TECHNIUM
SOCIAL SCIENCES JOURNAL

Vol. 24, 2021

A new decade for social changes

www.techniumscience.com

ISSN 2668-7798

Technium Social Sciences Journal
Vol. 24, 65-73, October, 2021
ISSN: 2668-7798
www.techniumscience.com

The relationship between emotional intelligence with student's mathematics representation ability

M. Coesamin

Faculty of Teacher Training and Education, Lampung University
m.coesamin@fkip.unila.ac.id

Sugeng Sutiarso

Faculty of Teacher Training and Education, Lampung University
sugeng.sutiarso@fkip.unila.ac.id

Nadila Intan Saputri

Faculty of Teacher Training and Education, Lampung University
snadilaintan@gmail.com

Abstract. This study aims to determine the relationship between students' emotional intelligence and students' mathematical representation abilities. The population in the study were all eighth grade students of SMP Negeri 1 Sukoharjo, Sukoharjo sub-district, Pringsewu Regency for the 2020/2021 academic year which were distributed in nine classes. The research sample was selected by purposive sampling technique and 32 students were selected for class VIII-A. The design used is a correlational research design. The research data is in the form of quantitative data in the form of students' emotional intelligence scores obtained through filling out questionnaires on students' emotional intelligence and students' mathematical representation ability scores obtained through circle material test activities. The data analysis technique in this study uses the Pearson product moment correlation test. The conclusion of this study is that there is a significant relationship between students' emotional intelligence and students' mathematical representation abilities, with a Pearson product moment correlation index number of 0.698, meaning that the higher the emotional intelligence of students, the higher the students' mathematical representation ability.

Keywords. relationships, emotional Intelligence, mathematis, representation ability, students

I. Introduction

Education is basically a process to help humans develop their qualities, so that they are able to deal with all changes and problems that occur. The purpose of national education is stated in Law Number 20 of 2003 concerning the National Education System Article 3, namely to educate the nation's life and develop the potential of students to become human beings of faith and fear of God Almighty, noble, healthy, knowledgeable, capable, creative, independent, and become a democratic and responsible citizen. Through education, it is hoped that quality human resources will be born who are able to develop the life of the community, nation and

state in a better direction. Educational goals can be achieved, but steps are needed to develop student potential, one of which is by conducting learning activities in schools.

According to the Government Regulation of the Republic of Indonesia Number 32 of 2013 concerning National Education Standards Article 77 J and 77 K, there is mandatory content in elementary schools (SD), junior high schools (SMP), and high schools (SMA), one of which is mathematics. Learning mathematics is one of the important lessons for students at school, because the concept of mathematics is something that we often encounter in everyday life. Learning mathematics can be said to be successful if the objectives of learning mathematics are achieved.

The purpose of learning mathematics in Permendikbud No. 58 of 2014 is that students can represent ideas, reasoning, and be able to compile mathematical proofs using complete sentences, symbols, tables, diagrams, or other media to clarify situations or problems. Students are expected to be able to explain the relationship between concepts and use concepts and algorithms, in a flexible, accurate, efficient, and precise way in problem solving. by students, one of which is the ability of mathematical representation (mathematical representation). According to NCTM (2016), representation is at the core of learning mathematics. There is no good mathematics learning outcome without the support of good mathematical representation abilities in students.

The facts in the field show that the mathematical representation ability of students in Indonesia is still relatively low. This is based on the results of TIMSS (Trends in International Mathematics and Science Studies) in 2015 in the field of mathematics, Indonesia ranks 44th out of 49 participating countries with an average score of 397 out of an ideal score of 1000. The questions in TIMSS contain The questions with the cognitive domain studied are applying, knowing, and reasoning. TIMSS questions that measure reasoning are 25%. Absorin and Sugiman (2018: 195) state that in reasoning ability there is mathematical representation ability in it.

Furthermore, the 2019 OECD (Organization for Economic Cooperation and Development) stated that Indonesia was ranked 73rd out of 79 countries in the 2018 Program for International Student Assessment (PISA) with an average math ability score of 379 from the international average score, namely 489. In the PISA study (OECD, 2019) competencies measured in the cognitive domain are communication (communication), making or formulating models (mathematizing), representation (representation), reasoning and arguing (reasoning and argument), designing problem-solving strategies (devising strategies for solving problems), using symbols, formal and technical language, and operations (using symbolic, formal and technical language, and operations), and using mathematical tools (using mathematical tools).

