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The Use of the OSCAR Model-Based Mind Mapping Method on Students' Mathematical Problem-Solving Ability

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ABSTRACT

This study aims to determine the effect of the use of the OSCAR model-based Mind Mapping method on students' mathematical problem-solving skills. The subject of this study is class VIII D students consisting of 25 students. This experimental research with a quantitative approach uses a Pre-Experimental Research Design Type One Group Pretest/Posttest Design. The instruments used were Pretest/Posttest questions, student activity observation sheets, and student response questionnaires. The data from the research were processed by t-test and percentage technique. The results of the study showed that: 1) the use of the OSCAR model-based Mind Mapping method had a positive and significant effect on students' mathematical problem-solving skills. This can be seen from the results of the t-test obtained, t_{able}= 2.064 < t_{calcul}= 14.58 then, H-0. rejected and, H-1. Accepted, 2) Dominant student activities in the activity "Discussing with groups and actively participating in working on the given questions" with a percentage of 21.1%. 3) Students' response to mathematics learning using the OSCAR model-based Mind Mapping method is positive. This is based on the analysis of student responses, the total percentage is 80.75%, so it is included in the criteria for being very positive. It can be concluded that many students respond well to the use of the OSCAR model-based Mind Mapping method.

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1. Introduction

Education is a system that guides personalities based on good quality in society and civilization. Education is closely related to learning which is the main key in upholding an education. National Education System Law No. 20 of 2003 emphasizes that education is a way that is carried out in a structured manner to achieve learning methods so that students can grow their interests and talents. According to Arief & Rusman (2019), good education is pursued by educators, and a good learning process is also a good one. One way to create a good education is to improve the quality of human resources, especially teachers, both in planning and the learning process.

To realize an education that can keep up with the times in the 21st century, the Indonesian state always upgrades the education system, one of which is by enacting the Independent Curriculum. In independent curriculum problem-solving skills have become important skills that need to be developed in the world of education, students are given the opportunity to face complex real problems and plan solutions (Rambung et al., 2023). Through the independent curriculum, students are taught to carry out the entire process when solving problems, so that they can help students in practicing problem-solving skills that are needed, especially in mathematics learning.

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Mathematics is a science that is represented by symbols or symbols that have meaning for problem solving, where the solution of the problem is obtained by reasoning, using terms that are arranged clearly, accurately, and carefully (Rusli et al., 2018). Mathematics is a subject that deals with many concepts, where these concepts are interrelated, this proves the importance of understanding mathematical concepts in a structured way. Students must be able to follow and understand the mathematics learning material from beginning to end, otherwise in the next material students will have difficulty understanding. Branca argues that mathematical problem-solving skills include methods, strategies, and procedures where they are the main goals and core processes in the mathematics curriculum so that they play an important role in mathematics learning (Akbar et al., 2018).

According to the results of the PISA (Program for International Students Assessment) survey organized by the OECD (Organization for Economic Co-operation and Development) in 2021, Indonesia ranked 70th out of 81 countries participating in the test, where mathematical reasoning is still an important core in the PISA study test, but in 2021 the scope is more complex because of its connection with problem solving. context, and capabilities of the 21st century (Zahid, 2020) . This proves that the mathematical ability of students in Indonesia in solving problems is relatively low. This low problem-solving ability is due to the lack of

teacher innovation and the passive role of students during teaching and learning activities in the classroom (Nursyifaa & Senjayawati, 2018).

From the results of observations at SMP Muhammadiyah 1 Surabaya, it was found that the method of teaching and learning activities applied was still centered on the teacher, it made students not able to understand the material in depth because they did not have the opportunity to explore more widely the material presented. The learning method has also not been fully implemented, it makes students feel bored when learning mathematics. When we also interviewed a mathematics teacher, he explained that there are still several problems in mathematics learning, including the lack of students' problem-solving skills because they are not accustomed to practicing literacy questions and the lack of activity of students during learning. Another obstacle encountered by researchers is that mathematics is a subject that is of minimal interest to most students because they view mathematics as a discipline that is complicated to understand, they find it difficult to do problems related to mathematics, especially in story problems.

