EDUMATIKA: *Jurnal Riset Pendidikan Matematika* *e-ISSN 2620-8911*
Volume 8, Issue 1, May 2025 *p-ISSN 2620-8903*

Truth-Seeking Behavior of Prospective Mathematics Teachers in Solving Islamic-Integrated Problems with Contradictory Information (PWCI): A Mathematical Resilience Perspective

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Abstract. This study aims to describe the truth-seeking behavior of prospective mathematics teachers through the lens of mathematical resilience. This research employs a descriptive qualitative approach. The subjects were prospective mathematics teachers at an Islamic university in Malang, Indonesia, which selected through purposive sampling techniques. Data were collected using questionnaires, tests, and in-depth interviews. The data analysis techniques included data reduction, data presentation, and conclusion drawing/verification. The findings reveal that subjects with high mathematical resilience were able to meet all indicators of truth-seeking, as reflected in their comprehensive mastery of relevant information and their ability to solve problems systematically, even when confronted with contradictory information. Subjects with moderate resilience could only fulfill some indicators, indicating challenges in dealing with complex information. Meanwhile, subjects with low resilience demonstrated success in only a few indicators, highlighting significant difficulties in understanding and analyzing contradictory information. These notable differences emphasize the critical role of mathematical resilience in fostering truth-seeking abilities, particularly when integrating Islamic and mathematical perspectives.

Keywords: Islamic-Integrated Problems; Mathematical Resilience; Problems with Contradictory Information; PWCI; Truth-Seeking Behavior

Abstrak. Penelitian ini bertujuan untuk mendeskripsikan perilaku *truth-seeking* calon guru matematika dengan tinjauan resiliensi matematis. Jenis penelitian ini adalah deskriptif dengan pendekatan kualitatif. Subjek penelitian adalah calon guru matematika di salah satu universitas di Kota Malang yang dipilih menggunakan teknik *purposive sampling*. Data diperoleh melalui pemberian angket, tes, dan wawancara mendalam. Teknik analisis data yang digunakan meliputi reduksi data, penyajian data, dan penarikan kesimpulan/verifikasi. Hasil penelitian menunjukkan bahwa subjek dengan resiliensi matematis tinggi mampu memenuhi semua indikator pencarian kebenaran, yang tercermin dari penguasaan komprehensif terhadap informasi relevan dan kemampuan menyelesaikan masalah secara sistematis, meskipun dihadapkan pada informasi kontradiktif. Subjek dengan resiliensi sedang hanya mampu memenuhi beberapa indikator, sehingga kesulitan menghadapi tantangan dari informasi yang kompleks. Sementara itu, subjek dengan resiliensi rendah hanya berhasil pada sebagian kecil indikator dengan menunjukkan adanya hambatan signifikan dalam memahami dan menganalisis informasi kontradiktif. Perbedaan yang mencolok ini mengindikasikan bahwa resiliensi matematis berperan penting dalam kemampuan *truth-seeking*, khususnya dalam konteks integrasi Islam dan matematika.

Kata kunci: Masalah Terintegrasi Keislaman; Perilaku *Truth-Seeking;* PWCI; Resiliensi Matematis; Mahasiswa Calon Guru Matematika

Available online at journal homepage:
http://ejournal.iainkerinci.ac.id/index.php/edumatika
Email: edumatika@iainkerinci.ac.id
DOI: https://doi.org/10.32939/ejrpm.v8i1.4341

EDUMATIKA: *Jurnal Riset Pendidikan Matematika* *e-ISSN 2620-8911*
Volume 8, Issue 1, May 2025 *p-ISSN 2620-8903*

INTRODUCTION

Mathematics cannot be separated from critical thinking skills. The ability to think critically is not only important for students but also essential for prospective mathematics teachers. Mathematics teacher candidates with critical thinking skills will find it easier to process learning and seek solutions to problems during the mathematics teaching process. Developing critical thinking skills in prospective mathematics teachers cannot rely solely on classroom learning; it requires additional experiences and opportunities beyond the campus setting (Damayanti et al., 2021). The critical thinking process has been insufficient, highlighting the need for lecturers to play a role in developing critical thinking skills among prospective mathematics teachers. Critical thinking is essential for these candidates to systematically solve problems they encounter, enabling them to find solutions more easily. This skill is also necessary for mental activities such as decision-making, problem-solving, hypothesis analysis, persuasion, and research (Zayyadi, 2017).

Critical thinking disposition is the affective dimension of critical thinking ability (Kholid & Jayanti, 2022). According to Boonsathirakul & Kerdsomboon (2021), there are seven components of critical thinking disposition: open-mindedness, systematicity, inquisitiveness, truth-seeking, analyticity, self-confidence, and maturity. These seven components encourage prospective mathematics teachers to develop their critical thinking skills. Truth-seeking is particularly fundamental among these components, as it serves as a gateway to the other components (Kurniati et al., 2018). One of the advantages of individuals with strong truth-seeking abilities is that they do not accept problems at face value. Instead, they verify them through more accurate information to support the issue. Truth-seeking ability can be identified through solving problems containing contradictory information, as such situations require individuals to sort, analyze, and determine valid and relevant information critically. This aligns with the study by Duan et al. (2023), which highlights the importance of critical thinking dispositions, including truth-seeking, in addressing Problems with Contradictory Information (PWCI) types of issues.

PWCI are used because they reflect real-life situations where prospective teachers are faced with contradictory or inconsistent information. In the context of Islamic-Integrated PWCI serves as a tool to hone prospective teachers' ability to apply Islamic values in solving complex problems. The use of Islamic-Integrated Problems with Contradictory Information (PWCI) allows prospective teachers to understand how mathematics can be used as a tool in real-life situations, while also instilling spiritual values (Kusno & Marsigit, 2018). This is relevant to the goals of Islamic education, which focuses not only on cognitive aspects but also on character development.

Individuals vary in their ability to solve mathematical problems, and this is due to differences in their critical thinking dispositions. One factor that influences mathematical problem-solving is mathematical resilience (Fatimah & Purba, 2021). Resilience is a significant factor in mathematics

EDUMATIKA: *Jurnal Riset Pendidikan Matematika* *e-ISSN 2620-8911*
Volume 8, Issue 1, May 2025 *p-ISSN 2620-8903*

learning (Sugandi, 2017). Resilience reflects the quality of engagement in mathematics learning, encompassing confidence in achieving success through hard work, persistence in facing challenges, and a willingness to reflect, learn, and discuss. These qualities are essential soft skills that prospective mathematics teachers should possess throughout the mathematics learning process (Dilla et al., 2018). Mathematical resilience can contribute to overcoming difficulties and obstacles in mathematics learning. The presence of confidence among prospective mathematics teachers enhances their ability to facilitate learning, positively impacting the smoothness of the teaching process (Komala & Suryadi, 2018).

