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The Effect of Self-Concept on Student's Mathematics Representation Ability

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***Abstract**: Representational ability, namely the ability of students to express mathematical ideas in their minds into tangible forms such as pictures, tables, symbols, mathematical equations, writing or words, and so on. Self-concept is one of the variables that is considered to affect students' mathematical representation abilities. Self-concept is how he sees himself. The study aimed to investigate whether self-concept influences the mathematical representation abilities of Grade VIII students at SMP Negeri 9 Purwokerto. Quantitative methods were used in this study with a survey approach. The study population consisted of 283 class VIII students of SMP Negeri 9 Purwokerto, with a total sample of 166 students. The independent variable in the form of self-concept and the dependent variable in the form of students' mathematical representation abilities are the variables in this study. Questionnaires were used to assess self-concept, and tests were to assess students' mathematics representation ability. Data analysis was performed by simple linear regression. The research shows that self-concept has an influence of 18.2% on students' mathematical representation abilities, while other variables influence 81.8% of students' mathematical representation abilities. Based on the research that has been done, self-concept affects the students' mathematics representation ability of class VIII students of SMP Negeri 9 Purwokerto. The effect of self-concept on students' mathematics representation ability is 0.182.*

***Keywords**: mathematics; representation ability; self-concept.*

INTRODUCTION

Mathematics is an educational component and part of the subjects required in schools (Sumartini, 2015). Mathematics develops students' mathematical talents in thinking, imagination, awareness, accuracy, organization, problem-solving, connectedness, delivery, and representation. Learning mathematics can help students improve their math skills (Sabirin, 2014). Based on the National Council of Teachers of Mathematics (NCTM), students must master five criteria for the process of learning mathematics, namely: a) learn to solve problems; b) learn to reason and prove; c) learn to communicate; d) learn to relate concepts; and e) learn to present (Istiani & Suningsih, 2021). These five standards are essential parts of mathematics that students must master to improve their mathematical thinking skills. Representation with inline functions with other components is one such fundamental aspect.

Representation, according to NCTM, is a process of changing an issue or idea into a different form, such as from a physical image or model to a symbol, word, or sentence. Mathematical representation is among the overall objectives of school mathematics learning activities (Sapitri & Ramlah, 2019). The ability to solve problems and communication skills are closely related to the ability of mathematical representation because it is essential for students. Representation, whether in pictures, graphs, diagrams, or other types of representation, is needed to communicate something. With representation, challenges that seem complicated and difficult can now be seen easily, allowing the given problem to be solved quickly (Sabirin, 2014).

Representation is the primary basis on which students understand and apply mathematical ideas, so representation plays a role in solving mathematical problems.

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Students' representation ability is the ability to explain mathematical ideas or ideas using a particular approach. Mathematical representation ability is the ability to communicate mathematical ideas (statements, problems, definitions, solutions, and so on) in one of the forms: a) graphs, diagrams, pictures, or tables; b) mathematical, numeric notation/ algebraic symbols; and c) written text/word, which interprets his thoughts (Kartini, 2011). Indicators of students' mathematical representation abilities, namely (Graciella & Suwangsih, 2016): (a) Modeling and interpretation of social, physical, and mathematical processes in the use of representations (symbolic, verbal, and visual); (b) Using and creating representations (visual, symbolic, and verbal) to express and organize mathematical concepts; (c) Translate, apply and select mathematical representations (verbal, visual, and symbolic) in solving problems.

According to research by The Trends in International Mathematics and Science Study (TIMSS), eighth-grade students in Indonesia have low mathematical representation abilities in knowing algebraic symbols or notations associated with simple conditions (Amieny & Firmansyah, 2021). Based on preliminary observations with Mrs. SU, a Mathematics teacher for class VIII at SMP Negeri 9 Purwokerto, students still need help using representations to learn mathematics. Students still need help presenting mathematical ideas, for example, in making mathematical models or equations from algebraic material. Then, students still need help understanding the problem, so they are not good at finding solutions in solving problems. Furthermore, students need help in creating illustrative representations of real-life problems, which requires students to create illustrative representations first so students can solve the problem.

