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THE RELATIONSHIP OF RESILIENCE WITH BASIC MATHEMATICS LEARNING OUTCOMES OF PGMI STUDENTS

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ABSTRACT

Students still need help learning mathematics and completing assignments. Various things can cause this. One of them is the pressure of facing basic mathematics learning. This research aims to determine the relationship between mathematical resilience and learning outcomes in basic mathematics courses for PGMI UIN Sunan Kalijaga Yogyakarta students. The sample for this research consisted of 33 PGMI UIN Sunan Kalijaga students. The research method used is the correlation research method. Data collection techniques use research instruments in the form of test and non-test instruments. The test instrument used in this research is questions to measure mathematics learning outcomes, while the non-test instrument uses a questionnaire to measure mathematical resilience. The data analysis technique uses descriptive data analysis, prerequisite tests (normality and homogeneity tests), and hypothesis testing using the product moment correlation formula. The results of this research show that there is a significant relationship between resilience and mathematics learning outcomes for class C PGMI UIN Sunan Kalijaga students.

Keywords: mathematical resilience; mathematics learning outcomes; PGMI student

INTRODUCTION

Education includes the activities of educating, teaching, and training.[1] This activity was carried out as an effort to transform values. The values that will be transformed include religious, cultural, knowledge, technology, and skills.[2] The values that will be transformed are maintaining, developing, and even changing society's culture if necessary. Education can be carried out at various levels, such as early childhood, primary, secondary, and higher education. Education aims to form people who can think critically, creatively, and innovatively, adapt to change, and make the right decisions in life.[3] A person in education will gain knowledge from various scientific disciplines, including mathematics.

[1] Adib Fatoni, "Wawasan Pendidikan (Pendidikan dan Pendidik)," *MIDA : Jurnal Pendidikan Dasar Islam* 3, no. 1 (January 10, 2020): 65–79, https://doi.org/10.52166/mida.v3i1.1841.

[2] Fatma Nur Aktaş, Pınar Akyıldız, and Yüksel Dede, "Students' Mathematics Educational Values at Religious Vocational Middle Schools: A Cross-Sectional Study," *Education 3-13* 51, no. 3 (April 3, 2023): 480–92, https://doi.org/10.1080/03004279.2021.1981421.

[3] Rifa Hanifa Mardhiyah et al., "Pentingnya Keterampilan Belajar Di Abad 21 Sebagai Tuntutan Dalam Pengembangan Sumber Daya Manusia," *Lectura : Jurnal Pendidikan* 12, no. 1 (February 4, 2021): 29–40, https://doi.org/10.31849/lectura.v12i1.5813.

In the current information age and future, the role of mathematics will be increasingly felt, especially in analyzing and interpreting phenomena that occur.[4] Minister of Education and Culture Regulation (Permendikbud) number 58 of 2014 states that mathematics is a universal science and is one of the important subjects in advancing human thinking, is the basis for the development of modern technological progress, and has an important role in various other scientific disciplines.[5] Mathematics can solve everyday problems and form suitable, structured, logical, scientific attitudes and thought patterns to achieve a decent life. Learning mathematics is expected to shape students' ability to express ideas and practice rational, critical, and creative thinking. Students who can think critically tend to be more active and concentrate more on what they are learning.[6] However, students who need help to think critically, rationally, and creatively are less active, serious, and concentrated, leading to low learning quality. This lack of seriousness is a factor in decreasing student learning achievement.

Mathematics is a general science that is the basis for technological development and realizes a person's thinking power.[7] Mathematics is the basis of knowledge from other knowledge. In formal education, learning mathematics is a mandatory subject that students must study at every level of education, starting from elementary school.[8] Learning mathematics at the elementary school level requires students to be active in constructing knowledge and accustomed to thinking critically and algorithmically so they can answer problems educators raise. Mathematics education must continue striving because it is an important tool for social development and global competitiveness.