Efforts to make students' problem-solving skills become trained are very necessary so that the goals of mathematics learning can be achieved, as explained by the National Council of Teachers of Mathematics that when learning mathematics there are several competencies that need to be improved, namely problem-solving competencies, reasoning, mathematical connections and representation (Hafriani, 2021). The strategy sought in training students' mathematical problem-solving skills, namely using correct learning models or methods, also involves students actively during the teaching and learning process (Wulandari et al., 2020).

Based on research on how the brain works conducted by Tony Buzan, the brain is easier to remember and understand the information presented with symbols, images, and shapes, from this he stated that Mind Mapping can explain the concept of student understanding in learning more efficiently, as well as train students' creativity through sketches as desired in their planned direction (Risma, 2021). The results of the study show that students who get learning with the Mind Mapping method are able to solve problems better than students who get conventional learning methods, most students agree that Mind Mapping learning provides convenience in learning mathematics, students who learn the Mind Mapping method become more active in discussing and responding well to the challenges given. In addition to learning methods, appropriate models are also needed to support learning to make it easier for students to solve problems. The learning model chosen in this study is the OSCAR (Orientation, Self-Observation, Construction, Association, Reflection) learning model (Ningsih, 2023).

The OSCAR (Orientation, Self-Observation, Construction, Association, Reflection) learning model is a learning model where students are given the opportunity to explore their thinking skills. What distinguishes it from other models is that in this OSCAR model there is a self-observation phase, in this phase students already have their own opinions before conducting group discussions, so that students' ability to reason can grow and develop (Holisin & Kristanti, 2017). Students' ability to reason well is very needed, especially when solving a problem or making a decision. In this case, the OSCAR learning model is the right learning model to train students' reasoning so that it is easier to solve the mathematical problems faced (Holisin et al., 2019). The OSCAR model-based Mind Mapping

method is a learning method that invites students to make a concept map according to their understanding and creativity through an exploration approach of thinking skills so that students can solve mathematical problems more easily. From the above presentation, the researcher was encouraged to carry out research on "The Use of the OSCAR Model-Based Mind Mapping Method on Students' Mathematical Problem-Solving Skills."

2. Method

This study aims to determine the effect of the use of the OSCAR model-based Mind Mapping method on students' mathematical problem-solving skills. This type of research is a quantitative experiment with an implemented research design, namely Pre-Experimental Research Design, a type of One Group Pretest-Posttest Design. The focus of this design is one group, where the group is given a Pretest before treatment (initial test), then Posttest (final test). By comparing the conditions before and after being treated, the results obtained will be more accurate. The population in this study is grade VIII students of SMP Muhammadiyah 1 Surabaya for the 2023/2024 school year which consists of 4 classes. The sampling in this study uses the Purposive Sampling technique, which is a method of determining samples based on the researcher's consideration of the school's approval. The sample in this study was taken from class 1, namely in class VIII D, which consisted of 25 students with heterogeneous abilities. The instruments used are pretest/posttest questions in the form of test instruments, descriptions, student activity observation sheets, and student response questionnaires.

This research procedure is carried out in 3 stages, namely 1) Preparation Stage, here the researcher applies for permission from the school about the research to be carried out, compiles and determines the subject of the research, plans and makes learning tools and instruments used in the research such as activity observation sheets, teaching modules, Pretest-Posttest questions, and questionnaires to be validated later and tested to see the level of validity and resiliency. 2) Implementation Stage, there are several activities carried out at the implementation stage, including: (a) Providing Pretests to students, the goal is to find out the students' initial abilities before treatment, (b) Implementing the learning process of the Mind Mapping method based on the OSCAR model,

Table 1. Stages of learning implementation

Phase	Student and Teacher activities	
	Introduction	1. The teacher opens the learning (salam), then continues with prayer with the students. 2. The teacher checks the student's attendance, then checks the student's readiness before learning by asking questions related to the completeness of the study and asking the students to store items that can interfere with activities and learning concentration. 3. The teacher gave an insight by giving an illustration of *Mind Mapping* as a method that will be used with the help of the canva application.