In research by Faradillah & Humaira (2021), it was stated that individuals with high levels of resilience possess strong critical thinking abilities. Those with moderate resilience have average critical thinking skills, while individuals with low mathematical resilience exhibit weak critical thinking abilities. Additionally, research by Sari & Untarti (2021) indicates that individuals in the high resilience category provide diverse solutions and generate new ideas. Those with moderate resilience tend to demonstrate systematic results and offer varied solutions, although not in detail. In contrast, individuals with low resilience struggle to solve problems with a systematic approach. Murni et al. (2021) presented research findings regarding the relationship between interest in learning mathematics and mathematical resilience, stating that individuals with high mathematical resilience have a strong interest in learning, while those with low resilience exhibit low interest in learning. Truth-seeking is one of the critical thinking dispositions that needs to be specifically explored, especially its relationship with mathematical resilience. Existing research has shown a correlation between mathematical resilience and critical thinking in general, but has not explored specific aspects of truth-seeking that could provide a deeper understanding of how students with different levels of mathematical resilience seek truth in mathematical problem solving.

As stated that truth-seeking is one of the dispositions of critical thinking, so it is important in learning mathematics that has an impact on students' cognitive and affective development (Rosa, 2019). When students develop a truth-seeking disposition, they do not just passively receive information but actively evaluate evidence, test assumptions, and seek a deeper understanding of the mathematical concepts learned, thus strengthening their critical thinking and problem-solving skills (Novandi et al., 2025). Making truth seeking a core value in mathematics learning, educators not only facilitate higher academic achievement but also prepare students to become independent thinkers who are able to face future challenges with strong reasoning skills and a love for the truth-seeking process.

Research on truth-seeking has been widely studied by experts. This indicates that it remains an interesting topic for further investigation. Some researchers have linked truth-seeking with learning models (Ansori et al., 2017; Kurniati et al., 2020). Other researchers have also attempted to explore truth-seeking behavior through various types of problems, including HOTS questions by

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Prastya et al. (2023) which showed a positive relationship between truth-seeking and problem-solving abilities, non-routine problems by Kholid & Jayanti (2022) which stated that individuals who can solve problems correctly tend to have high truth-seeking abilities, and research on Problems with Contradictory Information (PWCI) by Ardiansyah et al. (2022) which mentioned that PWCI-based problems play an important role in improving individual truth-seeking. Previous research has extensively examined truth-seeking through Problems with Contradictory Information (PWCI), but no studies have specifically investigated truth-seeking through Islamic integration problems or explored how these abilities vary across different levels of mathematical resilience, creating a significant gap in our understanding of this critical relationship. Islamic-integrated problems with contradictory information can explore truth-seeking abilities in the context of Islamic values, so that students can identify, evaluate and resolve contradictory information to strengthen mathematical and spiritual understanding.

Islamic integrated mathematics is increasingly prominent in shaping students who are not only capable of logical and analytical thinking, but also have strong character and spiritual values. This approach makes mathematics learning not merely cognitive, but also contextual and holistic by linking mathematical concepts to Islamic values such as honesty, accuracy, and justice (Suhandri & Syahwela, 2024). In addition, the integration of Islam in mathematics problems is also proven to increase learning motivation and provide an understanding that science and religion cannot be separated, as emphasized in the transdisciplinary learning promoted by the integrative curriculum (Rahmi et al., 2023). Thus, the use of math problems based on Islamic integration is a strategic means to form a generation of Muslims who think critically as well as have noble character.

From the issues presented earlier, it is clear that truth-seeking ability is essential for prospective mathematics teachers. Additionally, mathematical resilience is equally important, as it helps in overcoming challenges and difficulties during the learning process. These problems have prompted the researcher to further investigate the issues surrounding truth-seeking and mathematical resilience. This study is expected to provide an overview of how the level of mathematical resilience affects the truth seeking tendencies of prospective mathematics teachers in responding to contradictory information. Subjects with high resilience showed better truth seeking ability than subjects with low resilience. Thus, mathematical resilience has a role in the education of prospective teachers to be able to build a scientific attitude and commitment to truth seeking.

METHOD

This research employs a qualitative approach with a descriptive method, aiming to explore and analyze the truth-seeking abilities of prospective mathematics teachers in solving Islamic-integrated PWCI (Problem with Contradictory Information) viewed from the perspective of mathematical

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resilience. According to Sugiyono (2016), the data obtained in qualitative research is in the form of words, images, or objects, rather than numbers.

This study was involved prospective mathematics teachers at one of Islamic universities in Malang, Indonesia. The researcher used purposive sampling to determine the research subjects that that meet the specific criteria required in the research. The subjects who have the knowledge and information needed by the researcher, making the data more relevant (Patton, 2002). The subjects were chosen based on their level of mathematical resilience: high, medium, and high. Each category was represented by prospective mathematics teacher.

There were three types of instruments used in this study: the mathematical resilience questionnaire, the PWCI-type Islamic integration test, and the interview guide. The mathematical resilience questionnaire was used as a tool to measure the level of mathematical resilience. This questionnaire was given to all prospective mathematics teachers. While the PWCI-type Islamic integration test was used to assess truth-seeking ability. This test was administered to the representative prospective mathematics teachers from each category. In the test, the researcher presented questions and answers, and the subjects were instructed to provide an analysis of the correctness of the presented questions and answers. The interview instrument was used by the researcher to strengthen the test data and further assess the truth-seeking abilities of the prospective mathematics teachers.

The mathematical resilience questionnaire instrument was developed based on indicators adopted from Sumarmo (2015), which include: (1) Demonstrating self-confidence, commitment to working hard, and resilience in facing failure, problems, and uncertainty. (2) Being interested in socializing, talking with peers, and adapting to the surrounding environment. (3) Developing innovative ideas and seeking creative solutions to overcome challenges. (4) Learning from failure to strengthen self-motivation. (5) Showing an interest in learning, conducting in-depth research, and using various references. (6) Being competent in language use, self-management, and emotional awareness. Meanwhile, the interview instrument was developed based on indicators adopted from Ardiansyah et al. (2022), as shown in Table 1.