According to Purwaningtyas (2020), Indonesian students' math achievement scores are at Level 1 of the six existing levels, which is still limited to reproductive competence. At Level 1, the representation ability is not yet visible. The new representation ability will be seen at a minimum at Level 2. Moreover, according to Yulian (2016), the questions on TIMSS and PISA are questions whose substance is contextual. Contextual questions require students to be able to interpret a problem and change the problem to another, simpler form to facilitate problem solving. The results of TIMSS and PISA show that the mathematical representation ability of Indonesian students is still relatively low.

The ability of students' mathematical representation is low, it can be indicated that there is a factor that causes it. The low ability of students' mathematical representation can be caused by two factors, namely internal factors and external factors. According to Slameto (2015: 54), internal factors are factors that exist within the individual who is studying, while external factors are factors that exist outside the individual. In this regard, Slameto (2015: 54) mentions that the

Technium Social Sciences Journal
Vol. 24, 65-73, October, 2021
ISSN: 2668-7798
www.techniumscience.com

internal aspects of students can be in the form of physical factors, psychological factors, and fatigue factors. While external factors are family factors, school factors and community factors. Furthermore, Slameto (2015: 55) states that psychological factors include intelligence, attention, interests, talents, motives, maturity, and readiness. One of the factors that influence learning is intelligence. Intelligence itself includes intellectual intelligence, emotional intelligence, and spiritual intelligence.

Intellectual intelligence is better known as Intelligence Quatient (IQ). Previously, intellectual intelligence was considered as the intelligence that determines one's life. But later it was realized that there is another intelligence that is no less important, namely non-intellectual intelligence in the form of emotions, personal and social factors. Goleman (1998: 44) argues that the determinant of one's success lies not only in how high the IQ is, but also how the emotional and spiritual conditions of children (students) must be considered. Because IQ is only able to contribute 20% of a person's success, and 80% is contributed by other intelligences. According to Rahma (2014), emotional intelligence has a very important role to achieve success in school and in communicating in the community. Emotional intelligence includes different abilities, but complements each other with academic intelligence (academic intelligence). Karimah (2016) argues that emotional intelligence has an important role in achieving success, with low emotional intelligence will cause students difficulty in focusing (concentration) on during the teaching and learning process.

Based on the results of research by Rahma (2017) on fifth grade students of SD Negeri 4 Metro Pusat, it shows that there is a relationship between emotional intelligence and student learning outcomes. The results of research from Ahsyar (2015) in class VIII-D SMP PGRI Sedati, showed that there was a significant and positive relationship between emotional intelligence and mathematics learning outcomes. If emotional intelligence has a relationship with mathematics learning outcomes, it is possible that emotional intelligence also has a relationship with students' mathematical representation abilities. This is based on the assumption that learning outcomes are abilities possessed by students after participating in learning activities, where to achieve learning outcomes it is necessary to have learning objectives that are in accordance with the content standards of primary and secondary education. Based on content standards, there are five standards of mathematical ability that must be possessed by students, one of which is mathematical representation.

Based on the explanation above, a study was conducted to determine the relationship between students' emotional intelligence and mathematical representation abilities in even semester VIII students of SMP Negeri 1 Sukoharjo, Sukoharjo District, Pringsewu Regency for the 2020/2021 academic year. The purpose of this study was to determine the relationship between emotional intelligence and students' mathematical representation abilities.

2. Method

The population in this study were all grade VIII students of SMP Negeri 1 Sukoharjo in the even semester of the 2020/2021 academic year which were distributed into nine classes, namely grades VIII-A to VIII-I. Sampling was done by purposive sampling technique. Purposive sampling technique is taking the class as a sample on the basis of certain considerations (Sugiyono, 2015: 124). Sampling was carried out with the consideration that the sample class came from a class taught by a teacher who taught mathematics longer and the sample was taken from the class with the highest average UTS score. Class VIII-A was chosen which consisted of 32 students as the research sample. This research is a correlation research, because it aims to analyze the relationship between students' emotional intelligence and

Technium Social Sciences Journal
Vol. 24, 65-73, October, 2021
ISSN: 2668-7798
www.techniumscience.com

mathematical representation ability. According to Winarni (2011: 46) correlational research is research on the relationship between variables or several variables with other variables.