Phase	Student and Teacher activities	
	Core Activities	**Phase 1 (*Orientation*)** 1. The teacher motivates students by giving problems related to daily activities related to the material being studied and explaining the learning objectives. 2. The teacher groups the students into several groups; each group contains 5 students. 3. Students are given the opportunity to ask questions related to something previously explained by the teacher.
		Phase 2 (*Self-Observation*) 1. The teacher directs students to collect information, understand, and pay attention to the problems in the student worksheet related to statistics. 2. The teacher motivates the students to identify the problem. 3. Individually, students observe problems in the student worksheet presented by the teacher 4. Individually, students identify known ones are also asked.
		Phase 3 (*Construction*) 1. The teacher guides students to construct problem-solving steps based on the information that has been observed beforehand. 2. The teacher directs students to solve problems in the student worksheet individually. 3. The teacher directs the students in planning the ***Mind Mapping pattern*** individually 4. Students can ask questions about something they are confused about, and the teacher responds to the question.
		Phase 4 (*Association*) 1. Students discuss problem-solving steps in groups. 2. The teacher encourages students to exchange information by expressing opinions and reasons from the results of the individual's work that has been done before to solve the problem. 3. Students explain the reasons related to the steps the group chose in solving the problem. 4. Students make a summary of the results of the discussion in the form of ***Mind Mapping*** with the help of the Canva application with shapes, ornaments, and colors as creative as possible.
		Phase 5 (*Reflection*) 1. The teacher appointed the group to explain the results of the discussion. 2. The teacher guides the discussion by directing students to convey the results of the group discussion by applying the ***Mind Mapping method***. 3. Students from each other group ask questions or respond to the results of the presentation. 4. Students conclude the statistical material that has been studied.
	Cover	1. Pray together. 2. The teacher closed the lesson with gratitude and greetings.

(c) The learning process using the OSCAR model-based Mind Mapping method was carried out during 2 meetings. Learning is carried out in groups with the collection deadline given, (d) giving a posttest to students, the goal is to see the student's problem-solving ability after treatment. 3) Data Analysis Stage, this stage is the final stage carried out by the researcher, including: a) conducting a pretest-postest assessment to find out the ability to solve students' mathematical problems with the problem solving indicators applied using the Polya theory which consists of 4 indicators including understanding the problem, choosing the right strategy,

solving problems based on strategy, and rechecking the answer results (Astutiani, 2019). b) data processing, c) making reports, and d) drawing data conclusions related to students' mathematical problem-solving skills.

The data collection techniques used in this study were observation, test (pretest/posttest), and questionnaire. The data analysis techniques carried out in this study started with a question test to determine the level of validity and reliability of an instrument, then data analysis was carried out with a normality test to find out whether the sample studied came from a normally distributed population or not. After the normality test is carried out, a homogeneity test is carried out to find out whether the sample taken is homogeneous or not. Next, a hypothesis test (t-test) was carried out to determine the effect of the use of the OSCAR model-based Mind Mapping method on students' mathematical problem-solving ability, and finally an N-Gain value test was carried out to determine the magnitude of the increase in pretest to posttest scores. For student activity data, student response questionnaires, and student Mind Mapping assessments in this study were analyzed using percentage techniques.

3. Results and Discussion

The research that has been carried out has succeeded in identifying various forms of ethnomathematics at the research location, namely the Surabaya City Heroes Monument. The following will present descriptively the results of observations and interviews regarding ethnomathematics at the Surabaya City Heroes Monument. The parts that contain ethnomathematics are the colonade gate, the hero monument, and the November 10 museum.