[4] Suntonrapot Damrongpanit, "From Modern Teaching to Mathematics Achievement: The Mediating Role of Mathematics Attitude, Achievement Motivation, and Self-Efficacy," *European Journal of Educational Research* volume–8–2019, no. volume8-issue3.html (July 15, 2019): 713–27, https://doi.org/10.12973/eu-jer.8.3.713.

[5] Nerru Pranuta Murnaka and Sri Ratna Dewi, "Penerapan Metode Pembelajaran Guided Inquiry Untuk Meningkatkan Kemampuan Pemahaman Konsep Matematis," *Journal of Medives : Journal of Mathematics Education IKIP Veteran Semarang* 2, no. 2 (2018): 163–71.

[6] Ririn Dwi Agustin, "Kemampuan Penalaran Matematika Mahasiswa Melalui Pendekatan Problem Solving," *Pedagogia : Jurnal Pendidikan* 5, no. 2 (August 31, 2016): 179–88, https://doi.org/10.21070/pedagogia.v5i2.249.

[7] Mikke Novia Indriani and Imanuel Imanuel, "Pembelajaran Matematika Realistik Dalam Permainan Edukasi Berbasis Keunggulan Lokal Untuk Membangun Komunikasi Matematis," in *Login PRISMA, Prosiding Seminar Nasional Matematika* (Jurusan Matematika FMIPA UNNES, 2018).

[8] Mohammad Fahmi Nugraha et al., *Pengantar Pendidikan Dan Pembelajaran Di Sekolah Dasar* (Edu Publisher, 2020).

Collect students are students at the higher education level.[9] Students are intellectual people who have a more critical and constructive mindset. Therefore, in solving a problem, every student must process the data before taking action. Teaching collects students is certainly different from teaching students. Lecturers should teach students how to learn. Learning how to know will be possible if every lecturer carries out learning that focuses on students. However, learning at university has a more significant learning load than school.

In achieving good learning outcomes, students are influenced by various factors in life, both internal and external conditions. Several experts suggest that several factors influence a person's learning outcomes, namely factors that come from within the individual are called internal factors, such as interest, motivation, talent, intelligence, and a person's level of religiosity and spirituality.[10] Then, factors that come from outside the individual or the social environment are called external factors. Such as family (including parents' socio-economic status), surrounding environment (community social support), school facilities, and infrastructure.[11] Learning outcomes or achievements are the realization or expansion of a person's potential skills or capacities.[12] Learning outcomes are often used to determine how far someone has mastered the material that has been taught. A series of measurements are needed using good evaluation tools that meet the requirements to actualize these learning outcomes. Furthermore, learning outcomes or learning outcomes, according to Jenkins and Unwin, are questions that indicate what students are likely to do due to their learning activities.[13] Thus, learning outcomes are something that students achieve or obtain thanks to their efforts or thoughts, which are expressed in the form of mastery and basic skills contained in several aspects of life so that changes in behavior can be seen in the individual.

[9] Arifin Maksum and Ika Lestari, "Analisis Profil Kemandirian Belajar Mahasiswa di Perguruan Tinggi," *Parameter: Jurnal Pendidikan Universitas Negeri Jakarta* 32, no. 1 (August 8, 2020): 75–86, https://doi.org/10.21009/parameter.321.05.

[10] Tohol Simamora, Edi Harapan, and Nila Kesumawati, "Faktor-Faktor Determinan Yang Mempengaruhi Prestasi Belajar Siswa," *JMKSP (Jurnal Manajemen, Kepemimpinan, Dan Supervisi Pendidikan)* 5, no. 2 (April 24, 2020): 191, https://doi.org/10.31851/jmksp.v5i2.3770.

[11] Tasya Nabillah and Agung Prasetyo Abadi, "Faktor Penyebab Rendahnya Hasil Belajar Siswa," vol. 2 (Universitas Singaperbangsa Karawang, 2020), https://journal.unsika.ac.id/index.php/sesiomadika/article/view/2685.

[12] Karwati Karwati and Priansa Priansa, *Manajemen Kelas* (Bandung: Alfabeta, 2014).