There are two kinds of instruments in this study, namely test instruments and non-test instruments. The test instrument is used to measure students' mathematical representation ability, the test is given in the form of description questions, namely five questions based on indicators of students' mathematical representation ability on the subject of circles. The non-test instrument was used to measure the level of emotional intelligence of students in the form of an emotional intelligence questionnaire consisting of 30 statements which were divided into 18 positive statements and 12 negative statements. The emotional intelligence questionnaire consists of indicators of emotional intelligence including aspects of recognizing one's emotions (Self Awareness), managing emotions (Self-Regulation), motivating oneself (Self-Motivation), recognizing other people's emotions and building relationships (Goleman, 1999). The emotional intelligence scale in this study used a Likert scale consisting of four answer options, namely strongly agree (SS), agree (S), disagree (TS), and strongly disagree (STS).

Before testing the hypothesis on students' emotional intelligence data and students' mathematical representation abilities, the data normality test was carried out first. The normality test of the data in this study used the Kolmogorov-Smirnov test. Thus, it can be concluded that the residual data of students' emotional intelligence and students' mathematical representation abilities come from a normally distributed population.

3. Result and Discussion

Result

The research data used in this study are data on students' mathematical representation abilities obtained from test scores on the circle material and students' emotional intelligence data obtained from the emotional intelligence scale of students at SMP Negeri 1 Sukoharjo. Then, from the data taken, look for the total value, maximum value, minimum value, average value, standard deviation and variance. The description of the data is presented in Table 1 as follows.

Table 1. Data Description of Students' Mathematical Representation Ability and Emotional Intelligence

	N	Total Value	Max. Value	Min. Value	Average	Standard Deviation	Variance
Mathematical Representation Ability	32	495	22	10	15.47	2.74	7.50
Emotional Intelligence	32	2488	91	60	77.75	7.76	60.19

To further classify the data on students' mathematical representation abilities and emotional intelligence according to the criteria. The category guidelines for students' mathematical representation abilities are listed in Table 2.

Table 2. Guidelines for Grouping Students' Mathematical Representation Ability

Score	Category
$X \geq \bar{x} + 1.5\,\sigma$	Very high
$\bar{x} + 0.5\,\sigma \leq X < \bar{x} + 1.5\,\sigma$	High
$\bar{x} - 0.5\,\sigma \leq X < \bar{x} + 0.5\,\sigma$	Medium
$\bar{x} - 1.5\,\sigma \leq X < \bar{x} - 0.5\,\sigma$	Low
$X < \bar{x} - 1.5\,\sigma$	Very Low

Technium Social Sciences Journal
Vol. 24, 65-73, October, 2021
ISSN: 2668-7798
www.techniumscience.com

Based on the calculations, the results of the grouping of students' mathematical representation abilities are shown in Table 3.

Table 3. Grouping of Students' Mathematical Representation Ability Data

Category	Percent
Very high	12.5%
High	9.375%
Medium	56.25%
Low	9.375%
Very Low	12.5%

Next is the grouping of students' emotional intelligence data. The category guidelines for students' emotional intelligence are in Table 4.

Table 4. Guidelines for Grouping Students' Emotional Intelligence

Score	Category
$X \geq \bar{x} + \sigma$	High
$\bar{x} - \sigma \leq X < \bar{x} + \sigma$	Medium
$X < \bar{x} + \sigma$	Low

Based on the calculations, the results of the grouping of students' mathematical representation abilities are shown in Table 5.

Table 5. Grouping of Students' Emotional Intelligence Data

Category	Percent
High	21.875%
Medium	59.375%
Low	18.75%

Based on the results of the normality test, it was found that the population of data on emotional intelligence and mathematical representation abilities of students came from a population that was normally distributed. Therefore, the hypothesis test in this study uses the Pearson product moment correlation formula with the help of SPSS 22 Software, with a significance level used of 0.05 and the price of r_{table} = 0.361. From the results of calculations based on the Pearson product moment correlation formula, the Pearson product moment correlation index or r_{xy} is 0.698

The summary of the results of the Pearson product moment correlation test is presented in Table 6 as follows.