After the research was conducted, data on students' mathematical problem-solving abilities was obtained using the OSCAR model-based Mind Mapping learning method. The research was carried out in class VIII D which was attended by 25 students. The following is the data on the results of the pretest obtained from giving questions in the form of a description of 4 items.

Table 2. Pretest Description

Descriptive Statistics						
	N	Minimum	Maximum	Mean	Standard deviation	Variance
Pretest	25	46.00	84.00	59.1600	7.96178	63.390
Valid N (listwise)	25					

In Table 2, the minimum and maximum values are 46 and 84, respectively. Then a mean value of 59.16 was obtained with a standard deviation of 7.96 and a variance of 63.39.

The data on the results of the Posttest is presented in Table 3.

Table 3. Posttest Description

Descriptive Statistics						
	N	Minimum	Maximum	Mean	Standard deviation	Variance
Posttest	25	75.00	98.00	85.1600	6.03241	36.390
Valid N (listwise)	25					

In Table 3, the minimum value to the maximum value is 75 and 98, respectively, then the mean value is 85.16 with a standard deviation of 6.03241 and a variance of 36.390. The following is a recapitulation of pretest and posttest data.

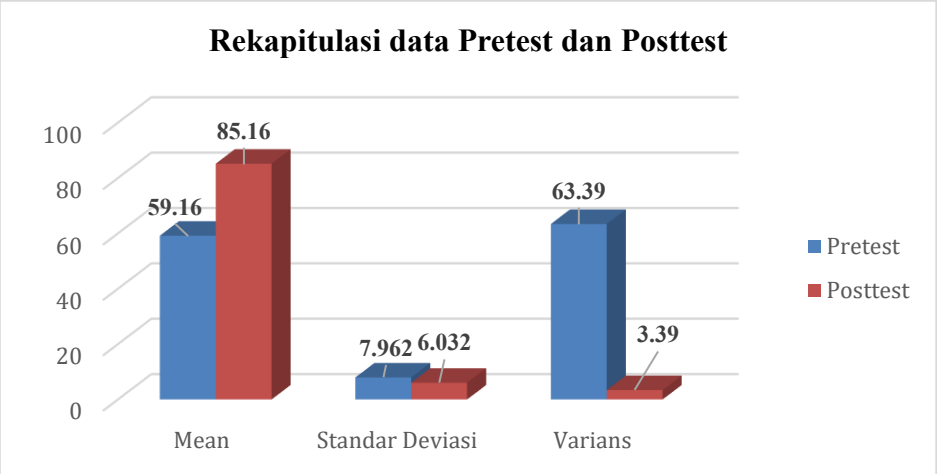

Figure 1. Pretest and Posttest Data Recapitulation

From the recapitulation above, there is a difference in the data of the results of pretest and posttest scores of students. To find out whether the difference in data is significant or not, the researcher conducts statistical analysis using several steps. First, the normality and homogeneity test. The calculation was carried out using SPSS software version 26 for windows. The results of the analysis of the normality and homogeneity test of Pretest-posttest data are presented in the following table.

Table 4. Pretest Normality *Test*

One-Sample Kolmogorov-Smirnov Test		
		Pretest
N		25
Normal Parametersa,b	Mean	59.1600
	Standard deviation	7.96178
Most Extreme Differences	Absolute	.146
	Positive	.129
	Negative	-.146
Test Statistic		.146
Asymp. Sig. (2-tailed)		.181c
a. Test distribution is Normal. b. Calculated from data. c. Lilliefors Significance Correction.		

From Table 4.13, it is stated that the significant value (Sig) shown in the Kolmogorov-Smirnov test is 0.181. If the significant value of the Pretest data is more than 0.05, then the data is normally distributed.

