ISSN 2502-5872 (Print)
ISSN 2622-3627 (Elektronik)

Volume 11 Number 2, May 2026, 337-348

ANALYSIS OF STUDENTS' INTEREST IN LEARNING MATHEMATICS BASED ON SELF-EFFICACY

Dina Adinda[1*], Nursupiamin[2], Riska Elfira[3]
[1,2,3]Mathematics Education Department, Universitas Islam Negeri Datokarama Palu, Indonesia

*Correspondence: adindadinaa11@gmail.com

ABSTRACT

Mathematics learning plays an important role in developing students' logical, critical, analytical, and systematic thinking skills. However, low interest in learning mathematics remains a common challenge that affects students' engagement and learning outcomes. One psychological factor that may influence students' learning interest is self-efficacy. This study aimed to explore students' interest in learning mathematics in relation to their levels of self-efficacy. A qualitative descriptive approach was employed, involving eleventh-grade students at MAN 2 Kota Palu. A self-efficacy questionnaire was administered as a preliminary screening tool to classify students into high and low self-efficacy groups, from which four participants were purposively selected for in-depth qualitative analysis. Data were collected through semi-structured interviews, classroom observations, and documentation of students' assignments. The findings indicated that students with high self-efficacy demonstrated greater persistence, active participation, and willingness to engage in mathematical problem-solving activities. In contrast, students with low self-efficacy tended to exhibit hesitation, reduced participation, and avoidance of tasks perceived as difficult. These results suggest that students' interest in learning mathematics is influenced not only by cognitive ability but also by their beliefs in their own capabilities. Therefore, fostering students' self-efficacy is essential to enhance their engagement and interest in mathematics learning.

Keywords: Mathematics Learning, Learning Interest, Self-Efficacy, Student Engagement

How to Cite: Adinda, D., Nursupiamin, N., & Elfira, R. (2026). Analysis of Students' Interest in Learning Mathematics Based on Self-Efficacy. *Mathline: Jurnal Matematika dan Pendidikan Matematika, 11*(2), 337-348. http://doi.org/10.31943/mathline.v11i2.1112

PRELIMINARY

Mathematics learning holds a strategic position within the education system as it plays a significant role in improving students' logical, critical, analytical, and systematic thinking skills (Setiowati et al., 2024). In addition, mathematics serves as an essential foundation for mastering various fields of science and technology that continue to develop (Ismayanti et al., 2022). However, the reality in the field indicates that mathematics learning still faces several fundamental challenges, one of which is students' low interest in

learning. This low level of learning interest results in limited student engagement during the learning process and has implications for suboptimal learning outcomes (Setiawan et al., 2022).

Learning interest can be understood as an internal drive within students that generates feelings of attraction, enjoyment, and readiness to actively participate in learning activities (Zuschaiya, 2024). Slameto emphasized that learning interest plays an important role in determining learning success, as students with high learning interest generally demonstrate greater attention, perseverance, and effort in completing learning tasks (Sulhan et al., 2025). In the context of mathematics learning, learning interest becomes a particularly important aspect considering the abstract nature of mathematical content, which demands higher-order thinking skills and often triggers learning anxiety and avoidance behaviors among some students (Nurhidayati, 2024) Several studies have highlighted that emotional factors in mathematics learning, including anxiety, may influence students' ability to perform optimally when dealing with problem-solving activities(Lisfianisa & Hasanah, 2025).

One of the psychological factors that plays an important role in shaping students' learning interest is self-efficacy (Yulita & Defrinal, 2025). Bandura defined self-efficacy as an individual's belief in their ability to organize and execute the actions required to achieve specific goals (Hidayanti, 2023). In mathematics learning, self-efficacy influences how students respond to difficulties, their level of persistence in learning, and their confidence in solving mathematical problems (Sakarti, 2025). Students with high self-efficacy tend to perceive difficulties as challenges that can be overcome, whereas those with low self-efficacy are more likely to experience doubt, give up easily, and avoid tasks perceived as difficult (Anggraini, 2025).

