time when repeated measurements are made. If a measuring device yields consistent findings after multiple measurements, it is considered dependable (Janna & Herianto, 2021).

The purpose of the normality test is to determine whether or not the data in the research

sample is normally distributed. Researchers use the SPSS programme by conducting the Shapiro wilk To ascertain whether the data is regularly distributed, use a normality test. Following the normality test's conclusion that the research data was normally distributed, the homogeneity test was conducted. Testing whether or not the fluctuations of two or more distributions are the same is known as homogeneity. the two population groups are homogeneity or heterogeneous can be assessed through the homogeneity test. Researchers will also test whether the data is homogeneous or not by using the SPSS programme. Student test results from the experiment were examined by hypothesis testing. Hypothesis testing research can use the "t" test, here researchers use the help of the SPSS 27 programme to conduct the "t" test (Independent Sample T-Test) (Aulannisa, et,Al., 2021). While the questionnaire and teacher responses are seen from the average percentage that has been calculated through Microsoft excel.

Results and Discussion

The results of the research at SDN Sukaraja 01 which included learning outcomes and creative thinking skills of grade VI students in both experimental and control classes, each of which had 30 students. The results of the pre-test and post-test data analysis can be seen in table 2.

Table 2. Description of Pre-test and Post-test Scores Student Learning Outcomes

Value Categories	Pretest Experiment	Postest Experiment	Pretest Control	Postest Control
Lowest Value	33	69	34	38
Top Rated	89	100	88	94
Average	53,73	88,67	60,33	71,97
Standard Deviation	15,64	9,20	13,07	12,18
Variance	244,61	84,71	170,85	148,37

Table 2 illustrates the differences in the cognitive learning outcomes of the experimental and control classes' students in social studies lessons before and after treatment. The experimental class received treatment using a problem-based learning model aided by mind mapping, while the control class received treatment using a discovery learning model with conventional methods. With an average of 53,73, With an average of 88,67, the lowest experimental class post-test score was 69, and the highest score was 100. With an average of 60,33, the control class pre-test score ranged from 34, the lowest, to 88, the highest. For the control class post-test, the lowest score was 38 and the highest score was 94 with an average of 71,97. Additionally, the normality and homogeneity tests were performed as a precondition test before the hypothesis test was analyzed. The outcomes of the prerequisite tests the homogeneity and normalcy tests are as follows.

Table 3. Normality test

Class	Sig		Information
Experiment	Pre-test	Post-test	
	0,57	0,09	Normal
Control	Pre-test	Post-test	
	0,611	0,58	Normal

Table 3 shows that the Normality Test in the Shapiro wilk column for the experimental class for the pretest obtained a sig of 0,057 while the posttest was 0,09 and for the control class the pretest value obtained a sig of 0,611 while the postest was 0,58. The results of the normality test of

the experimental class and control class > 0,05 then H_0 is accepted so it can be said that the data from each class is normally distributed.

Furthermore, the data was tested using the homogeneity test with the Levene test. The following homogeneity test results can be seen in table 4.

Table 4. Homogeneity Test

Class	Sig	Description (>/<)	A	Information
Experiment Control	0,369	>	0,05	homogeneity

The data was homogeneity according to the homogeneity test, which was performed on the experimental and control classes. A significance value of greater than 0,05 was found. The results of the precondition test demonstrated the homogeneity and normal distribution of the data. Next, as indicated in table 5, the Independent Sample t-test (t-test) was performed.

Table 5. Uji Independent Sampel T-Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Social Studies Maple Cognitive Learning Outcomes	Equal variances assumed	.819	.369	5.991	58	.000	16.700	2.787	11.120	22.280
	Equal variances not assumed			5.991	53.973	.000	16.700	2.787	11.112	22.288

Table 5 shows that the significance value of sig (2-tailed) is 0.000 <0.05, so H_0 is rejected and H_1 is accepted. Therefore, it can be said that there is an average difference in learning outcomes between the standard discovery learning model and the *problem based learning* model with *mind mapping* assistance. Thus, it can be concluded that the *problem based learning* approach with *mind mapping* influences the learning objectives of sixth-grade students studying social studies.