Table 5. Post-Test Normality *Test*

One-Sample Kolmogorov-Smirnov Test		
		Posttest
N		25
Normal Parameters[a,b]	Mean	85.1600
	Standard deviation	6.03241
Most Extreme Differences	Absolute	.129
	Positive	.125
	Negative	-.129
Test Statistic		.129
Asymp. Sig. (2-tailed)		.200[c,d]
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

In Table 5. It is seen that the significant value (Sig) shown in the Kolmogorov-Smirnov test is 0.200. The significant value of the Pretest data is more than 0.05, then H_0. Refused, H_1. Accepted.

Table 6. Homogeneity Test *Pretest* trial class and experimental class

Test of Homogeneity of Variances					
		Levene Statistic	df1	df2	Sig.
Pretest	Based on Mean	1.582	1	46	.215
	Based on Median	1.088	1	46	.302
	Based on Median and with adjusted df	1.088	1	45.872	.302
	Based on trimmed mean	1.682	1	46	.201

The results of the homogeneity test in Table 6. The significance value of 0.215> α (0.05) means, H_1. Accepted. This shows that there is no significant difference in the variance in the pretest score variance of the trial class and the researcher class, so it can be concluded that the data of the two classes are homogeneous.

Table 7. Pretest and Posttest Data Hypothesis Test Results

Paired Samples Test									
		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Standard deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	*Posttest* - *Pretest*	26.000	8.91628	1.78326	22.31954	29.68046	14.580	24	.000

From Table 4.16, it is found that the value of, $t\text{-}_{table}$=2,064<, $t\text{-}_{calcul}$=14.58. So according to the decision making above that, H_0. rejected and, H_1. accepted so that it was concluded that there was a positive and significant difference in students'

mathematical problem-solving ability before and after learning using the OSCAR Model-Based Mind Mapping Method.

After the t-test, the N-Gain score test was then carried out to see the magnitude of the increase in Pretest and Posttest scores. The output obtained from the N-Gain value test is shown in Table 8.

Table 8. N-Gain Value Test

Descriptive Statistics						
	N	Minimum	Maximum	Mean	Standard deviation	Variance
NGain	25	.38	.96	.6269	.14757	.022
Valid N (listwise)	25					

Judging from Table 8. The test result of the N-Gain value is 0.6269, which is in the medium criterion. So, it can be concluded that there is a positive influence with a moderate category on the use of the OSCAR model-based Mind Mapping method on students' mathematical problem-solving skills.

Observation of student activities is carried out during the learning process according to the teaching module. This observation was carried out in 5 groups with 5 students each for 2 meetings. Based on the data from the observation of student activities during learning activities, it is observed by calculating the percentage of student activity assessment. In Table 9. The results of the percentage of student activities from meeting 1 to meeting 2 were stated.

Table 9. Results of Percentage of Student Activity in Research Class

No.	OSCAR	Student Activities	Meeting 1	Meeting 2	Average
1	Orientation dan self-observation	Observe mathematics learning using *the OSCAR-based Mind Mapping method, pay attention to the teacher's explanations, and understand the worksheet*	20,8%	20,5%	20,6%
2	Association	Listen to friends during a discussion or presentation	19,1%	18,4%	18,8%
3	Reflection	Ask questions, express opinions, and draw conclusions	18,4%	20,2%	19,3%
4	Construction	Discuss with the group and actively participate in working on the questions given	21,1%	21,2%	21,1%
5	Association	Presenting the results of the group work in front of the class	20,6%	19,8%	20,2%
	TOTAL		100%	100%	

From Table 9. It was found that the average percentage of student activities that were mostly done during learning were discussed with groups and actively participating in working on the given questions with a percentage of 21.1%, while the average percentage of student activities that were least carried out during learning was listening to friends during discussions or presentations with a percentage of 18.8%

After the learning activity process was carried out with the Mind Mapping method based on the OSCAR model, students were invited to fill out a response

questionnaire. This is necessary to see students' interests and responses after learning mathematics by applying the OSCAR-based Mind Mapping model. In this case, the provision of student response questionnaires is carried out at the end of learning.