Table 1. Truth-Seeking Indicators

	Truth-Seeking Indicators		**Truth-Seeking Indicators in Contradictory Information**	**Score**	**Code**
1.	Trying to achieve the best understanding	A.	Gathering the information presented in the question	$0 \leq x \leq 2$	1A
2.	Maintaining conviction	A.	Verifying the accuracy of the information contained in the question	$0 \leq x \leq 2$	2A
3.	Emphasis on evidence and reasoning for statements recognized as true	A.	Writing or stating the contradictory information in the question	$0 \leq x \leq 4$	3A
		B.	Writing or stating the evidence and logical reasoning that supports the statement		3B

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Truth-Seeking Indicators	Truth-Seeking Indicators in Contradictory Information	Score	Code
4. Paying attention to important details	A. Not validating the statements in the discussion (that are considered incorrect) and providing commentary	$0 \leq x \leq 8$	4A
	B. Understanding if there is contradictory information in the questions and discussions		4B
	C. Writing or stating the answer that the presented question has no solution		4C
	D. Finding a solution based on the correct information		4D

The data analysis technique in this study employs triangulation of methods. This method of triangulation involves comparing the results of the PWCI-type Islamic integration test with the results of interviews conducted by the researcher with the subjects. To ensure the accuracy of the data obtained, the researcher conducted member checking by confirming the subjects' work results. Each participant from each resilience category will be assigned a score to measure the level of fulfillment of the truth-seeking sub-indicators based on the predetermined scoring guidelines: 0 to 2 for unmeet to meet the indicator properly.

The data analysis technique used a descriptive approach follows the Miles & Huberman (1994) model: data reduction, data display, and conclusion/verification. In the first stage, the researcher will perform data reduction. The collected data will be reduced by grouping it according to the necessary criteria. Unneeded data will be discarded so that the researcher can focus more on relevant data. The next stage is data display. In this stage, the researcher will present the data in a simpler form using tables, figures, and simple analysis. Presenting data simply will make it easier for the researcher to identify patterns in the necessary data. The final stage is conclusion/verification. The researcher will draw conclusions based on the analysis and support them with relevant previous research. This connection with previous studies aims to verify the data for greater validity.

RESULTS AND DISCUSSION

All prospective mathematics teachers were classified into three categories of mathematical resilience based on their questionnaire score: high if score greater than 79,29, medium if score 67,14 to 79,29, and low if score elsewhere (Dwirahayu & Satriawati, 2022). Based on the grouping of mathematical resilience among prospective mathematics teachers, three subjects were selected to represent each category. They are LI for the high mathematical resilience category, NK for the moderate category, and SR for the low category.

Truth-Seeking of Prospective Mathematics Teachers in High Mathematical Resilience

The subject with high mathematical resilience, coded as LI, clearly demonstrates all indicators of truth-seeking. LI strives to achieve the best understanding in every situation and questions their

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beliefs with experts to ensure their views are based on credible sources. Subject LI demonstrates the best understanding by gathering the information presented in the questions and discussions, as shown in the following Figure 1.

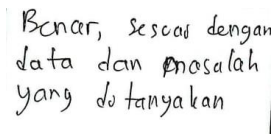
Problem	Solution	Subject's Answer	
Given $x, y, z \in \mathbb{Z}, x^3 = 8, y = 3$ and $z^2 = -1$. If a is the number of verses in a specific surah in the Quran, with $a = 3x^4 - 4y^2 + 4z^2$. Name at least two surahs that have a total of a verses!	Given: $x, y, z \in \mathbb{Z}$ $x^3 = 8$ $y = 3$ $z^2 = -1$ If a represents the number of verses in a certain surah of the Quran, with $a = 3x^4 - 4y^2 + 4z^2$ Question: Name at least two surahs that have a total of a verses!		Correct, in accordance with the given data and the problem being asked.

Figure 1. Subject LI Collect Information

The results in Figure 1 show that the subject LI understands the questions and discussions by stating that the information aligns with the provided data and issues. This understanding is further emphasized through the following interview.

P : *Can you explain the review that has been written?*

LI : *Well, here it says that x, y, and z are equal to this (pointing to the question sheet). a represents the number of verses in a particular surah in the Quran with the composition* $a = 3x^4 - 4y^2 + 4z^2$. *Then, mention 2 surahs that have a total number of verses equal to a. In my understanding, if a is the number of verses in a particular surah, it means this question is looking for at least 2 surahs that have a number of verses equal to a. Here, the initial information has already been provided, and the writing is also consistent with the question. Furthermore, a is also in accordance with the question. Yes, everything is correct.*

From the image of the work results and the interview above, the subject LI is able to provide an explanation regarding the statements written. Subject LI begins their explanation by reading the information in the discussion of the question and completes the explanation by referring to a as a specific surah in the Quran. Furthermore, subject LI responds that the information is accurate and correct. Based on this data presentation, it can be concluded that subject LI has been able to achieve the best understanding by gathering information from the questions and discussions (1A). This aligns with the research which states that individuals with high resilience can confidently explain their understanding (Rahmatiya & Miatun, 2020).

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Problem	Solution	Subject's Answer	
Given $x, y, z \in \mathbb{Z}, x^3 = 8, y = 3$ and $z^2 = -1$. If a is the number of verses in a specific surah in the Quran, with $a = 3x^4 - 4y^2 + 4z^2$. Name at least two surahs that have a total of a verses!	The number of verses in a surah of the Quran is denoted by an integer. Thus, it can be written as: $a \in \mathbb{N}$	Salah, karena N merupakan simbol himpunan bilangan asli, sedangkan himpunan bilangan bulat adalah $\mathbb{Z}$	Incorrect, because $\mathbb{N}$ represents the set of natural numbers, while the set of integers is denoted by $\mathbb{Z}$.

Figure 2. Subject LI Wrote Down the Evidence

Based on the Figure 2, subject LI corrects the notation "$a \in N$" which represents the symbol for natural numbers with N, and subject LI writes the appropriate symbol for integers, which is Z. Therefore, it can be concluded that subject LI is able to verify the correctness of the information presented (2A). This is in line with the research which states that individuals with high resilience possess excellent analytical skills for verifying the truth-seeking (Fatimah & Fitriani, 2021; Wahidah & Miatun, 2022).

Problem	Solution	Subject's Answer
Given $x, y, z \in \mathbb{Z}, x^3 = 8, y = 3$ and $z^2 = -1$. If a is the number of verses in a specific surah in the Quran, with $a = 3x^4 - 4y^2 + 4z^2$. Name at least two surahs that have a total of a verses!	The problem cannot be solved because there is information in the question that is inconsistent.	Benar : 1. Tidak tepat jika mengatakan $z^2 = -1$, karena bilangan yang berpangkat genap adalah menghasilkan bilangan positif 2. kesalahan dalam menuliskan simbol bilangan bulat (Fatal dalam konsep) The subject provides or states contradictory information. The subject writes or states the reason for the contradictory statement. Correct: 1. It is incorrect to state that $\boldsymbol{z^2 = -1}$ because a number raised to an even power produces a positive result. 2. There is a mistake in determining the symbol for integers (a critical error in the concept).