To be clear, the average post-test results for the experimental class and control class are shown in the statistical table below:

Table 6. Average post-test control class and experiment.

	Class	N	Mean	Std. Deviation	Std. Error Mean
Social Studies Maple Cognitive Learning Outcomes	Post-test experiment (Mind Mapping-Assisted PBL Model)	30	88.67	9.204	1.680
	Post-test control (DL Model with Conventional Method)	30	71.97	12.181	2.224

According to the above-mentioned descriptive statistics, the experimental posttest's average value (81,73) is higher than the mean score of the control posttest (71, 92), indicating that sixth-grade social studies students' learning outcomes have improved following their treatment with the *problem based learning* model aided by *mind mapping*. This suggests that the problem-based learning model can have a greater impact on cognitive learning outcomes in social studies students than the *discovery learning* model with conventional methods.

In addition to the influence of cognitive learning outcomes, researchers also measured creative thinking skills in experimental and control classes. While the control class used a *discovery learning* model with conventional techniques, the experimental class was taught using a *problem based learning* model supported by *mind mapping*. In order to ascertain the impact of the two classes creative thinking abilities, researchers made a student worksheet or LKPD which was measured through a rubric of creative thinking skills. LKPD in the experimental class students make mind mapping while in the control class students make a resume. After that, students respond through questionnaires related to making *mind mapping* or resumes that have been made. Teachers also responded regarding the making of resumes and *mind mapping*. Table 7 shows the results of creating *mind mapp* and resumes before to the normality and homogeneity tests, which are the prerequisite tests.

Table 7. Mind mapping scores and resumes

Value Categories	Experimental Class (Making Mind Mapping)	Control Class (Resume Creation)
Lowest Value	69	63
Top Rated	100	88
Average	87,17	74,47
Standard Deviation	9, 614	7, 569
Variance	92, 420	57, 792

Based on table 7, The findings indicate a difference between the experimental class's and the control class's results in terms of their capacity for creative thought. In the table, it is noted that in the experimental class, the lowest score for making mind mapping is 69 while the highest score is 100 with an average of 87,17. For the control class, the lowest score for resume making was 63 while the highest score was 88 with an average of 74,47.

Table 8. Experimental class creative thinking skills questionnaire response

Response	Percentage of Creative Thinking Skills (create mind mapping)	Information
Student	74,6 %	Creative
Teacher	85 %	Creative

Based on the questionnaire response table for making *mind mapping* in the experimental class, the percentage of student responses is 74,6% while the teacher's response is 85%. Both percentage values are based on the value category in the creative category. The following are the percentage results of making a control class resume.

Table 9. Questionnaire response to creative thinking skills control class

Response	Percentage of Creative Thinking Skills (create resume)	Information
Student	64,6 %	Enough
Teacher	67,5 %	Enough

Based on the questionnaire response table for resume making in the control class, the percentage of student responses is 64,6% while the teacher's response is 67,5%. Both percentage values are based on the value category in the sufficient category.

Based on the value of mind mapping and resume creation, as well as the responses of the experimental and control classes to the creation of mind maps and resumes, it can be concluded that the students in Social Studies in class VI have creative thinking skills. Specifically, the experimental class has a higher average value than the control class and falls into the creative category. Moreover, homogeneity and normality tests were performed as preconditions to the hypothesis test analysis. The outcomes of the prerequisite tests the homogeneity and normalcy tests are as follows.

Table 10. Normality Test

Class	Sig	Information
Experiment	0,12	Normal
Control	0,009	Normal

Based on table 10 in the shapiro wilk column shows that the results of the experimental class normality test obtained a sig of 0,12 and a control class of 0,09. So the normality test results show > 0,05 then H_0 is accepted so that it can be said that the data from each class are normally distributed.