According to Sugiono, questionnaires are data collection techniques that are carried out by giving several questions or written statements to respondents to be answered (Nugroho, 2018). The student response questionnaire on the use of the OSCAR model-based Mind Mapping method in learning contained 12 statements with 4 answer options including SS (Strongly Agree), S (Agree), TS (Disagree), and STS (Strongly Disagree). The purpose of the statement contained in the student response questionnaire is to see students' interest during learning by implementing the OSCAR model-based Mind Mapping method. Based on the results of the calculation of student response data, the number and percentage of student response questionnaires in learning were obtained as presented in Table 10.

Table 10. Student Response Survey Results

No	Statement	Percentage	Criterion
1	I find mathematics learning using the *OSCAR model-based* Mind Mapping method more interesting	81% (20 students)	Very Positive
2	I became more serious in participating in mathematics learning by using *the OSCAR model-based Mind Mapping* method	79% (20 students)	Positive
3	I love working on *OSCAR model-based* Mind Mapping assignments	77% (19 students)	Positive
4	I was more focused when learning and following it.	81% (20 students)	Very Positive
5	I became more interested in learning mathematics using *the OSCAR-based Mind Mapping method, because I know that mathematics is useful for solving everyday problems.*	83% (21 students)	Very Positive
6	Learning mathematics with *the OSCAR-based Mind Mapping method made me know more about how to operate and create concept maps through the application easily*	85% (21 students)	Very Positive
7	Learning mathematics with the *OSCAR-based Mind Mapping* method made it easier for me to understand the form of story problems	84% (21 students)	Very Positive
8	I was motivated to participate in the group discussion even though the teacher was not controlling my group.	85% (21 students)	Very Positive
9	I became more active in learning mathematics with *the OSCAR-based* Mind Mapping method	75% (19 students)	Positive
10	Learning mathematics with *the OSCAR-based Mind Mapping method makes it easier for me to know the main topics and concepts of the problem*	77% (19 students)	Positive
11	I find learning mathematics with *the OSCAR-based* Mind Mapping method to be fun.	82% (20 students)	Very Positive
12	Learning mathematics with *the OSCAR-based Mind Mapping method makes mathematics lessons easier.*	80% (20 students)	Very Positive
Average		**80,75%**	
Criterion		**Very Positive**	

In Table 10. The average percentage of student response questionnaire statements was 80.75% with the Very Positive criterion. The results of this

percentage show that many students responded well to learning using the OSCAR model-based Mind Mapping method.

According Karim (2018) to Mind Mapping, it can make it easier for students to remember material, increase understanding, provide new insights, and help organize material. A good mind mapping is one that is colored and applies to a lot of images and symbols so that it will look like a work of art that matches what we think (Hikmawati, 2020). Mind Mapping made by students is then given a score based on the assessment rubric. The assessment of making Mind Mapping based on the OSCAR model was assessed based on the Mind Mapping group. The results of the OSCAR model-based Mind Mapping assessment by category are presented in Table 11.

Table 11. OSCAR *Model-Based* Mind Mapping Category

Group	Value Criteria							Value
	Location	Color Variations	Color Compatibility	Keywords	Keyword Truth	Branch Shape	Keutuhan *Mind Mapping*	
Group 1	4	4	3	3	4	4	4	26
Group 2	4	3	4	4	4	4	4	27
Group 3	4	4	4	4	4	3	4	27
Group 4	4	3	2	4	4	3	4	24
Group 5	4	4	4	4	4	3	4	27
Average								**26,2**
Category								**Excellent**

In Table 11. The average percentage of students' Mind Mapping score was 26.2 with a very good category. So, it can be concluded that students are able to make Mind Mapping properly and correctly.