[13] Karwati and Priansa.

Based on the experts' opinions above, the researcher concludes that a teaching and learning process will ultimately produce student abilities, including knowledge, attitudes, and skills. In this case, the learning model also greatly influences the student's success process because learning models play a fairly significant role in teaching and learning activities. The abilities that students are expected to have will be determined by the relevance of using a learning model.

The stress that occurs in life is a process that every individual experiences, with no exception. One thing that differentiates pressure between individuals is the individual's success in adapting to existing pressures. Individuals who adapt well will perform well, whereas those who cannot adapt will remain in this unpleasant condition. The term that describes the personal qualities that enable individuals and their communities to grow despite adversity is called resilience.[14] Resilience is an individual's capacity to face and respond positively to unpleasant conditions that cannot be avoided and to utilize these unpleasant conditions as an opportunity for personal self-development.[15] Furthermore, Grotberg stated that resilience is a person's ability to assess, overcome, and improve themselves or change themselves from adversity or adversity in life because every person must experience difficulties or problems, and there is no one alive in the world.[16] Without any problems or difficulties. Based on the explanation of the definition of resilience according to several experts above, resilience is important for someone to have because each person has their problems. Resilience helps us to have the fighting power to solve every problem we face. When people have good resilience within themselves, they will not easily get stressed when facing difficulties because they will always look for the best alternative to solve their various problems.

Student resilience refers to a person's ability to overcome and adapt to academic, social, or emotional stress or challenges that arise during the study period. Students with strong resilience can more easily face challenging situations and maintain mental and physical health. Several factors can help increase student resilience, namely: a) strong

[14] K.M Connor, "Assessment of Resilience in the Aftermath of Trauma," *Journal of Clinical Psychiatry* 67, no. 2 (2006): 46–49.

[15] Bernhard Fietz, Julia Hillmann, and Edeltraud Guenther, "Cultural Effects on Organizational Resilience: Evidence from the NAFTA Region," *Schmalenbach Journal of Business Research* 73, no. 1 (March 2021): 5–46, https://doi.org/10.1007/s41471-021-00106-8.

[16] L.S. Zanthy, "Kontribusi Resiliensi Matematis Terhadap Kemampuan Akademik Mahasiswa Pada Mata Kuliah Statistika Matematika," *Mosharafa: Jurnal Pendidikan Matematika* 7, no. 1 (2018).

support from social networks; b) presence of parental or substitute parental support; c) supervisor or mentor outside the family; d) positive school experience; e) a feeling of mastery and belief that one's efforts can be different; f) participation in extracurricular activities; g) the capacity to change the effects of adversity into something beneficial; h) the ability or opportunity to make a difference by helping others; and i) do not avoid challenging situations that provide opportunities to develop coping skills.[17]

Increasing resilience can help students achieve academic success and face the future more confidently. There are many ways to increase resilience, including taking time to care for yourself, seeking support from family and friends, practicing meditation or yoga, and developing social and emotional skills. Mathematical resilience is defined as a positive adaptive attitude towards mathematics in mathematics learning.[18] Students with mathematical resilience will persist when facing difficulties, be successful collaboratively with their peers, have the language skills needed to express understanding, and have a developed learning theory. Students with mathematical resilience have confidence that their abilities in mathematics will grow.[19] They do not view mathematics as something exclusive, as something that other people understand, but they do not; even when the student himself experiences difficulties, he will maintain his self-confidence and be aware of its existence and usefulness until he is ultimately successful.

Thus, there is a suspicion that resilience abilities are related to students' mathematics learning outcomes. Students with high resilience abilities will have high learning outcomes because of their diligent and persistent attitude and self-confidence.[20] This is confirmed by previous research, which obtained analysis results that show that the

[17] Febriana Handayani, "Hubungan Self Efficacy Dengan Prestasi Belajar Siswa Akselerasi," *Character Jurnal Penelitian Psikologi* 1, no. 2 (2013), https://ejournal.unesa.ac.id/index.php/character/article/view/1868;

Joniel Hendrik Salouw, Suharno Suharno Suharno, and Rostin Talapessy, "Peran Guru Dalam Meningkatkan Karakter Disiplin Untuk Mewujudkan Ketahanan Pribadi Siswa Melalui Pembelajaran PPKn (Studi Kasus Di SMA 1 Wonreli Maluku Barat Daya)," *Jurnal Ketahanan Nasional* 26, no. 3 (December 31, 2020): 380, https://doi.org/10.22146/jkn.61168.