Recent international studies have consistently demonstrated that mathematics self-efficacy plays a significant role in shaping students' learning interest, engagement, and academic achievement. A scoping review conducted in ZDM – Mathematics Education highlights that students' beliefs about their mathematical competence influence not only their performance but also their emotional and motivational responses toward mathematical tasks by (Street et al. 2024). Similarly, research published in Learning and Individual Differences indicates that mathematics interest and self-efficacy are reciprocally related and jointly predict students' persistence and achievement (Leinonen & Pesonen, 2021). Furthermore, a systematic review in Frontiers in Psychology emphasizes that strengthening students' self-efficacy significantly enhances their academic engagement in

mathematics learning (Zakariya, 2022). These findings suggest that exploring the relationship between self-efficacy and learning interest remains highly relevant within broader international research discourse.

Previous studies have shown a significant relationship between self-efficacy and students' interest in learning mathematics. However, most of these studies employed quantitative approaches focusing on measuring the correlation or influence of self-efficacy on learning interest or learning outcomes (Hamid, 2025). Although such approaches provide important general insights, quantitative studies are not fully capable of explaining in depth how self-efficacy influences students' learning interest from the perspectives of lived experiences, perceptions, and learning processes directly encountered by students (Zamhariroh & Muhid, 2025).

Based on this condition, a research gap exists in the limited number of studies examining students' interest in mathematics learning processes in relation to self-efficacy using a qualitative approach (Nurrindar & Wahjudi, 2021). A qualitative approach is considered relevant as it enables researchers to explore more deeply the attitudes, behaviors, and learning experiences of students with varying levels of self-efficacy (Shafajar & Rohmah, 2025).

This study is grounded in Bandura's social cognitive theory, particularly the construct of self-efficacy, which emphasizes that individuals' beliefs about their capabilities influence their motivation, emotional regulation, and behavioral engagement in specific tasks. In the context of mathematics learning, self-efficacy is assumed to shape students' learning interest through their persistence, confidence, and response to academic challenges. Therefore, learning interest in this study is conceptualized not merely as emotional attraction toward mathematics, but as an affective–behavioral manifestation influenced by students' beliefs about their competence.

Therefore, this study aims to examine students' interest in learning mathematics in relation to their self-efficacy (Latifah & Ratnaningsih, 2022). Specifically, this research focuses on describing the characteristics of mathematics learning interest among students with high and low levels of self-efficacy (Dewi et al., 2023). The findings of this study are expected to provide theoretical contributions to the development of educational psychology research, as well as practical contributions for educators in designing instructional strategies that enhance students' self-efficacy and interest in learning mathematics (Nurvadila & Yuniati, 2025).

In this study, learning interest is operationally defined through observable indicators such as students' participation in classroom activities, persistence in completing tasks, attention during learning, and willingness to engage in problem-solving.

METHODS

This study employed a qualitative approach with a descriptive design to explore students' interest in learning mathematics in relation to their self-efficacy (Nurhidayati, 2024). The participants were eleventh-grade students at MAN 2 Kota Palu, purposively selected based on their levels of self-efficacy, categorized as high and low. From this screening, four students representing high and low self-efficacy levels were selected for in-depth qualitative analysis.

The participants consisted of 25 eleventh-grade students, including both male and female students with varying academic abilities. The selection of research subjects was conducted using purposive sampling based on self-efficacy levels. The classification of high and low self-efficacy was determined using score distribution, where students scoring in the upper range were categorized as high self-efficacy, while those in the lower range were categorized as low self-efficacy. Four students were selected as research subjects representing these categories.

Data were collected through semi-structured in-depth interviews, classroom observations during mathematics learning activities, and documentation in the form of learning records and students' assignments. A self-efficacy questionnaire was administered in the preliminary stage solely as a screening tool to identify and classify participants according to their self-efficacy levels for subject selection, rather than as primary quantitative data for analysis.

The self-efficacy questionnaire used in this study was developed based on Bandura's theoretical framework of self-efficacy. The instrument included indicators such as confidence in problem-solving, persistence, and task completion. Prior to its use, the instrument was reviewed by experts in mathematics education to ensure content validity. Although the questionnaire was used only as a preliminary screening tool, these validation steps were conducted to enhance the credibility of the data.