The student's mathematical problem-solving ability was observed by the researcher through the steps of making Mind Mapping in the fifth step, namely "Developing the form of mind from Mind Mapping". The guidelines used to determine students' problem-solving abilities when making Mind Mapping are according to the indicators of problem-solving ability according to (Lubna, 2023). The results of the percentage of students' problem-solving ability in the student worksheet questions are as shown in Table 12.

Table 12. Percentage of Problem-Solving Ability of Students in student worksheet Questions

Problem-Solving Ability Indicators	Group					Sum	Percentage
	1	2	3	4	5		
Understand and identify problems	3	4	3	4	3	17	17,9%
Choosing the right strategy or approach to solve the problem	4	3	4	4	4	19	20,0%
Solve problems based on strategy	7	8	9	10	9	43	45,3%
Double-check the answer results	3	4	4	3	2	16	16,8%
Sum	17	19	20	21	18	95	100%
Percentage	**77%**	**86%**	**91%**	**95%**	**82%**		**100%**

Based on Table 12. The most common problem-solving ability indicator for students during the creation of Mind Mapping is solving problems based on

strategies with an average percentage of 45.3% results. In the problem-solving indicator based on strategy, students are invited to solve statistical problems, namely mean, median, and mode with appropriate strategies.

Based on the results of previous data analysis, it was found that the use of the OSCAR model-based Mind Mapping method had a positive effect on students' mathematical problem-solving skills, because during learning students were very active and enthusiastic in following it. The results obtained after this learning is applied are quite satisfactory because students' mathematical problem-solving skills are increasingly honed, students are able to find various new ideas, are able to look at a problem from various points of view, are able to find solutions to the problems given, are able to explain reasons or opinions as the basis for the solutions found, and are able to explain the results of answers or solutions in a more neatly structured form so that they are easier to understand. This is in Acesta (2020) accordance with the opinion that students are easier to understand the learning material when using Mind Mapping in learning activities, students are also more aware of the direction of the material being studied and the relationship between one material and another. Mind Mapping can also increase students' creativity.

Mind Mapping is a learning method that is effectively used to improve concept understanding, memory, and foster students' creativity through freedom in imagination (Zahara, 2018). The opinion put forward by DePorter states that the mind map imitates the thought process where it is very possible to transfer the topic, in this case the mind map includes 2 parts of the brain that can improve information easily because learning with this Mind Mapping method students are required to record in an interesting way (Ningsih, 2023). Students will get an effective strategy to enter, store, and extract data from/to the brain through Mind Mapping (Dayani et al., 2021). The OSCAR learning model is a model where students are given the opportunity to explore their own thinking skills (Holisin & Kristanti, 2017). Students' ability to reason well is very needed, especially when solving a problem or deciding (Holisin et al., 2019). Thus, the OSCAR learning model is the right learning model to train students' reasoning to make it easier to solve the mathematical problems they face.

The use of the OSCAR model-based Mind Mapping method also has a positive influence on student activities during the learning process. Students are more active and creative in learning because the OSCAR model-based Mind Mapping method involves more students, besides that students' problem-solving skills are also increasingly honed because students can explain their opinions or the basis of the solutions provided. In addition, based on the results of the percentage of student responses after learning using the OSCAR-based Mind Mapping method, a percentage of 80.75% was obtained, this shows that in learning using the OSCAR-based Mind Mapping method, many students showed a good response.

4. Conclusions

The results showed that there was a positive and significant difference with the category of moderate N-gain values in students' mathematical problem-solving ability between before and after learning using the OSCAR Model-Based Mind Mapping Method. Student activities during the mathematics learning process with the OSCAR model-based Mind Mapping method on the mathematical problem-

solving ability of Muhammadiyah 1 Surabaya Junior High School students have a positive influence with the dominant activities carried out by students are discussing with groups and actively participating in working on the given questions with a percentage of 21.1%. The student response has a percentage of 80.75% with very positive criteria. This can be concluded if most students express a good response to mathematics learning using the OSCAR model-based Mind Mapping method.

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