[18] S. Johnston-Wilder and C. Lee, "Developing Mathematical Resilience," in *BERA Annual Conference 2010* (University of Warwick, 2010).

[19] Christopher Chisholm, "The Development of Mathematical Resilience in KS4 Learners" (PhD diss, University of Warwick, 2017).

[20] Ni Gusti Agung Made Mahayani, I Made Darmada, and Sandra Sukmaning Adji, "The Relationship of Divergent Thinking Ability, Learning Discipline, and Resilience to Adversity Towards The Mathematics Learning Outcomes of 5th Grade Elementary School Students in Cluster 2 Mekarsari-Baturiti: English," *Mathline : Jurnal Matematika Dan Pendidikan Matematika* 8, no. 4 (November 29, 2023): 1399–1414, https://doi.org/10.31943/mathline.v8i4.417.

higher the resilience, the higher the students' mathematics learning outcomes.[21] Based on the background described above, this research aims to determine the relationship between resilience and student mathematics learning outcomes. This condition certainly looks at the characteristics of learning mathematics, which are difficult. If someone has given up, there will be a desire not to learn it, causing motivation to learn to decrease. So, the researcher tries to provide an overview to all readers regarding the importance of teachers understanding the resilience abilities of their students.

RESEARCH METHODS

This research uses a quantitative approach with correlational research methods—correlation from the basic word correlation. Statistics The term "correlation" is defined as the relationship and level of relationship between two or more variables.[22] The existence of relationships and levels of these variables is important because by knowing the level of relationships that exist, researchers will be able to develop them in accordance with the research objectives. Correlational research (Correlational Studies) is research intended to determine whether there is a relationship between two or several variables.[23] The characteristic of correlational research is that it only requires a few research subjects. Quantitative correlational research is intended to determine whether there is a relationship between two or several variables.[24]

The research population is a generalization area consisting of objects or subjects with specific qualities and characteristics determined by the researcher to be studied and then conclusions drawn.[25] In this research, the population to be studied is all second-semester PGMI UIN Sunan Kalijaga students. The sample is a portion or representative of the population to be analyzed.[26] The sampling technique used in this research is purposive sampling because the samples are adjusted to research needs. Purposive

[21] Katon Agung Ramadhan and Kismiantini, "The Impact of Student Resilience, Goal Orientation and Digital Learning on Students' Mathematic Achievement: Analysis of PISA 2018 Data" (FRONTIERS IN INDUSTRIAL AND APPLIED MATHEMATICS: FIAM2022, Mahendergarh, India, 2024), 110004, https://doi.org/10.1063/5.0133612.

[22] A Sudijono, *Pengantar Evaluasi Pendidikan* (Jakarta: Rajawali Pers, 2011).

[23] Suharsimi Arikunto, *Prosedur Penelitian Suatu Pendekatan Praktik* (Jakarta: PT. Rineka Cipta, 2013).

[24] Arikunto.

[25] Sugiyono, *Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif, Dan R&D)* (Bandung: Alfabeta, 2015).

[26] Arikunto, *Prosedur Penelitian Suatu Pendekatan Praktik*.

sampling is a technique for determining samples with specific considerations.[27] The sample in this research was class C PGMI UIN Sunan Kalijaga students, totaling 33 students. The researchers used PGMI students because the aim was to see the students as future teachers who would teach mathematics to elementary school children. Data collection techniques use research instruments in the form of test and non-test instruments. The test instrument in the research is to distribute questions to see mathematics learning outcomes. The non-test instrument is a data collection technique that distributes mathematical resilience questionnaires. Before use, the instrument is tested first, and its validity and reliability are calculated. The data analysis techniques used in this research are descriptive data analysis, prerequisite tests (normality test and homogeneity test), and hypothesis testing using the product moment correlation formula. The following are the hypotheses researchers developed in this paper, among others.