Figure 3. Subject LI Wrote Contradictory Information

Based on the Figure 3, subject LI recognizes the presence of contradictory information in the question by stating that $z^2 = -1$ and providing logical reasons and evidence that even powers will yield positive numbers. This demonstrates that subject LI is capable of articulating contradictory information (3A) as well as providing evidence and logical reasoning (3B). Subject LI pays attention to the details in the question and the provided discussion. Subject LI carefully considers important details, not overlooking small pieces of information that could influence overall understanding.

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Subject LI correctly states that the question has no solution (4C) and writes two notes regarding this statement (4A). In the first note, subject LI writes that it is incorrect to say $z^2 = -1$ because numbers raised to an even power will yield positive results. In the second note, the subject points out an error in the use of the symbol for integers. This also shows that subject LI understands that there is contradictory information represented by $z^2 = -1$ (4B). This is further supported by the following interview results.

P : *What about the unsolvable question?*

LI : *Because of the initial information, the writing is correct, but there is an error* $z^2 = -1$. *Since it is a number raised to an even power, it cannot be negative. Especially since the universe here is positive integers. The second reason is the incorrect symbol usage. But the most critical error is with Z.*

P : *How can the question be solved?*

LI : *To solve it, just replace* z^2 *with a non-negative and non-irrational number. For example,* $z^2 = 4$.

Based on the interview results, it shows that subject LI is able to find a solution based on accurate information (4D) by replacing z^2 with a non-negative and non-irrational number. Subject LI also provides an example that can be used, $z^2 = 4$. From the data presentation and interview, it can be concluded that subject LI pays attention to details. This aligns with the research which states that individuals with high levels of resilience tend to be more meticulous and attentive to details when solving problems (Johnson & McLean, 2021).

Truth-Seeking of Prospective Mathematics Teachers in Moderate Mathematical Resilience

The subject coded as NK, categorized as having moderate mathematical resilience, demonstrates only a small portion of the truth-seeking indicators. This subject is able to partially meet indicators 1 and 2, which include the effort to achieve the best understanding, although they still struggle to verify the accuracy of the information provided. However, NK is unable to meet indicators 3 and 4, which relate to emphasizing logical evidence and reasoning, as well as paying attention to important details in the given questions. Subject NK demonstrates the best understanding by gathering the information presented in the questions and discussions, as shown in the following Figure 4.

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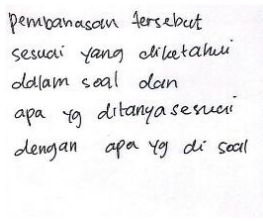
Problem	Solution	Subject's Answer	
Given $x, y, z \in \mathbb{Z}, x^3 = 8, y = 3$ and $z^2 = -1$. If a is the number of verses in a specific surah in the Quran, with $a = 3x^4 - 4y^2 + 4z^2$. Name at least two surahs that have a total of a verses!	Given: $x, y, z \in \mathbb{Z}$ $x^3 = 8$ $y = 3$ $z^2 = -1$ If a represents the number of verses in a certain surah of the Quran, with $a = 3x^4 - 4y^2 + 4z^2$ Question: Name at least two surahs that have a total of a verses!		The discussion aligns with the given information in the problem and matches the question being asked.

Figure 4. Subject NK Collect Information

The work results from subject NK indicate that the subject understands the questions and the accompanying discussions. This is reflected in their response, stating that the information provided aligns with the data and the existing problem. This understanding is further reinforced through the interview, where NK explains their approach to the question.

P : *Can you explain the review you have written?*

NK : *So, first, I look for what is known from the question. Then I check what is being asked, which is also in the question.*

In the interview, NK expressed that the first step taken is to identify what is known from the question, followed by checking the alignment between the known information and what is being asked in the question. This demonstrates the subject's ability to partially meet the first truth-seeking indicator, which is trying to achieve the best understanding (1A). Subject NK does not make an effort to seek the truth within the question and the discussion. This is evident in the following Figure 5.

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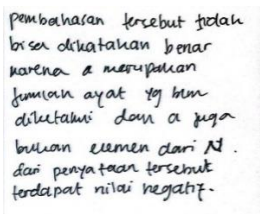
Problem	Solution	Subject's Answer	
Given $x, y, z \in \mathbb{Z}, x^3 = 8, y = 3$ and $z^2 = -1$. If a is the number of verses in a specific surah in the Quran, with $a = 3x^4 - 4y^2 + 4z^2$. Name at least two surahs that have a total of a verses!	The number of verses in a surah of the Quran is denoted by an integer. Thus, it can be written as: $a \in \mathbb{N}$.		The discussion cannot be considered correct because $\boldsymbol{a}$ represents the number of verses, which has not yet been determined, and $\boldsymbol{a}$ is also not an element of $\mathbb{N}$. From the given statement, there is $\boldsymbol{a}$ negative value, making it inconsistent with the concept of the number of verses, which should be non-negative.

Figure 5. Subject NK Does Not Verify the Accuracy

Based on Figure 5, subject NK writes that the statement in the discussion is incorrect because a is stated as an element of the set of natural numbers ($\mathbb{N}$), which implies that negative numbers are included. Furthermore, NK elaborates in the following interview results.

NK : *In the second part, where a is an element of $\mathbb{N}$.*

P : *Why? What does it mean that a is an element of $\mathbb{N}$?*

NK : *Because the value of a has not been identified with any surah.*

P : *Ah yes, what does $\mathbb{N}$ represent?*

NK : *Quantity.*

P : *Quantity? What do you mean?*

NK : *Yes, I don't know. I forgot.*

As indicated by the work and interview results, subject NK shows a lack of verification and tends to give up when faced with uncertainties. The subject has mentioned a correction in the discussion and understands that a does not meet the criteria for being an integer due to the presence of a negative value. However, NK forgets about the symbol for numbers, leading to a failure to address the natural numbers denoted by $\mathbb{N}$. Additionally, subject NK misinterprets the meaning of the symbol $\mathbb{N}$ as quantity.

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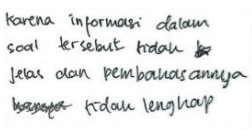
Problem	Solution	Subject's Answer	
Given $x, y, z \in \mathbb{Z}, x^3 = 8, y = 3$ and $z^2 = -1$. If a is the number of verses in a specific surah in the Quran, with $a = 3x^4 - 4y^2 + 4z^2$. Name at least two surahs that have a total of a verses!	The problem cannot be solved because there is information in the question that is inconsistent.		Because the information in the problem is unclear and the explanation is incomplete, the problem cannot be fully understood or solved correctly.