Table 6. Summary of Pearson Product Moment Correlation Test Results

Correlations			
		Intelligence Emotional Student	Ability Mathematical Representation
Intelligence Emotional Student	Pearson Correlation	1	.698**
	Sig. (2-tailed)		.000
	N	32	32
Ability Mathematical Representation	Pearson Correlation	.698**	1
	Sig. (2-tailed)	.000	
	N	32	32

Technium Social Sciences Journal
Vol. 24, 65-73, October, 2021
ISSN: 2668-7798
www.techniumscience.com

Based on the calculation, $r_{value} = 0.698 > r_{table}=0.361$, it can be concluded that there is a relationship between students' emotional intelligence and students' mathematical representation ability. From the results of the Pearson product moment correlation test, Sig. (2-tailed) of 0.000. Because 0.000 < 0.05 then H_0 is rejected, meaning that there is a significant relationship between students' emotional intelligence and students' mathematical representation abilities. In the future, it will be seen how strong the relationship between students' mathematical representation abilities and students' emotional intelligence is.

According to Riduwan (2015: 138) the interpretation of the correlation coefficient of the r value is as follows:

Table 7. Interpretation of the Correlation Coefficient Value of r

Interval	Level
0.000 – 0.199	Very Low
0.200 – 0.399	Low
0.400 – 0.599	Strong enough
0.600 – 0.799	Strong
0.800 – 1.000	Very Strong

From the calculation results, the correlation index number ranges from 0.600 - 0.799, so based on the interpretation of the correlation coefficient, the value of r shows that there is a strong relationship between students' emotional intelligence variables and students' mathematical representation abilities.

Furthermore, the Pearson product moment correlation test was conducted to see the level of relationship between students' emotional intelligence indicators, namely recognizing self-emotions, managing emotions, motivating oneself, recognizing other people's emotions and fostering relationships with students' mathematical representation abilities. The summary of the results of the Pearson product moment correlation test between the five indicators of emotional intelligence and students' mathematical representational abilities is presented in Table 8 as follows.

Table 8. Correlation Test Results Between the Five Indicators of Emotional Intelligence and Students' Mathematical Representation Ability

Emotional Intelligence Indicator	Value r	Value Sig. (2-*tailed*)	Level
Recognizing self-emotions	0.374	0.035	Low
Managing self-emotions	0.419	0.017	Strong Enough
Motivate yourself	0.662	0.000	Strong
Recognizing Other People's Emotions (Empathy)	0.362	0.042	Low
Fostering Relationships	0.288	0.111	Low

Discussion

Based on the results of hypothesis testing using the Pearson product moment correlation test between students' emotional intelligence and students' mathematical representation abilities, it was concluded that there was a significant relationship between emotional intelligence and students' mathematical representation abilities. The relationship between emotional intelligence and students' mathematical representation ability has a strong level of relationship.

In addition, the Pearson product moment correlation test was conducted for the five aspects of emotional intelligence indicators, namely recognizing self-emotions, managing

emotions, motivating oneself, recognizing other people's emotions and fostering relationships with students' mathematical representation abilities and concluded that of the five indicators of emotional intelligence, there is one indicator. which does not have a relationship with students' mathematical representation ability, namely the indicator of fostering a relationship. For the other four indicators, the results show that there is a significant relationship with students' mathematical representation abilities. Indicators of recognizing self-emotions and recognizing emotions of others have a low level of relationship with students' mathematical representation abilities, indicators of managing other people's emotions have a fairly strong level of relationship with students' mathematical representation abilities, and indicators of self-motivation have a strong relationship with students' mathematical representation abilities.

If students' emotional intelligence is good, it will encourage students to have good thinking skills. This is in line with the results of Sulistya-ningsih's research (2016), namely if the emotional intelligence is getting better, the higher the critical thinking ability possessed by that person. Muligar (2016) explains that there is a significant positive effect between students' critical thinking abilities and mathematical representation abilities. Students who have high critical thinking skills will be able to improve their competence in mathematical representation. Then, someone who has good visual representation skills can show the relationship between images and solving strategies in various mathematical problems (Ruliani, et al: 2018). So it can be concluded that if students have good emotional intelligence, students can express their ideas well, improve problem solving skills by presenting data or information from a representation to graphical or table representations and solve problems by involving mathematical expressions. A good attitude will help students involve emotions in activities to represent their ideas or ideas to understand, direct memory, and make final decisions to solve mathematical problems using words.

Students with good emotional intelligence, when faced with difficulties and various situations when completing assignments and learning mathematics will be able to motivate themselves to solve problems that require students' mathematical representation abilities, students will give their best efforts related to what they are doing. and manage their emotions and interests, they will never give up on solving problems that involve representation, they will try to make complex problems into simpler forms. In addition, students who are able to recognize other people's emotions and build good relationships will be easier to represent ideas and can be understood by others. This is in line with the opinion of Iman (2016) that students who recognize their own emotions and are able to manage their emotions will be able to motivate themselves to achieve the best results in learning and not easily give up maximizing themselves. Meanwhile, students with low emotional intelligence tend to find it difficult to motivate themselves, have difficulty managing emotions, lack the ability to cope with mental tension, do not want to accept other people's points of view, lack the ability to communicate ideas with words, and give up quickly when faced with obstacles.