H_0 : There is no relationship between resilience and basic mathematics learning outcomes for PGMI students.

H_a : There is a relationship between resilience and basic mathematics learning outcomes for PGMI students.

Table 1
Resilience Instrument Grid

Indicator	Question Item Number	Number of questions
Demonstrate an attitude of perseverance, confidence, or self-confidence, work hard, and do not give up quickly in the face of failure, problems, and uncertainty	1, 2, 3, 4, 5, 6	6
Willing to socialize, quickly provide help, discuss with peers, and adapt to their environment	7, 8, 9	3
Coming up with new ideas or ways and looking for creative solutions to challenges	10, 11, 12, 13	4
Using failure experiences to build self-motivation	14, 15, 16, 17	4
Demonstrates curiosity, reflects, researches, and utilizes a variety of sources	18, 19, 20, 21, 22, 23	6
Have language skills, self-control, and be aware of their feelings	24, 25, 26, 27	4

Source: Dwirahayu & Satriawati, 2022.[28]

[27] Sugiyono, *Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif, Dan R&D)*.

[28] G Dwirahayu and G Satriawati, "Analisis Resiliensi Matematis Ditinjau Dari Hasil Belajar Matematika Siswa SMA" (Jakarta, FITK UIN Syarif Hidayatullah Jakarta, 2022), https://repository.uinjkt.ac.id/dspace/handle/123456789/58912.

RESULT AND DISCUSSION

This research aims to determine the relationship between resilience and mathematics learning outcomes of PGMI students. Of course, this research is a good guide for students as prospective teachers who, when they complete higher education, will be able to implement academic-related abilities to the maximum. Before the research instruments were distributed to students, the researchers carried out a validation process with several expert validators to ensure that the instruments used were valid and reliable. Furthermore, a data normality test process is carried out after the data goes through the validity process and is distributed to students. The normality test is carried out to determine whether the sample comes from a normally distributed population. The normality test uses the one-sample Kolmogorov-Smirnov test. The calculation results are shown in Table 2.

Table 2
Residual Normality Results Between X and Y

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		33
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	10.5804582
Most Extreme Differences	Absolute	.159
	Positive	.092
	Negative	-.159
Test Statistic		.159
Asymp. Sig. (2-tailed)		.034[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Liliefors Significance Correction.
Source: Personal Document

Based on the calculation results in the SPSS 16.0 for Windows program, the significance value of the Kolmogorov Smirnov test is $0.034 > \alpha = 0.05$, so H0 is accepted, so it can be concluded that the residual data is normally distributed. The next test requirement is the linearity test. This test is used to determine whether the two variables have a significant linear relationship or not. The tests carried out by researchers obtained the following results:

Table 3
Linearity Test Results of X against Y

ANOVA Table							
			Sum of Squares	df	Mean Square	F	Sig.
Learning Outcomes * Resilience	Between Groups	(Combined)	8681.747	12	723.479	9.943	.000
		Linearity	6554.695	1	6554.695	90.085	.000
		Deviation from Linearity	2127.053	11	193.368	2.658	.028
	Within Groups		1455.222	20	72.761		
	Total		10136.970	32			

Source: Personal Document

Based on the ANOVA table on the test results above, it shows that the significance value is $0.028 > \alpha = 0.05$, so H0 is accepted. This means that the regression model is said to have a linear pattern. Based on the description above, it can be concluded that the data is normally distributed and has a linear relationship to meet the test requirements. Research can be continued with hypothesis testing.