Figure 6. Subject NK Writes a Conclusion

Based on the results in Figure 6, subject NK has written information that contains contradictions and indicates a lack of solutions (4A). However, this writing is not appropriate and lacks relevance to the context of the problem. This shows that subject NK struggles to identify and express contradictory information effectively. Consequently, subject NK is also unable to provide the evidence and logical reasoning related to the contradictory statement. This inability indicates that subject NK has not fully met the truth-seeking indicators, which emphasize the use of strong evidence and logical reasoning to support or refute information. Subject NK is unaware of the contradictory information in the question, which leads to the realization that the problem indeed has no solution. Due to this unawareness, the subject is also unable to write a correct solution based on accurate information. It can be concluded that subject NK does not pay attention to details. This contrasts with the findings of previous research (Fatimah & Fitriani, 2021), which stated that the abilities to analyze, interpret, and evaluate are very good among students with moderate resilience.

Truth-Seeking of Prospective Mathematics Teachers in Low Mathematical Resilience

The subject coded SR, categorized as having low mathematical resilience, does not demonstrate indicators of truth-seeking. The subject SR shows a minimal effort to achieve understanding in indicator 1, although it is still inaccurate. Furthermore, the subject SR is unable to fulfill indicators 2 through 4, which relate to checking the truth, stating contradictory information, and understanding when there is conflicting information. The understanding effort made by subject SR in indicator 1 can be seen in the following Figure 7.

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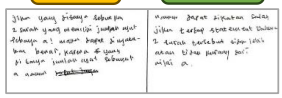
Problem	**Solution**	**Subject's Answer**
Given $x, y, z \in \mathbb{Z}, x^3 = 8, y = 3$ and $z^2 = -1$. If a is the number of verses in a specific surah in the Quran, with $a = 3x^4 - 4y^2 + 4z^2$. Name at least two surahs that have a total of a verses!	Given: $x, y, z \in \mathbb{Z}$ $x^3 = 8$ $y = 3$ $z^2 = -1$ If a represents the number of verses in a certain surah of the Quran, with $a = 3x^4 - 4y^2 + 4z^2$ Question: Name at least two surahs that have a total of a verses!	Correct / Incorrect  Correct If the question asks to name 2 surahs that have a number of verses equal to $\boldsymbol{a}$, then it can be considered correct, because the question is specifically about the number of verses being equal to $\boldsymbol{a}$. Incorrect However, it can be considered incorrect if there is a statement that the 2 surahs have neither more nor fewer verses than the value of $\boldsymbol{a}$.

Figure 7. Subject SR Collect Information

The work results of subject SR indicate that the subject collects information by providing both correct and incorrect opinions rather than showing one or the other. Therefore, it can be said that subject SR is also unable to understand the instructions as given. However, in the interview, subject SR demonstrates a slight understanding of indicator 1, although it is very inaccurate, and the subject fails to recall concepts related to mathematics.

P : *What kind of integers are those?*

SR : *The ones like 1, 2, 3, and so on.*

P : *Is* -1 *an integer or not?*

SR : *Yes, it's a real number. I mean, when the result is a real number, then it's correct.*

P : *What do you mean by this? For example, is* -2 *a real number or not?*

SR : *No.*

P : *So, what is a real number then?*

SR : *I forgot.*

Subject SR does not make an effort to seek the truth contained in the questions and discussions. This is evident in the following image.

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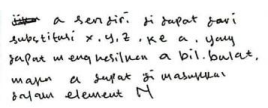
Problem	Solution	Subject's Answer	
Given $x, y, z \in \mathbb{Z}, x^3 = 8, y = 3$ and $z^2 = -1$. If a is the number of verses in a specific surah in the Quran, with $a = 3x^4 - 4y^2 + 4z^2$. Name at least two surahs that have a total of a verses!	The number of verses in a surah of the Quran is denoted by an integer. Thus, it can be written as: $a \in \mathbb{N}$.		a itself is obtained by substituting $\boldsymbol{x, y, z}$ into the expression for a, which can result in a being an integer. Therefore, a is included as an element of $\mathbb{N}$.

Figure 8. Subject SR Does Not Seek the Truth

Based on the Figure 8, subject SR writes that a can be substituted in the element $\mathbb{N}$, which means negative numbers are also included. This is also supported by subject SR's statements as follows:

P : *Now, if x, y, z are integers. Does a necessarily meet the criteria of the verse you mentioned?*

SR : *Definitely.*

SR : *Earlier, if the value of a does not meet the criteria, meaning it is less than zero, then it is wrong. However, if it is greater than zero, then it is correct.*

P : *Okay, now can you explain the next line?*

SR : *a can be denoted in $\mathbb{Z}$ because $\mathbb{Z}$ is part of $\mathbb{N}$.*

In the interview, subject SR states that a can be denoted in $\mathbb{Z}$, and since $\mathbb{Z}$ is part of $\mathbb{N}$, a can be substituted in the element $\mathbb{N}$.

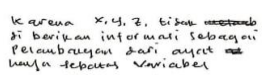
Problem	Solution	Subject's Answer	
Given $x, y, z \in \mathbb{Z}, x^3 = 8, y = 3$ and $z^2 = -1$. If a is the number of verses in a specific surah in the Quran, with $a = 3x^4 - 4y^2 + 4z^2$. Name at least two surahs that have a total of a verses!	The problem cannot be solved because there is information in the question that is inconsistent.		Because $\boldsymbol{x, y, z}$ are not provided as representations of verse counts but are merely variables, the problem remains ambiguous regarding their interpretation.

Figure 9. Subject SR Wrote the Conclusion

Based on the Figure 9, subject SR provides a review by considering the statement that "the problem cannot be solved" to be true. The subject writes the reason that x, y, z given in the problem do not represent verses in the Quran. Although the subject validates this point, the evidence and logical reasons provided are irrelevant because x, y, z refer to the components of a, and what should represent the verses in the Quran is a. This indicates that subject SR is unable to articulate or state

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contradictory information with logical reasoning. This inability shows that subject SR cannot emphasize the evidence and logical reasons for statements considered true.

Based on the data presented above, it is evident that subject SR is not aware of contradictory information in the provided problem. This leads SR to fail to find solutions based on accurate information. Therefore, it can be concluded that subject SR does not pay attention to details. This aligns with research conducted by Kurnia (2018) and Rahmatiya & Miatun (2020), which shows that students in the low resilience category struggle to solve mathematical problems.

To provide a clearer picture, the following is a Table 2 describing truth-seeking from prospective mathematics teachers based on each category of mathematical resilience.