Self-concept is how a person sees himself (Rohwi et al., 2019). Self-concept is an essential part of social psychology which is built on the experience and feedback of others that builds the self-construction of each individual. Self-concept is significant because it spurs students to learn all the variables contained in students (Fahinu et al., 2021). Students must have a solid self-concept to bring up positive views and attitudes when solving math problems. When teachers tell students that students have to do something in front of the class, students usually feel insecure. This anxiety causes students to give up easily when faced with complex challenges. As a result, a learning environment is needed to bring out positive student self-concepts. Students with a positive self-concept tend to be able to carry out the tasks presented, be confident about their answers, and be wise about the opinions of their friends. On the other hand, students with low self-concepts are hesitant to respond and are easily influenced by their peers' responses.

Self-concept is one of the variables that is considered to affect students' mathematical representation abilities. Students who can see themselves positively will allow students to develop mathematical ideas in their minds more easily. This is because if students think optimistically, never give up, and try to embody mathematical ideas in their minds into a tangible form. They will have a positive self-concept. Therefore, the better students can describe their mathematical ideas, the better or more positive their self-concept will be (Rohwi et al., 2019).

A person's self-concept can be defined as a self-description or self-evaluation (Handayani, 2016). Self-concept is self-perception that develops due to social contact with other people. Self-concept is an individual's perspective and behavior toward himself (Zulkarnain et al., 2020). Self-concept indicators, namely as follows (Hendriana et al., 2018): (a) Interest, sincerity, interest: showing tenacity, will, interest, seriousness, and courage in carrying out activities and learning mathematics; (b) Confidence in self-skills and success in carrying out mathematical assignments; (c) Be able to recognize one's abilities and deficiencies in mathematics; (d) Be tolerant of others and work together; (e) Respect for the opinions of oneself and others, as well as the ability to forgive one's mistakes and those of

others; (f) Be social: know where to put and show the ability to communicate; (g) Recognizing the advantages of learning mathematics and the desire to learn mathematics.

The results of a previous study entitled "The Relationship between Self-Concept and the Mathematical Creative Thinking Ability of MTsN 4 West Bandung Students" states that self-concept contributes 62.73% to creative thinking ability and 37.27% to other factors that affect creative thinking ability. According to previous research, self-concept also influences other abilities besides the ability to think creatively mathematically (Romlah & Novtiar, 2018). The difference between this research and the research conducted by the authors is the dependent variable used; where in this study, the dependent variable used was students' mathematical creative thinking abilities, while in this study, the authors used the dependent variable in the form of students' mathematical representation abilities.

Research conducted by (Handayani, 2016) entitled "The Influence of Self-Concept and Student Anxiety on Understanding Mathematical Concepts" states that there is a prominent influence between self-concept and students' anxiety on understanding mathematical concepts. The difference between this research and research conducted by the authors is the dependent variable used; where in this study, the dependent variable used was understanding of mathematical concepts, while in this study, the authors used the dependent variable in the form of students' mathematical representation abilities. Previous research entitled "The Influence of Self-Concept on the Mathematical Understanding Ability of Class VII Students of SMP Negeri 9 Kendari" states that there is a very significant influence between self-concept on the ability of mathematical understanding of class VII students of SMP Negeri 9 Kendari (Fahinu et al., 2021). The difference between this research and research conducted by the authors is the dependent variable used; where in this study, the dependent variable used was understanding of mathematical concepts, while in this study, the authors used the dependent variable in the form of students' mathematical representation abilities. Another possible ability is the ability of mathematical representation.

RESEARCH METHODS

This study uses quantitative research with a survey approach. Survey research is used on small or large populations. However, the data was investigated in samples from this population to find a correlation, relative events, and distribution between psychological or sociological characteristics (Sugiyono, 2016). This research occurred at SMP Negeri 9 Purwokerto, Banyumas Regency, Central Java Province. This population consisted of 283 students of class VIII SMP Negeri 9 Purwokerto, with a total sample of 166 students. The variables of this study consisted of independent variables in the form of self-concept and the dependent variable in the form of students' mathematical representation abilities. Self-concept indicators in this study are (Hendriana et al., 2018): (a) Interest, sincerity, interest: showing tenacity, will, interest, seriousness, and courage in carrying out activities and learning mathematics: (b) Confidence in self-skills and success in carrying out mathematical assignments; (c) Be able to recognize one's abilities and deficiencies in mathematics; (d) Be tolerant of others and work together; (e) Respect for the opinions of oneself and others, as well as the ability to forgive one's mistakes and those of others; (f) Be social: know where to put and show the ability to communicate; (g) Recognizing the advantages of learning mathematics and the desire to learn mathematics.