Hypothesis testing is carried out using a simple person product moment correlation test. Simple correlation analysis tests between one dependent variable and one independent variable. The results of the simple correlation test in this study are as follows:

Table 4
Simple Correlation Test Results between X and Y

Correlations			
		Resilience	Learning outcomes
Resilience	Pearson Correlation	1	.804**
	Sig. (2-tailed)		.000
	N	33	33
Learning outcomes	Pearson Correlation	.804**	1
	Sig. (2-tailed)	.000	
	N	33	33

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Personal Document

Based on the analysis of the relationship between resilience and mathematics learning outcomes using SPSS, a Pearson correlation value of 0.804 was obtained. This shows that the relationship between resilience and mathematics learning outcomes correlates with the degree of relationship, namely perfect correlation, and the form of the relationship is positive, which means that the higher the resilience, the higher the student's mathematics learning outcomes. Meanwhile, the sig value. (2-tailed) 0.000 is smaller than

$\alpha = 0.05$, so a significant relationship exists between resilience and student mathematics learning outcomes.

Based on the scores of mathematics learning outcomes and mathematical resilience obtained, this study's results show a match between mathematics learning outcomes and the mathematical resilience of PGMI students because, in general, these two variables are in the high category. The results of this research are in accordance with the results of research conducted by[29] This showed that mathematics learning outcomes of 22.3% influenced mathematical resilience ability, so if students' mathematical resilience abilities were high, then the student's learning outcomes would also be high. Apart from that,[30] The results showed a positive and significant relationship between mathematical resilience and academic ability, where mathematical resilience contributed 48.5% to academic ability, so mathematical resilience can be used to predict academic ability levels.

Meanwhile, the results of the analysis show that there is a mismatch in categorization, namely 39.39. The biggest discrepancy is in students who have a moderate level of mathematical resilience but have high learning outcomes, namely 33.33%. Discrepancies in categorizing each variable can be triggered by factors influencing mathematical resilience and mathematics learning outcomes. This is supported by various supporting factors, both within and outside the college student, thus allowing for differences in resilience outcomes and student learning outcomes, where college students with a high level of resilience should obtain high learning outcomes, as well as when a low level of resilience can result in higher learning outcomes. Even students' basic mathematics learning will need to be higher.

If students have low or medium learning outcomes but moderate or high mathematical resilience, these can be triggered by factors influencing their learning outcomes. If a student has moderate or high learning outcomes but low or moderate mathematical resilience, this can be triggered by factors that influence their mathematical

[29] Stefani Ayuning Iman and Dani Firmansyah, "Pengaruh Kemampuan Resiliensi Matematis Terhadap Hasil Belajar Matematika," in *Prosiding Sesiomadika*, vol. 2, 1 (Universitas Singaperbangsa Karawang, 2020), https://journal.unsika.ac.id/index.php/sesiomadika/article/view/2601.

[30] Dwirahayu and Satriawati, "Analisis Resiliensi Matematis Ditinjau Dari Hasil Belajar Matematika Siswa SMA."

resilience. Students need better fighting power in solving mathematical problems but have potential in themselves that needs to be realized in mathematics.

In this research, the lowest indicators of mathematical resilience were being willing to socialize, easily giving help, discussing with peers, and adapting to their environment. This means that some students have not socialized, discussed, and adapted to learning mathematics, so they rarely have friends with whom they can discuss mathematical problems and have yet to learn mathematics in every situation. These low-detected indicators are among the most important factors in this research process. These indicators are indicators of 21st-century learning skills that fall into the communication and collaboration skills category.[31] This indicator is the initial key that can support students in exchanging information or knowledge, especially with peers.[32] So, if this indicator is weak, it will directly impact the ongoing learning situation.

Meanwhile, factors that can increase resilience[33] Are a) strong support from social networks; b) presence of parental or substitute parental support; c) supervisor or mentor outside the family; d) positive school experience; e) a feeling of mastery and belief that one's efforts can be different; f) participation in extracurricular activities; g) the capacity to change the effects of adversity into something beneficial; h) the ability or opportunity to make a difference by helping others; and i) do not avoid challenging situations that provide opportunities to develop coping skills. It is suspected that students with low mathematical resilience need to possess these factors.