Table 2. Description of Truth-Seeking in Terms of Mathematical Resilience

Subject	Truth-Seeking		Total Score
	Description	Score	
High mathematical resilience (1A, 2A, 3A, 3B, 1D, 2D, 3D, 4D)	Able to achieve the best understanding	2	16
	Able to maintain conviction	2	
	Able to write and articulate evidence and logical reasoning for statements that are considered true	4	
	Able to pay attention to details	8	
Moderate mathematical resilience (1A, D3)	Able to achieve the best understanding	2	3
	Unable to maintain conviction	0	
	Unable to write or articulate evidence and logical reasoning for statements that are considered true	0	
	Less able attention to detail	1	
Low mathematical resilience (1A)	Less able to perform the best understanding	1	1
	Unable to maintain conviction	0	
	Unable to write or articulate evidence and logical reasoning for statements that are considered true	0	
	Does not pay attention to details	0	

Based on Table 4, subjects with high mathematical resilience mastered all indicators of truth-seeking with a maximum score of 16. They are able to write and present logical proofs for answers they consider correct, in line with the findings of Amaliyah (2019), who stated that students with high mathematical resilience are skilled at collecting facts in an orderly manner and constructing logical assumptions. Additionally, these subjects pay attention to detail, as seen in their ability to identify contradictory information carefully, as stated by Sirri et al. (2024), who found that individuals with high resilience are able to find creative solutions and focus on details of information.

In the moderate resilience category, subjects demonstrate the ability to attempt to understand problems well. However, research by Athiyah et al. (2020), Al Ghifari et al. (2022), Rohmah et al. (2020) indicates that subjects in this category often face difficulties in interpreting problems. This highlights that prospective mathematics teachers in the moderate resilience category are more capable of reaching this stage compared to students in the same category. Subjects with moderate resilience also tend to overlook important details. This finding is supported by studies by Azizah & Abadi (2022), Lutfiyana et al. (2023), Nurfitri & Jusra (2021), and Rahmatiya & Miatun (2020), which show that subjects with moderate resilience are less meticulous in answering questions or

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solving problems. Additionally, subjects with moderate resilience often struggle to maintain their beliefs, feeling concerned if their answers do not align with the instructions in the problem (Azizah & Abadi, 2022).

Subjects with low resilience tend to struggle with achieving optimal understanding. This occurs due to several factors influencing the subject, such as psychological and cognitive aspects. According to Hertinjung et al. (2022), individuals with low resilience are less able to solve problems, which affects their ability to focus on understanding a problem. Additionally, individuals with low resilience tend to have difficulty maintaining their beliefs. According to Sholichah et al. (2019), individuals with low resilience are more prone to stress and anxiety, which can affect their ability to maintain the beliefs they hold. These characteristics of low resilience are interconnected. According to Puspita et al. (2024), individuals who struggle with understanding are also less able to maintain their beliefs.

Research shows that the higher the level of mathematical resilience in prospective mathematics teachers, the better their truth-seeking abilities in solving Islamic-integrated problems with contradictory information (PWCI). The process of solving PWCI-based problems requires the ability to filter conflicting or inconsistent information, making strong resilience crucial for navigating uncertainty and complexity. Mathematical resilience, which encompasses perseverance and adaptability in facing mathematical challenges, plays a significant role in truth-seeking and problem-solving skills. This aligns with the findings of Eliza et al. (2023), who stated that students with good mathematical resilience can progress even when confronted with inconsistent problems. Furthermore, Fatimah & Fitriani (2021) found a positive correlation between mathematical resilience and students' critical mathematical thinking skills, with a correlation coefficient of 0.894. This indicates a strong relationship between mathematical resilience and truth-seeking, which is one of the key dispositions of critical thinking.

In the context of solving Islamic-integrated problems with contradictory information (PWCI), mathematical resilience allows prospective teachers to remain consistent and objective in seeking the truth, even when faced with contradictory information. Research by Hasanah et al. (2024) mentioned that Islamic integrated problems can stimulate individuals to associate mathematical concepts or materials with a problem related to Islamic values. In line with research Febrianti et al. (2023) which states that the use of Islamic integration problems can provide individual understanding of problem solving skills. In addition, the findings of Rahmatiya & Miatun (2020) which state that mathematical resilience helps students overcome difficulties in mathematical problem-solving. In line with the research by Romano et al. (2021), it shows that academic resilience is related to an individual's ability to remain engaged and seek accurate solutions in an emotionally supportive educational environment. Another study by Duan et al. (2023) also explored teacher resilience from an ecological perspective,

where teachers with high resilience are more effective in confronting challenges through dynamic interactions with their environment.

CONCLUSION

The conclusion shows that prospective mathematics teachers in terms of high, medium, and low mathematical resilience show variations in truth seeking behavior. Subjects with higher resilience have better capacity in dealing with complex problems and conflicting information, while subjects with lower resilience tend to have difficulties in managing and understanding information well. The Islamic-integrated PWCI used in this study effectively revealed these distinct truth-seeking patterns across resilience levels while contextualizing mathematical challenges within Islamic values. This finding implies that mathematical resilience has an important role in the education of prospective teachers, especially in shaping scientific attitudes and commitment to the search for truth. Therefore, strengthening resilience needs to be an integral part of the learning process and the development of prospective mathematics teachers. Future research is expected to expand the study of truth seeking by reviewing its relationship to other abilities, such as self efficacy, self concept self confidence, or other abilities. Thus, a more comprehensive understanding of the factors that influence truth seeking can be developed.

REFERENCES

Al Ghifari, S. S., Juandi, D., & Usdiyana, D. (2022). Systematic Literature Review: Pengaruh Resiliensi Matematis Terhadap Kemampuan Berpikir Matematis Tingkat Tinggi. *Jurnal Cendekia : Jurnal Pendidikan Matematika*, *6*(2), 2025–2039. https://doi.org/10.31004/cendekia.v6i2.1271

Amaliyah, A. (2019). *Profil Kemampuan Penalaran Logis Siswa Ditinjau dari Resiliensi Matematis*. (Thesis, UIN Sunan Ampel Surabaya). http://digilib.uinsa.ac.id/31536/

Ansori, A. Z., Ibrahim, M., & Widodo, W. (2017, August). Theoretical Study of the A Truth-Seeking Learning Model: The Learning Model to Improve Students' Critical Thinking Disposition. In *1st Annual International Conference on Mathematics, Science, and Education (ICoMSE 2017)* (pp. 196-201). Atlantis Press. https://doi.org/10.2991/icomse-17.2018.22

Ardiansyah, K., Kurniati, D., Trapsilasiwi, D., & Osman, S. (2022). Truth-Seekers Students' Critical Thinking Process in Solving Mathematics Problems with Contradiction Information. *Kreano, Jurnal Matematika Kreatif-Inovatif*, *13*(1), 1–13. https://doi.org/10.15294/kreano.v13i1.33286

Athiyah, F., Umah, U., & Syafrudin, T. (2020). Pengaruh Mathematical Resilience Terhadap Kemampuan Pemecahan Masalah Matematis Siswa. *JKPM (Jurnal Kajian Pendidikan Matematika)*, *5*(2), 223-234. https://doi.org/10.30998/jkpm.v5i2.5286