The results of data analysis on emotional intelligence of eighth grade students of SMP Negeri 1 Sukoharjo were divided into three categories, namely low, medium, and high. The mathematical representation ability of eighth grade students of SMP Negeri 1 Sukoharjo is divided into five categories, namely very low, low, medium, high and very high. The results of data grouping show that 12.5% of students have very high mathematical representation abilities and 9.375% are high. Students who have very high or high mathematical representation abilities also have high emotional intelligence abilities. This is evidenced by comparing the total scores of students, it is true that students with high emotional intelligence will have high mathematical representation abilities, and vice versa. From the results of hypothesis testing, it is found that there is a strong relationship between emotional intelligence and students' mathematical

representation abilities, and the relationship between the two variables has a positive or unidirectional relationship. That is, the higher the students' emotional intelligence, the higher the students' mathematical representation abilities, and vice versa.

Based on observations during the implementation of the research, students who have high emotional intelligence tend to give a positive response to the questions given, are enthusiastic about asking things that are not understood in the questions, work on the questions given well and collect them on time. On the other hand, students who have low emotional intelligence abilities tend not to include complete steps in working on problems. This shows that students with high emotional intelligence have more ability to manage motivation and emotions to be productive than students with low emotional intelligence. In addition, students with high emotional intelligence will be able to recognize emotions and manage their emotions so that they have a higher interest in learning, compared to students with low emotional intelligence.

4. Conclusion

Based on the results of research and discussion, it can be concluded that students' emotional intelligence has a significant relationship with students' mathematical representation abilities with an r_{value} 0.698, meaning that the relationship between emotional intelligence and students' mathematical representation abilities has a strong relationship. In addition, based on the Pearson product moment correlation test between the five indicators of emotional intelligence and students' mathematical representation abilities, it can be concluded that there is no relationship between emotional intelligence indicators in the aspect of fostering a relationship with students' mathematical representation abilities. While the indicators of recognizing one's own emotions and recognizing the emotions of others have a low level of relationship with mathematical representation abilities, indicators of managing other people's emotions have a fairly strong relationship with mathematical representation abilities, and indicators of self-motivation have a strong relationship with mathematical representation abilities.

References

[1] Ahsyar, A.H. 2015. Hubungan antara Kecerdasan Emosi dan Hasil Belajar Matematika di SMP PGRI Sedati. *Jurnal Pendidikan Matematika STKIP PGRI Sidoarjo Vol. 3, No. 1, April 2015 ISSN 2337-8166.* http://lppm.stkippgri-sidoarjo.ac.id/files/Hubungan-antara Kecerdasan Emosional dan Hasil Belajarmatematika di SMP GRI Sedati.Pdf.

[2] Daryono. 2020. *Pengaruh Model Pembelajaran Berbasis Masalah Terhadap Kemampuan Representasi Matematis.* Skripsi.Universitas Lampung, Bandar Lampung.

[3] Effendi, L. A. 2012. Pembelajaran dengan Metode Penemuan Terbimbing untuk Meningkatkan Kemampuan Representasi dan Pemecahan Masalah Matematis Siswa SMP. *Jurnal Penelitian Pendidikan, Volume 13, Nomor 2, Hal.1-10.* http://jurnal.upi.edu/file/Leo_Adhar.pdf.

[4] Goleman, D. 1998. *Kecerdasan Emosional: Mengapa EI lebih penting daripada IQ,* Cet. 7. Jakarta: PT Gramedia Pustaka Utama. 497 hlm.

[5] Iman, S. 2016. *Hubungan Antara Kecerdasan Emosional Dan Sikap Sosial Dengan Prestasi Belajar Siswa Kelas V SD Se-gugus II Depok Selatan*. Skripsi. Yogyakarta: Universitas Negeri Yogyakarta.

[6] Karimah, F. 2016. *Pengaruh Kecerdasan Emosional Terhadap Hasil Belajar Matematika Peserta Didik Kelas VIII SMP Negeri 3 Bontonompo Kabupaten Gowa.* Skripsi. Makassar : Universitas Islam Negeri Alauddin Makassar.