While the indicators of students' mathematics representation ability in this study are (Graciella & Suwangsih, 2016): (a) Modeling and interpretation of social, physical, and mathematical processes in the use of representations (symbolic, verbal, and visual); (b) Using and creating representations (visual, symbolic, and verbal) to express and organize

mathematical concepts; (c) Translate, apply, and select mathematical representations (verbal, visual, and symbolic) in solving problems.

The data collection method uses a questionnaire (questionnaire) to assess students' self-concept and tests to assess students' mathematical representation abilities. The research instrument uses validity and reliability tests. The research instrument used in this study was 32 self-concept questionnaire items and 6 test items for students' mathematical representation abilities, which had been tested on 28 class IX A students at SMP Negeri 9 Purwokerto to determine the validity and reliability of an instrument. A validity test is used to assess the reliability or accuracy of an instrument. This validity test uses Product Moment correlation (Arikunto, 2018). An instrument is said to be valid if (rxy ≥ rtable) with a significance level of 5% (Sarjono & Julianita, 2011). Instrument validity test was carried out to 28 respondents, so that the table value obtained with a significance level of 5% is 0.388. As for the results of the validity test for self-concept variables, there are 17 valid questionnaire items out of 32. While the results of the validity test for the variable students' mathematical representation abilities, namely the total number of valid question items. The reliability test is used to determine the consistency of the measuring instrument. The reliability test uses the Cronbach Alpha technique (Rostina, 2016). An instrument is said to be reliable if the rcount value is > 0.60. The results of the reliability test for the self-concept variable show that the value of r count is 0.818, which means that the instrument is reliable. At the same time, the reliability test results for the variable students' mathematical representation abilities showed that the value of r count was 0.714, which means that the instrument is reliable. Analysis prerequisite tests and hypothesis tests were used to analyze the data. Linearity test, normality test, and regression significance test as analysis prerequisite tests. Meanwhile, a simple linear regression analysis was performed to test the hypothesis. The SPSS 22 for Windows program is used to help with data analysis calculations.

RESULTS AND DISCUSSION

This research was conducted at SMP Negeri 9 Purwokerto with a sample of 166 students. Before the prerequisite analysis test was carried out, the respondents gave answers to the questionnaire (questionnaire) and the test given by the researcher with a total of 6 test questions and 17 questionnaire items. The linearity test, normality test, and regression significance test were used in the analysis prerequisite test. The prerequisite analysis test tries to confirm that the regression equation is linear and significant, ensuring that the data is normally distributed.

To investigate whether the distribution of data is normally distributed or not using the normality test. The decision-making criterion is if the sig. $\alpha < 0.05$, then the data is not normally distributed, and if the sig. $\alpha \geq 0.05$, the data is normally distributed (Setiawan & Adrian, 2019).

From Table 1, the significance value is 0.200 > 0.05, so the data is normally distributed. Furthermore, the linearity test aims to analyze the linear relationship or not between variables. To investigate whether or not a linear relationship between variables can be seen in its significance value, that is, if the sig. $\alpha \geq 0.05$, the relationship is linear, and if the sig. $\alpha < 0.05$, the relationship is not linear (Sarjono & Julianita, 2011).

Table 1. Normality Test

		Unstandardized Residual
N		166
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	1.92992418
Most Extreme Differences	Absolute	.055
	Positive	.055
	Negative	-.035
Test Statistic		.055
Asymp. Sig. (2-tailed)		.200[c,d]

Table 2. Linearity Test

			Sum of Squares	df	Mean Square	F	Sig.
Mathematics Representation Ability * Self-Concept	Between Groups	(Combined)	225.072	23	9.786	2.639	.000
		Linearity	136.988	1	136.988	36.948	.000
		Deviation from Linearity	88.084	22	4.004	1.080	.375
	Within Groups		526.476	142	3.708		
	Total		751.548	165			

Table 2 shows that the significance value is 0.375. Thus, between variables have a linear relationship because the significance value is > 0.05. A regression significance test was carried out to investigate whether the regression coefficients obtained provide a significant (significant) relationship. Testing the hypothesis is as follows: Ho: the regression is not significant; H_1: significant regression. The test provisions are if the sig. $\alpha \geq 0.05$, then H_1 is rejected, so the regression is meaningless, and if the sig. $\alpha < 0.05$, then H_1 is accepted so that the regression means (Jaya, 2010).