Azizah, R. N., & Abadi, A. P. (2022). Kajian Pustaka: Resiliensi dalam Pembelajaran Matematika. *Didactical Mathematics*, *4*(1), 104–110. https://doi.org/10.31949/dm.v4i1.2061

Boonsathirakul, J., & Kerdsomboon, C. (2021). The Investigation of Critical Thinking Disposition among Kasetsart University Students. *Higher Education Studies*, *11*(2), 224-224. https://doi.org/10.5539/hes.v11n2p224

Damayanti, D., Yudiantara, R., & An'ars, M. G. (2021). Sistem Penilaian Rapor Peserta Didik Berbasis Web Secara Multiuser. *Jurnal Informatika dan Rekayasa Perangkat Lunak*, *2*(4), 447–453. https://doi.org/10.33365/jatika.v2i4.1512

Dilla, S. C., Hidayat, W., & Rohaeti, E., E. (2018). Faktor gender dan resiliensi dalam pencapaian kemampuan

berpikir kreatif matematis siswa SMA. , 2(1), . *Journal of Medives: Journal of Mathematics Education IKIP Veteran Semarang*, *2*(1), 129–136. https://doi.org/10.31331/medives.v2i1.553

Duan, S., Chu, W., & Liu, H. (2023). "Seeking resilience, sustaining development": A self-narrative study of early career English teacher resilience from an ecological perspective. Sustainability, 15(16), 12386. https://doi.org/10.3390/su151612386

Dwirahayu, G., & Satriawati, G. (2022). *Analisis Resiliensi Matematis Ditinjau dari Hasil Belajar Matematika Siswa SMA*. (Thesis, UIN Syarif Hidayatullah Jakarta). https://repository.uinjkt.ac.id/dspace/handle/123456789/58912

Eliza, R., Utami, N. P., Warahmah, S., & Wendra, B. (2023). Resiliensi Mahasiswa Calon Guru Matematika di PTKIN Terhadap High Order Thinking Skills. *AKSIOMA: Jurnal Program Studi Pendidikan Matematika*, *12*(1), 1559–1570. https://doi.org/10.24127/ajpm.v12i1.7246

Faradillah, A., & Humaira, T. (2021). Mathematical critical thinking skills senior high school student based on mathematical resilience and domicile. *Jurnal Cendekia: Jurnal Pendidikan Matematika*, *5*(2), 1978–1991. https://doi.org/10.31004/cendekia.v5i2.682

Fatimah, A. E., & Fitriani, F. (2021). Analisis Kemampuan Berpikir Kritis Matematis Ditinjau dari Resiliensi Matematis Mahasiswa Pendidikan Teknik Informatika dan Komputer. *Journal of Didactic Mathematics*, *2*(2), 94–100. https://doi.org/10.34007/jdm.v2i2.871

Fatimah, A. E., & Purba, A. (2021). Hubungan Resiliensi Matematis Terhadap Kemampuan Pemecahan Masalah Matematis Mahasiswa pada Mata Kuliah Matematika Dasar. *Journal of Didactic Mathematics*, *1*(3), 151–157. https://doi.org/10.34007/jdm.v1i3.470

Febrianti, S., Imamuddin, M., & Isnaniah. (2023). Analisis Kemampuan Pemecahan Masalah Matematika Dalam Menyelesaikan Soal HOTS Terintegrasi Nilai-Nilai Islami. *Ar-Riyadhiyyat: Jurnal Pendidikan Matematika*, *4*(1), 1–10. https://doi.org/10.47766/arriyadhiyyat.v4i1.1475

Hasanah, R., Imamuddin, M., Isnaniah, I., & Kumalasari, H. Y. (2024). Kemampuan Literasi Matematika Siswa dalam Menyelesaikan Soal Matematika Terintegrasi Islam. *JUMAT: Jurnal* Matematika, 2(1), 10-22. https://doi.org/10.53491/jumat.v2i1.733

Hertinjung, W. S., Yuwono, S., Partini, P., Laksita, A. K., Ramandani, A. A., & Kencana, S. S. (2022). Faktor-Faktor Yang Memengaruhi Resiliensi Remaja Di Masa Pandemi. *Proyeksi*, *17*(2), 60–71. https://doi.org/10.30659/jp.17.2.60-71

Johnson, D. P., & McLean, H. S. (2020). Reliability, Resilience, and Developing a Problem-Solving Culture. In Patient Safety and Quality Improvement in Healthcare: A Case-Based Approach (pp. 55-68). Springer International Publishing. https://doi.org/10.1007/978-3-030-55829-1_4

Kholid, M. N., & Jayanti, I. T. (2022). Truth-Seeking Mahasiswa Dalam Memecahkan Masalah Non-Rutin Ditinjau Dari Gaya Kognitif. *AKSIOMA: Jurnal Program Studi Pendidikan Matematika*, *11*(2), 1241. https://doi.org/10.24127/ajpm.v11i2.5051

Komala, E., & Suryadi, D. (2018, November). Analysis of internal and external mathematical representation ability to senior high school students in Indonesia. In *Journal of Physics: Conference Series* (Vol. 1132, p. 012047). IOP Publishing. https://doi.org/10.1088/1742-6596/1132/1/012047

Kurnia, H. I., Royani, Y., Hendriana, H., & Nurfauziah, P. (2018). Analisis Kemampuan Komunikasi Matematik Siswa SMP Ditinjau dari Resiliensi Matematik. *JPMI (Jurnal Pembelajaran Matematika Inovatif)*, *1*(5), 933-940. https://journal.ikipsiliwangi.ac.id/index.php/jpmi/article/view/1597

Kurniati, D., Purwanto, P., As'ari, A. R., & Dwiyana, D. (2018). Exploring the mental structure and mechanism: How the style of truth-seekers in mathematical problem-solving? *Journal on Mathematics Education*, *9*(2), 311–326. https://doi.org/10.22342/jme.9.2.5377.311-326

Kurniati, D., Purwanto, P., As'ari, A. R., & Sa'dijah, C. (2020). Changes of the Students' Truth-Seeking Behaviour during the Infusion Mathematics Learning. *TEM Journal*, *9*(4), 1711–1720. https://doi.org/10.18421/TEM94-52

Kusno, K., & Marsigit, M. (2018). Integrasi Nilai-Nilai Spiritual Dalam Materi Relasi. *AlphaMath : Journal of Mathematics Education*, *4*(1), 46-62. https://doi.org/10.30595/alphamath.v4i1.7354

Lutfiyana, L., Pujiastuti, E., & Kharisudin, I. (2023). Systematic Literature Review: Resiliensi Matematis dan