[7] Kemdikbud. 2014. *Permendikbud RI Nomor 58 Tahun 2004 tentang Kurikulum 2013 Sekolah Menengah Pertama/Madrasah Tsanawiyah*. Jakarta. 2302 hlm.
[8] Muligar, Rendi. (2016). *Penerapan Model Pembelajaran Accelerated Learning Cycle untuk Meningkatkan Kemampuan Berpikir Kritis dan Representasi Matematis serta Mengurangi Kecemasan Matematis Ditinjau dari Perbedaan Gender Siswa SMP.*Thesis. Bandung: Universitas Pasundan. (Online). Tersedia di: http://repository. unpas.ac.id/14188/.
[9] NCTM. 2000. *Virginia Principles and Standars for School Mathematics*. Reston VA: The National Council of Teachers of Mathematics Inc.
[10] Organization for Economic Cooperation and Development. 2019. *PISA 2018 Insight and Interpretations*. http://oecd.org/pisa/.
[11] Pemerintah Republik Indonesia. 2013. *Peraturan Pemerintah Republik Indonesia No. 32 Tahun 2013 tentang Perubahan Atas Peraturan Pemerintah No. 19 Tahun 2005 tentang Standar Nasional Pendidikan*. Jakarta. 52 hlm.
[12] Pratiwi, D. E. 2013. *Penerapan Pendekatan Model Eliciting Activities (MEAs) untuk Meningkatkan Kemampuan Representasi Matematis. Tesis*. Universitas Pendidikan Indonesia, Bandung.
[13] Prawira, P. A. 2016. 2016. *Psikologi Umum Dengan Perspektif Baru.* Yogyakarta: Ar-Ruzz Media. 402 hlm.
[14] Purwaningtyas, Y. D. 2020. *Efektivitas Penerapan Strategi Metakognitif Ditinjau Dari Kemampuan Representasi Matematis Siswa*. Skripsi. Universitas Lampung, Bandar Lampung.
[15] Rahma, F. W. 2017. *Hubungan Kecerdasan Emosional dengan Hasil Belajar Matematika Siswa Kelas V SD Negeri 4 Metro Pusat.* Skripsi.Universitas Lampung, Bandar Lampung.
[16] Riduwan. 2009. *Belajar Mudah Penelitian.* Bandung : Alfabeta. 246 hlm.
[17] Ruliani, I. D., dkk. (2018). Profile Analysis of Mathematical Problem Solving Abilities with Krulik & Rudnick Stages Judging from Medium Visual Representation.*JIPM (Jurnal Ilmiah Pendidikan Matematika) Vol* 7(1), 22-29. http://journal.upgris.ac.id/index.php/ JIPMat/article/view/3630.
[18] Sabirin, M. 2014. Representasi dalam pembelajaran matematika. *Jurnal Pendidikan Matematika IAIN Antasari Volume 01, Nomor 2, Januari – Juni 2014, Hal 33-44.* https://media.neliti.com/media/publications/121557-ID-representasidalampembelajaran matematika.pdf.
[19] Slameto. 2015. *Belajar dan Faktor-Faktor Yang Mempengaruhinya.* Jakarta: Rineka Cipta. 195 hlm.
[20] Sugiyono. 2019. Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Bandung: Alfabeta. 444 hlm.
[21] Sulistianingsih, P. (2016). Pengaruh Kecerdasan Emosional dan Motivasi Belajar terhadap Kemampuan Berpikir Kritis Matematika. *Jurnal Kajian Pendidikan Matematika Volume 02 Nomor 01, 129-139.* http://journal.lppmunindra.ac.id/index.php/jkpm/artcle/view/1899.
[22] TIMSS. 2015. *TIMSS 2015 International Result in Mathematics*. http://timss2015 .org/wp-content/uploads/filebase/full%20pdfs/T15-International-Results-in-Science.pdf.
[23] Winarni, E. W. 2011. *Penelitian Pendidikan*. Bengkulu: Putri Media. 316 hlm.
[24] Yulian, V. N. 2016. Meningkatkan Kemampuan Pemecahan Masalah Matematis Siswa melalui Metode Pembelajaran Metode Inkuiri Berbantuan Software Algebrator. *Jurnal Penelitian dan Pembelajaran Matematika UNTIRTA. Volume 9 Nomor 1.* https://jurnal. untirta .ac.id/index.php/JPPM/article/view/976. Diakses pada 29 November 2020.