The self-efficacy scores ranged from 32 to 50. The categorization was based on score distribution, where higher scores indicated stronger self-efficacy. Students in the upper score range were classified as having high self-efficacy, while those in the lower range were categorized as having low self-efficacy.

The researcher acted as the primary instrument throughout the data collection and analysis processes. Data trustworthiness was ensured through source and method triangulation as well as member checking. Data were analyzed interactively through data reduction, data display, and conclusion drawing to generate credible findings.

The data analysis was conducted systematically through three stages. First, interview transcripts and observation field notes were coded to identify meaningful units related to students' learning interest and self-efficacy expressions. Second, the codes were categorized into themes based on predefined indicators of learning interest, including attention, participation, persistence, and emotional response toward mathematical tasks. Third, a cross-case analysis was conducted to compare patterns between students with high and low self-efficacy in order to identify similarities and differences in learning engagement.

RESULTS AND DISCUSSION

The qualitative data analysis involved a systematic coding process. Initial codes such as "active participation," "task persistence," "avoidance behavior," and "lack of confidence" were identified from interview transcripts and observation notes. These codes were then grouped into broader categories, including behavioral engagement and emotional response. From these categories, key themes emerged, namely positive learning engagement among students with high self-efficacy and avoidance-oriented behavior among those with low self-efficacy.

Learning interest in this study was identified through observable and verbal indicators, including (1) students' attention during instructional activities, (2) active participation in discussions, (3) persistence in completing mathematical tasks, and (4) emotional responses when facing mathematical difficulties. These indicators served as the analytical framework in interpreting qualitative data obtained from interviews, observations, and documentation.

1. Subject Selection Based on Self-Efficacy Level

Participants were selected purposively based on their levels of self-efficacy as identified through a preliminary self-efficacy questionnaire administered to 25 eleventh-grade students at MAN 2 Kota Palu. The questionnaire results were used solely as a screening tool to capture variations in students' confidence in learning mathematics and to identify participants with contrasting levels of self-efficacy for in-depth qualitative analysis. Based on the score distribution, students were classified into high and low self-efficacy categories, from which representative

participants were selected as the primary subjects of this study. The distribution indicated that the majority of students demonstrated moderate to high levels of self-efficacy, while a smaller number exhibited lower levels, reflecting variation in students' confidence in learning mathematics. This classification served as the basis for subsequent qualitative exploration of differences in students' interest in learning mathematics, rather than as quantitative data for statistical analysis.

Table 1. Distribution of Students' Self-Efficacy Scores

Self-Efficacy Score	Number of Students
50	4
49–48	3
45–44	4
42–41	4
40–39	4
38–32	6
Total	25

2. Learning Interest among Students with High Self-Efficacy

Findings from interviews, classroom observations, and documentation indicated that students with high levels of self-efficacy demonstrated positive interest in learning mathematics. These students showed a strong willingness to engage in learning activities, such as paying attention to the teacher's explanations, attempting to solve mathematical problems independently, and actively participating in classroom discussions. When encountering difficulties, they tended to persist in solving problems rather than avoiding them.

One student with high self-efficacy stated, "I feel confident when solving math problems because I believe I can find the answer."

This tendency was reflected in students' responses during the interview process. One participant stated:

"If the problem is difficult, I still try to solve it first. Usually, with more practice, I can understand it."

Another participant expressed:

"I feel that if I keep trying, I will eventually understand. So, I am not afraid to try even if I make mistakes."

Classroom observations further showed that students with high self-efficacy were more actively involved during the learning process. They were more likely to respond to the teacher's questions, contribute to group discussions, and seek clarification when facing difficulties. In addition, documentation of students'

assignments indicated that these students generally completed their tasks on time and demonstrated consistent effort in solving mathematical problems.

3. Learning Interest among Students with Low Self-Efficacy

In contrast, findings from interviews, classroom observations, and documentation revealed that students with low levels of self-efficacy tended to demonstrate lower interest in learning mathematics. These students often expressed uncertainty about their own abilities and showed hesitation when faced with mathematical problems perceived as difficult. Rather than attempting to solve the problems independently, they were more likely to delay engagement or rely on peers for assistance.