Furthermore, the data were tested using a homogeneity test with a *levene test*. The following homogeneity test results can be seen in table 11.

Table 11. Homogeneity Test

Class	Sig	Description (>/<)	A	Information
Experiment Control	0,126	>	0,05	Homogeneity

The data were homogenity based on table 11, which shows the results of the Homogeneity Test of creative thinking abilities in the experimental class and the control class. A significance value of greater than 0,05 was found. Table 12 displays the results of the hypothesis test, which is conducted using the t-test (Independent sample t-test) due to the data's normal distribution and homogeneity as determined by the precondition tests that were conducted.

Table 12. Uji Independent Sample T-Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Creative Thinking	Equal variances assumed	2.408	.126	5.685	58	.000	12.700	2.234	8.228	17.172
	Equal variances not assumed			5.685	54.974	.000	12.700	2.234	8.223	17.177

When a sig value (2 tailed) of 0,000 <0,05 is found using the preceding table, H_0 is rejected and H_1 is approved. Therefore, there is an average difference in the creative thinking abilities between the standard discovery learning model (resume-making) and the *problem based learning* model aided by *mind mapping*. Thus, it can be concluded that the Problem Based Learning learning strategy, which uses *mind mapping*, has an impact on the creative thought ability of the social studies class VI students.

To provide additional understanding, the following statistical table displays the mean cognitive capacities of the experimental group and the control group:

Table 13. Average score of creative thinking skills

	Class	N	Mean	Std. Deviation	Std. Error Mean
Keterampilan_berpikir_kreatif	Experimental class (making mind mapping)	30	87.17	9.614	1.755
	Control class (creating resumes)	30	74.47	7.569	1.382

It is possible to deduce that there is an increase in problem-based learning with mind mapping in IPS lesson at VIB or as a class experiment based on the preceding deskriptif statistical results. This is because the average percentage of problem-based learning in creative learning is higher in these classes (87,17) than in creative learning in control classes (74,47). Therefore, the mind mapping-based problem-based learning model yields better results than the conventional model discovery learning approach when it comes to student creative writing in IPS classes.

This study aims to measure the influence of *the problem-based learning model* assisted by *mind mapping* on the learning outcomes and creative thinking skills of students in social studies lessons in class VI. While the control class employed a traditional discovery learning learning, the experimental class received instruction utilizing a *problem based learning* model aided by mind mapping. For creative thinking skills, experimental classes students make *mind mapping* in groups. In the group, each student made 1 *mind mapp* according to the History text distributed. The historical text regarding the material "Efforts to Defend Indonesian Independence" there are 4

namely: the battle of Surabaya, the terrain area, Bandung sea of fire and ambarawa. From the 4 then concluded by the group. For the control class each student makes a resume. Based on the hypothesis test that has been done, it was found that the significance value of sig (2-tailed) of 0,000< 0,05 then H_0 is rejected and H_1 is accepted. So it is concluded that there is a difference in average learning outcomes and creative thinking skills between the *problem-based learning model assisted by mind mapp*ing and *the discovery learning* model (conventional). Therefore, it can be concluded that the Problem Based Learning learning model, with the help of mind mapping, has an impact on students' learning outcomes and creative thinking skills thought during class VI social studies classes. This can be seen from the average score of the experimental postest (81,73) while the students' creative thinking skills in making *mind mapping (*871,17) considerably higher than the mean scores on the control posttest (71, 92) and the mean score on the creative thinking skills test (74, 47), indicating a difference in the improvement between the learning outcomes and the creative thinking abilities of the students in class VI social studies. Therefore, in class VI social studies sessions, the *problem based learning* model with *mind mapping* support had a greater impact on students' learning outcomes and capacity for creative thought than the *discovery learning* model using conventional methods. This indicates that in class VI social studies classes, the problem-based learning paradigm with mind mapping support improves learning outcomes and fosters students' creative thinking skills thought.