This discrepancy also agrees with research conducted, which showed no significant relationship between resilience and student mathematics learning outcomes.[34]

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[31] Eris Nurhayati, Dedi Riyan Rizaldi, and Ziadatul Fatimah, "The Correlation of Digital Literation and STEM Integration to Improve Indonesian Students' Skills in 21st Century," *International Journal of Asian Education* 1, no. 2 (2020): 73–80, https://doi.org/10.46966/ijae.v1i2.36;

Dedi Riyan Rizaldi et al., "The Relationship Between Learning Style and Critical Thinking Skills in Learning Kinetic Theory of Gases," *Journal of Science and Science Education* 2, no. 2 (October 29, 2021): 72–76, https://doi.org/10.29303/jossed.v2i2.488.

[32] Astalini Astalini et al., "Identifikasi Sikap Peserta Didik terhadap Mata Pelajaran Fisika di Sekolah Menengah Atas Negeri 5 Kota Jambi," *UPEJ Unnes Physics Education Journal* 8, no. 1 (2019): 34–43, https://doi.org/10.15294/upej.v8i1.29510;

Irena Puji Luritawaty, "Pengembangan Kemampuan Komunikasi Matematik Melalui Pembelajaran Take and Give," *Mosharafa: Jurnal Pendidikan Matematika* 8, no. 2 (May 31, 2019): 239–48, https://doi.org/10.31980/mosharafa.v8i2.556.

[33] Russ Newman, "APA's Resilience Initiative.," *Professional Psychology: Research and Practice* 36, no. 3 (June 2005): 227–29, https://doi.org/10.1037/0735-7028.36.3.227.

[34] Urip Tisngati and Nely Indra Meifiani, "Pengaruh Kepercayaan Diri Dan Pola Asuh Orang Tua Pada Mata Kuliah Teori Bilangan Terhadap Prestasi Belajar," *Jurnal Derivat* 1, no. 2 (2014): 8–18, https://doi.org/10.31316/j.derivat.v1i2.109; Anjar Widayanti, "Hubungan Antara Resiliensi Terhadap Hasil

Furthermore, the research showed that mathematical resilience only had a 5.8% influence on students' mathematics achievement.[35] This low influence is because most respondents have a moderate level of mathematical resilience.[36] It was also found that students with moderate mathematical resilience had a mathematical creative thinking ability score of level 1 or lower. In contrast, students with low mathematical resilience had a creative thinking ability score of level 2 or medium.[37] Based on the research above, the categorization of mathematical resilience with mathematics learning outcome scores only sometimes correspond.

CONCLUSION

Based on the results of hypothesis testing and discussion, it can be seen that the higher the resilience, the higher the student's mathematics learning outcomes, with a Pearson correlation value of 0.804. There is a significant relationship between resilience and the mathematics learning outcomes of PGMI UIN Sunan Kalijaga students, with a significance of 0.000. So, it can be concluded that there is a relationship between resilience and basic mathematics learning outcomes for PGMI students.

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All authors declare that there is no conflict of interest.

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[35] Hardi Tambunan, "Dampak Pembelajaran Online Selama Pandemi Covid-19 Terhadap Resiliensi, Literasi Matematis Dan Prestasi Matematika Siswa.," *Jurnal Pendidikan Matematika Indonesia* 6, no. 2 (2021): 70–76.

[36] Geoffrey D. Borman and Laura T. Overman, "Academic Resilience in Mathematics among Poor and Minority Students," *The Elementary School Journal* 104, no. 3 (January 2004): 177–95, https://doi.org/10.1086/499748.

[37] Siti Ummu Habibah, Abdul Halim Fathani, and Isbadar Nursit, "Kemampuan Berpikir Kreatif Matematis Berdasarkan Resiliensi Matematis Siswa Yang Memiliki Kegemaran Bidang Seni Kaligrafi.," *Jurnal Komunikasi Pendidikan* 5, no. 1 (2021): 1–12.

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