Table 3. Regression Significance Test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	136.988	1	136.988	36.556	.000[b]
	Residual	614.560	164	3.747		
	Total	751.548	165			

Table 3 shows a significance value of 0.000. It can be concluded that the regression means and H1 is accepted because the significance value is <0.05. To predict students' mathematics representation ability can use self-concept variables. Simple linear regression analysis was used to test the hypothesis. The researcher will calculate the value of the regression equation from self-concept (variable X) and students' mathematical representation

abilities (variable Y) using the functional relationship $\hat{Y} = a + bX$ to determine whether the proposed hypothesis is accepted. Then, for testing the hypothesis, namely: H_0: there is no effect of self-concept on the mathematics representation ability of class VIII students of SMP Negeri 9 Purwokerto and H_1: there is effect of self-concept on the mathematics representation ability of class VIII students of SMP Negeri 9 Purwokerto. The provisions for testing the hypothesis are (Sarjono & Julianita, 2011): (a) If the sig. < 0.05 (H_1 is accepted), then it is significant and (b) If the sig. ≥ 0.05 (H_1 is rejected), then it is not significant.

Table 4. Hypothesis Test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.056	1.258		9.582	.000
	Self-Concept	.171	.028	.427	6.046	.000

In Table 4, column B, the Constant value is 12.056, and the self-concept value is 0.171. Thus, the regression equation is obtained, namely: $\hat{Y} = 12{,}056 + 0{,}171X$. From the regression equation, the following explanation is obtained: (a) A constant of 12.056 is expressed if there is no value for X (X=0), then the value for $\hat{Y} = 12{,}056$, (b) The regression coefficient X, which is 0.171, is expressed by each unit of X increasing by 1, so the value of $\hat{Y}$ increases by 0.171.

Tabel 5. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.427[a]	.182	.177	1.936

Table 5 shows the magnitude of the correlation/relationship value (R), which is 0.427, and the percentage of independent variables that affect the dependent variable is the result of squaring R, which is called the coefficient of determination. Based on these results, the coefficient of determination is 0.182, which indicates that the influence of self-concept variables on the variables of students' mathematical representation abilities is 18.2%. In comparison, the remaining 81.8% of students' mathematical representation abilities are influenced by variables other than self-concept.

Mathematical representation is the ability of students to express mathematical ideas in their minds in tangible forms in the form of symbols, tables, pictures, mathematical equations, words, or writing. Meanwhile, self-concept is how a person views himself (Rohwi et al., 2019). One of the things that influence students' mathematical representation ability is self-concept. Students who have seriousness, interest, interest: show willingness, courage, persistence, seriousness, and interest in learning and doing mathematical activities will be able to use representations (verbal, symbolic, and visual) to model and interpret physical, social, and mathematical phenomena. Students who have seriousness, interest, interest: the show will, courage, persistence, seriousness interest in learning and doing mathematical activities will be able to create and use representations (verbal, symbolic, and visual) to organize and communicate mathematical ideas. Students who have confidence in their abilities and are successful in carrying out mathematical tasks will be able to create and use representations (verbal, symbolic, and visual) to organize and communicate mathematical ideas (Sundawan & Nopriana, 2019). Students who have confidence in their abilities and are successful in carrying out mathematical assignments will be able to select, apply, and translate

mathematical representations (visual, symbolic, and verbal) to solve problems (Cendana & Kusuma, 2019). Students who recognize their strengths and weaknesses in mathematics will be able to create and use representations (verbal, symbolic, and visual) to organize and communicate mathematical ideas (Sundawan & Nopriana, 2019).