By using a learning model *Problem Based Learning* Assisted *Mind Mapping* Student learning outcomes and students' creative thinking skills are better because the learning does not make students easily bored also makes students active in participating in learning as well as their creative thinking skills, students can imagine in developing their creativity. *Problem Based Learning* is a student-centered learning process and learning in groups that must solve a problem given by the teacher. The teacher here is only a facilitator in learning (Andersen & Rösiö, 2021). In the learning process, students actively participate in it is also easier to transfer knowledge compared to teachers who only do lectures (Barbieri et al., 2020). The important thing in this model is seen from the extent of student cooperation with small groups in solving a problem. This process deepens students' knowledge. Students are expected to interact well with teachers to increase their involvement in the learning process(Boye & Agyei, 2023). According to (Ahmad et al., 2023) model *Problem Based Learning* It has several advantages, one of which can develop students' creative and critical abilities. Therefore, the learning carried out will be meaningful and can increase students to be more active because in this ledge model encourages students to participate actively. In the implementation of learning using this model, it will highlight students' creative thinking abilities and the results of understanding the material delivered by the teacher can be well received so as to get good learning results because the learning process is not boring (Novellia, 2018).

Mind maping is the process of presenting ideas, concepts related to the core and connected with branches so as to produce a clear and understandable framework (Feng et al., 2023). *Mind mapping* can help students be more creative and make their knowledge easier to relearn because students discover for themselves what they know. This is proof that mind mapping has the potential to improve the brain's working ability. *Mind Mapping* It will be more effective if done in groups so that student activities become more fun (Feng et al., 2023). By using creative note-taking methods, it will be easier for students to remember, get many ideas because students can collaborate to explore a problem so that they can build ideas, can identify ideas that can improve understanding and critical thinking skills (Ho et al., 2023). It is expected that the use of *Mind Mapping* Social studies learning can improve memory and the ability to think creatively to develop the subject matter of learning (Putri et al., 2023).

This is in line with research conducted by Dewi in (Ni Puti Eva Adelina Ariswati., et al, 2018) which states that social studies learning outcomes are very different between students taught through the Problem Based Learning model with the help of print media and students taught through conventional learning. Research (Priantini, 2013)) found that students who use the Mind Map method have better creative thinking skills and social studies learning achievements than students who use conventional learning. This is in line with Long's research (dalam Sumarta, 2017) was shown that students who used mind maps in learning understood the material better than students who used traditional notes. The problem-based learning model encourages students to more actively seek information and work together to solve problems posed by the teacher. Research (Rizkiyani & Kristin, 2022) which states that *mind mapp* better than conventional methods for learning outcomes and creative thinking skills in social studies lessons for grade 5 elementary school students. It also shows that learning with problem-based models and methods *mind mapp* can increase student motivation and improve their social studies learning outcomes. The advantage of this research with a problem-based learning model that utilizes mind maps is that learning can be more meaningful and enjoyable for students because they participate in the learning process. In addition, learning can be more fun because students can make mind maps individually and then infer them in groups, and give them the opportunity to imagine. It can also be remembered that learning enhances creativity. Here, teachers must be innovative, creative, and act as facilitators responsible for facilitating student learning.

Conclusion

Based on the previous explanation, it can be concluded that problem based learning assisted by mind mapping has an effect on students' learning outcomes and creative thinking skills in social studies lessons in class VI. This can be proven through learning results with the average posttest of the experimental class being 81,73 and the average posttest of the control being 71,92. Meanwhile the average student thinking skills in making mind mapp is 871,17 and the average score of creative thinking skills students in making a resume is 74, 47. Another thing can be seen from the results of hypothesis testing with a significance value of 0.000 < 0.05. Therefore, it can be concluded that there is a difference in improvement between learning outcomes and students' creative thinking skills in social studies lessons in class VI so that the problem based learning model assisted by mind mapping has a better influence than the discovery learning model with conventional methods on students' learning outcomes and creative thinking skills. in Social Sciences Lessons in class VI.

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