Kemampuan Pemecahan Masalah Matematis. *Jurnal Cendekia : Jurnal Pendidikan Matematika*, *7*(3), 2167–2177. https://doi.org/10.31004/cendekia.v7i3.2445

Miles, M. B., & Huberman, A. M. (1994). *Qualitative Data Analysis*. SAGE Publications. https://vivauniversity.wordpress.com/wp-content/uploads/2013/11/milesandhuberman1994.pdf

Murni, V., Dewi, M., Jehadus, E., & Sugiarti, L. (2021). Hubungan Antara Minat Belajar Dengan Resiliensi Matematis Pada Masa Pandemi COVID-19. *Jurnal Cendekia: Jurnal Pendidikan Matematika*, *5*(2), 1147–1158. https://doi.org/10.31004/cendekia.v5i2.546

Novandi, M., Serani, G., Djudin, T., & Suratman, D. (2025). Keterampilan Berpikir Kritis dan Pengajarannya di Sekolah Dasar. *Jurnal Pendidikan Dasar Perkhasa*, *11*(1), 649–669. https://doi.org/10.31932/jpdp.v11i1.4509

Nurfitri, R. A., & Jusra, H. (2021). Analisis Kemampuan Pemecahan Masalah Matematis Peserta Didik Ditinjau dari Resiliensi Matematis dan Gender. *Jurnal Cendekia : Jurnal Pendidikan Matematika*, *5*(2), 1943–1954. https://doi.org/10.31004/cendekia.v5i2.723

Patton, M. Q. (2002). *Qualitative Research and Evaluation Methods (3rd ed.)*. Sage Publications. https://doi.org/10.1177/1035719X0300300213

Prastya, I., Wyrasti, A. F., & Irnandi, I. (2023). Creative Thinking Dispositions of Truth-Seeking Students in Solving Higher-Order Thinking Skills Questions. *JTAM (Jurnal Teori dan Aplikasi Matematika)*, *7*(1), 1. https://doi.org/10.31764/jtam.v7i1.10086

Puspita, D. A., Anggoro, B. S., & Pratiwi, D. D. (2024). Riset Keterhubungan: Bagaimana Self confidence dan Resiliensi Matematis Mempengaruhi Penalaran dan Kecerdasan Numerik Siswa. *Kognitif: Jurnal Riser HOTS Pendidikan Matematika*, *4*(3), 1174–1189. https://doi.org/10.51574/kognitif.v4i3.2066

Rahmatiya, R., & Miatun, A. (2020). Analisis Kemampuan Pemecahan Masalah Matematis Ditinjau Dari Resiliensi Matematis Siswa Smp. *Teorema: Teori dan Riset Matematika*, *5*(2), 187. https://doi.org/10.25157/teorema.v5i2.3619

Rahmi, Y., Wahyuni, C., Safitri, H., Aqsa, A., N., Nasrullah, A., Isnaniah, I., & Imamuddin, I (2023). Pengaruh Pembelajaran Matematika Terintegrasi Islam Terhadap Motivasi Belajar Siswa. *Jurnal Pendidikan Matematika*, *4*(1), 22–31. https://doi.org/10.47766/arriyadhiyyat.v4i1.1626

Rohmah, S., Kusmayadi, T. A., & Fitriana, L. (2020). Problem solving ability of junior high school students viewed by mathematical resilience. *Universal Journal of Educational Research*, *8*(7), 3026–3033. https://doi.org/10.13189/ujer.2020.080731

Romano, L., Angelini, G., Consiglio, P., & Fiorilli, C. (2021). Academic resilience and engagement in high school students: The mediating role of perceived teacher emotional support. *European journal of investigation in health, psychology and education*, *11*(2), 334–344. https://doi.org/10.3390/ejihpe11020025

Rosa, W. R. (2019). *Deskripsi Disposisi Berpikir Kritis Matematis Siswa dalam Pembelajaran Socrates Saintifik (Penelitian Kualitatif pada Siswa Kelas VII-2 Semester Genap Sekolah Global Madani Bandar Lampung Tahun Pelajaran 2018/2019)*. (Thesis, Universitas Lampung). https://digilib.unila.ac.id/57938/3

Sari, R. A., & Untarti, R. (2021). Kemampuan Berpikir Kreatif Matematis dan Resiliensi Matematis. *Mandalika Mathematics and Educations Journal*, *3*(1), 30–39. https://doi.org/10.29303/jm.v3i1.2577

Sholichah, I. F., Paulana, A. N., & Fitriya, P. (2019, July). Self-Esteem dan Resiliensi Akademik Mahasiswa. In *Proceeding National Conference Psikologi UMG 2018* (Vol. 1, No. 1, pp. 191-197). https://journal.umg.ac.id/index.php/proceeding/article/view/920

Sirri, E., Fazriansyah, M., & Faturohman, I. (2024). Identifikasi Resiliensi Matematis Siswa Kelas X pada Pembelajaran Matematika. *Jurnal Cendekia : Jurnal Pendidikan Matematika, 8*(3), 1908-1915. https://doi.org/10.31004/cendekia.v8i3.3375

Sugandi, A. I. (2017). Meningkatkan Kemampuan Berpikir Kreatif dan Resiliansi Matematis Siswa SMP Melalui Pendekatan Generatif. *Jurnal Perspektif Pendidikan, 11*(2), 70-77. https://mail.ojs.stkippgri-lubuklinggau.ac.id/index.php/JPP/article/view/393

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

EDUMATIKA: *Jurnal Riset Pendidikan Matematika* *e-ISSN 2620-8911*
Volume 8, Issue 1, May 2025 *p-ISSN 2620-8903*

Suhandri, S., & Syahwela, M. (2024). Pengembangan Bahan Ajar Matematika Terintegrasi Keislaman untuk Menumbuhkan Karakter Siswa SMP. *Jurnal Cendekia : Jurnal Pendidikan Matematika*, *8*(2), 926–937. https://doi.org/10.31004/cendekia.v8i2.2228

Sumarmo, U. (2015). *Resiliensi Matematik (Mathematical Resilience)*.

Wahidah, F., & Miatun, A. (2022). Profil Kemampuan Berpikir Kritis Siswa Berdasarkan Resiliensi Matematis Siswa SMA pada Pembelajaran New Normal. *ANARGYA: Jurnal Ilmiah Pendidikan Matematika*, *5*(2). 172-184. https://doi.org/10.24176/anargya.v5i2.8375

Zayyadi, M., & Subaidi, A. (2018). Berpikir Kritis Mahasiswa dalam Memecahkan Masalah Aljabar. *Paedagoria: Jurnal Kajian, Penelitian dan Pengembangan Kependidikan, 8*(2), 10-15. https://journal.ummat.ac.id/index.php/paedagoria/article/view/61