Students who recognize their strengths and weaknesses in mathematics will be able to select, apply, and translate mathematical representations (visual, symbolic, and verbal) to solve problems (Cendana & Kusuma, 2019). Students who cooperate and are tolerant of others will be able to create and use representations (verbal, symbolic, and visual) to organize and communicate mathematical ideas. Students who respect the opinions of others and themselves can forgive the mistakes of others, and they will be able to make and use representations (verbal, symbolic, and visual) to organize and communicate mathematical ideas (Sundawan & Nopriana, 2019). Students who respect the opinions of others and themselves can forgive the mistakes of others, and they will be able to choose, apply, and translate mathematical representations (visual, symbolic, and verbal) to solve problems (Cendana & Kusuma, 2019). Students who behave socially: demonstrate the ability to communicate and know where to put themselves will be able to create and use representations (verbal, symbolic, and visual) to organize and communicate mathematical ideas. Students who understand the benefits of learning mathematics and like learning mathematics will be able to select, apply, and translate representations (verbal, symbolic, and visual) of mathematics to solve problems.

Students who see themselves in a good or positive way can more easily construct mathematical ideas in their minds. This is because if students have a positive self-concept, they will always think positively, not give up quickly, and try to realize the mathematical ideas in their minds in a tangible form. Thus, the better or positive self-concept students have, the better they can represent mathematical ideas (Rohwi et al., 2019).

This study found that self-concept has a significant and positive relationship to the ability of mathematical representation. This means that the level of self-concept can affect students' mathematical representation abilities even though their contribution is not that big. Meanwhile, from the results of data analysis, it was found that the contribution of self-concept was still low to help students hone their mathematical representation abilities, namely 18.2%. Other factors or variables besides self-concept influence the remaining 81.8%. Relevant previous research indicates that there is a link between self-efficacy and students' mathematical representation abilities. The stronger the students' self-efficacy, the higher the students' mathematical representation ability (Setyawati, 2020). At the same time, self-efficacy is part of self-concept, so that self-concept affects students' mathematical representation abilities.

Implicitly, the importance of representation appears in the goals of problem-solving and mathematical communication because solving mathematical problems requires the ability to make mathematical models and interpret the solutions, which are indicators of representation (Syafri, 2019). Previous research has shown a positive and significant relationship between self-concept and students' mathematical problem-solving abilities, where the contribution of self-concept to mathematical representation ability is 24.6%, and other variables influence the remaining 75.4%. Like students' initial abilities, good motivation comes from themselves, their families, and the environment. With a self-concept that begins to develop, students can better assess what things show their success or failure in learning (Musriandi, 2017).. Previous research also shows that students' mathematical communication skills align with their self-concept, where the higher the student's self-concept, the better their mathematical communication skills (Sari & Pujiastuti, 2020).

CONCLUSION AND SUGGESTIONS

Based on this research, the conclusion is that self-concept influences the mathematical representation abilities of class VIII students of SMP Negeri 9 Purwokerto. The effect of self-concept on students' mathematical representation abilities is 18.2%, while the influence of other variables on students' mathematical representation abilities is 81.8%.

Based on these conclusions, the researcher provides suggestions for students to gain a better understanding of self-image in learning mathematics and to form an opinion that learning mathematics is fun learning so that students can develop their mathematical abilities. Furthermore, educators can teach students how to control their self-concept during mathematics learning activities to improve their mathematical representation abilities and achieve good results. Future researchers can examine the influence of variables other than self-concept, which are predicted to affect students' mathematical representation abilities.

REFERENCE

Amieny, E. A., & Firmansyah, D. (2021). Kemampuan Representasi Matematis Siswa Kelas VIII SMP dalam Pembelajaran Matematika. *Maju*, *8*(1), 133–142.

Arikunto, S. (2018). *dasar-dasar evaluasi pendidikan*. PT Bumi Aksara.

Cendana, L. S., & Kusuma, A. B. (2019). Meningkatkan Kemampuan Representasi Matematis dan Self Concept melalui accelerated llearning cycle MTS NEGERI 3 Banyumas. *Jurnal Karya Pendidikan Matematika Universitas Muhammadiyah Semarang*, *6*(1), 5–10.

Fahinu, Lambertus, & Makmur. (2021). Pengaruh Self-Concept terhdap Kemampuan Pemahaman Matematis Siswa Kelas VII SMP Negeri 9 Kendari. *Jurnal Pendidikan Matematika*, *9*(1), 127–140.

Graciella, M., & Suwangsih, E. (2016). Penerapan Pendekatan Matematika Realistik Untuk Meningkatkan Kemampuan Representasi Matematis Siswa. *Metodik Didaktik*, *10*(2), 27–36. https://doi.org/10.17509/md.v10i2.3180

Handayani, S. D. (2016). Pengaruh Konsep Diri Dan Kecemasan Siswa. *Jurnal Formatif*, *6*(1), 23–34.

Hendriana, H., Rohaeti, E. E., & Sumarmo, U. (2018). *Hard Skills dan Soft Skills Matematik Siswa* (N. F. Atif (ed.)). Refika Aditama.

Istiani, A., & Suningsih, A. (2021). Analisis Kemampuan Representasi Matematis Siswa. *Jurnal Pendidikan Matematika*, *10*.

Jaya, I. (2010). *Statistik Penelitian Pendidikan*. Perdana Mulya Sarana.

Kartini. (2011). Peranan Representasi dalam Pembelajaran Matematika. *Seminar Nasional Matematika Dan Pendidikan Matematika UNY*, 361–372.

Musriandi, R. (2017). Hubungan Antara Self-Concept dengan Kemampuan Pemecahan Masalah Matematis Siswa. *Jurnal Dedikasi*, *1*(2), 150–160.

Rohwi, Y. O., Soleh, D. A., & Fahrurrozi. (2019). Hubungan antara Konsep Diri dengan Kemampuan Representasi Matematis pada Peserta Didik Kelas V Sekolah Dasar di Kelurahan Kalisari Pasar Rebo Jakarta Timur. *Dinamika Sekolah Dasar*, 1–16.

Romlah, S., & Novtiar, C. (2018). Hubungan Antara Self-Concept Terhadap Kemampuan Berpikir Kreatif Matematis Siswa Mtsn 4 Bandung Barat. *Nusantara of Research : Jurnal Hasil-Hasil Penelitian Universitas Nusantara PGRI Kediri*, *5*(1), 9–15.

https://doi.org/10.29407/nor.v5i1.12087

Rostina. (2016). *Statistika Penelitian Pendidikan*. Alfabeta.

Sabirin, M. (2014). Representasi dalam Pembelajaran Matematika. *Jurnal Pendidikan Matematika*, *1*(2), 33. https://doi.org/10.18592/jpm.v1i2.49

Sapitri, I., & Ramlah. (2019). Kemampuan Representasi Matematis dalam Menyelesaikan Soal Kubus dan Balok pada Siswa SMP. *Prosiding Seminar Nasional Matematika Dan Pendidikan Matematika Sesiomadika*, *4*, 829–835.

Sari, S. M., & Pujiastuti, H. (2020). Analisis Kemampuan Komunikasi Matematis Siswa ditinjau dari Self-Concept. *Kreano, Jurnal Matematika Kreatif-Inovatif*, *11*(1), 71–77. https://doi.org/10.15294/kreano.v11i1.22717

Sarjono, H., & Julianita, W. (2011). *SPSS VS LISREL*. Salemba Empat.

Setiawan, A., & Adrian, D. (2019). *Metodologi dan Aplikasi Statistik*. Nuha Medika.

Setyawati, R. D. (2020). Profil Kemampuan Representasi Matematis Siswa SMP ditinjau dari Self Efficacy. *Phenomenon : Jurnal Pendidikan MIPA*, *10*(2), 220–235. https://doi.org/10.21580/phen.2020.10.2.6627

Sugiyono, P. D. (2016). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Alfabeta.

Sumartini, T. S. (2015). Mengembangkan Self Concept Siswa Melalui Model Pembelajaran Concept Attainment. *Mosharafa: Jurnal Pendidikan Matematika, Vol. 4*(2), 48–57.

Sundawan, M. D., & Nopriana, T. (2019). Guided-Discovery Learning, Representasi Matematis dan Konsep Diri Mahasiswa pada Materi Geometri. *JNPM (Jurnal Nasional Pendidikan Matematika), 3*(1), 123. https://doi.org/10.33603/jnpm.v3i1.1868

Syafri, F. S. (2019). Pengaruh kemampuan representasi siswa dalam pemecahan masalah matematika. *Jurnal Pendidikan Matematika*, *3*(May), 49–55.

Zulkarnain, I., Asmara, S., & Sutatminingsih, R. (2020). *Membentuk Konsep Diri Melalui Budaya Tutur: Tinjauan Psikologi Komunikasi*. Puspantara.