A student with low self-efficacy mentioned, "I usually feel unsure and prefer to wait for others to answer."

This pattern was reflected in students' interview responses. One participant stated:

"I often feel confused when I see math problems, so I become reluctant to work on them."

Another participant mentioned:

"I usually wait for my friends to answer first because I am afraid of making mistakes."

Classroom observations indicated that students with low self-efficacy were generally less active during the learning process. They rarely asked questions, showed limited participation in group discussions, and tended to remain passive when given opportunities to respond by the teacher. Supporting this observation, documentation of students' assignments revealed that these students frequently completed tasks with minimal effort or left them unfinished when they encountered difficulties.

4. Comparative Patterns of Learning Interest

A cross-case analysis was conducted to identify differences in learning interest between students with high and low levels of self-efficacy. The findings revealed distinct patterns in students' engagement during mathematics learning activities. Students with high self-efficacy consistently demonstrated greater enthusiasm toward learning tasks, actively participated in classroom discussions, and persisted when encountering challenging mathematical problems. They tended

to approach difficulties as part of the learning process and showed a willingness to complete tasks independently.

In contrast, students with low self-efficacy exhibited lower levels of engagement in mathematics learning. They were less likely to initiate participation in discussions, showed limited effort when solving problems, and were more inclined to avoid tasks perceived as difficult. These students often demonstrated hesitation and relied on peers when attempting to complete mathematical assignments. Differences were also observed in task completion, where students with high self-efficacy generally completed assignments on time, while those with low self-efficacy tended to submit incomplete work or delay task completion.

To further clarify these differences, the comparative characteristics of students' learning interest based on their levels of self-efficacy are summarized in Table 2.

Table 2. Comparative Patterns of Learning Interest Based on Self-Efficacy Level

Learning Interest Aspect	High Self-Efficacy	Low Self-Efficacy
Learning Engagement	Enthusiastic and interested	Less interested
Participation	Actively asks and discusses	Passive
Persistence	Does not give up easily	Easily discouraged
Response to Difficulty	Views as a challenge	Tends to avoid
Task Completion	Timely and complete	Often incomplete

5. Discussion

The findings of this study are primarily interpreted through the lens of self-efficacy as the central psychological construct influencing students' learning interest. The results reveal that variations in students' levels of self-efficacy are reflected in distinct patterns of engagement during mathematics learning activities.

This finding can be interpreted through Bandura's theory of self-efficacy, which emphasizes that individuals' beliefs about their ability to perform specific tasks influence their motivation, effort, and persistence when facing challenges (Hidayanti, 2023). Students with high self-efficacy in this study appeared to interpret mathematical difficulties as challenges that could be overcome through practice and effort. Importantly, this adaptive engagement may be attributed to their perceived control over task outcomes, enabling them to regulate effort and sustain persistence when encountering learning difficulties. Recent research has highlighted that students' self-efficacy beliefs contribute to their ability to manage academic challenges by enhancing their perceived competence and engagement in

learning tasks (Putra & Soetjiningsih, 2023; Zhang, 2025). Such perceptions are associated with increased perseverance in learning activities, which may foster higher interest in mathematics learning (Gusteti et al., 2024; Yulita & Defrinal, 2025).

Conversely, students with low self-efficacy were more likely to doubt their abilities and experience anxiety when encountering mathematical problems. This condition may lead to avoidance behavior, characterized by reluctance to attempt tasks independently or reliance on peers during task completion. Similar findings have been reported in previous studies indicating that low self-efficacy is associated with mathematics anxiety and reduced engagement in problem-solving activities (Loviasari & Mampouw, 2022; Nurhidayati, 2024). Avoidance tendencies can limit students' opportunities to develop problem-solving skills and reduce their participation in learning activities, thereby contributing to lower levels of interest in mathematics.

The comparative patterns identified in this study further suggest that students' interest in mathematics learning is not solely influenced by cognitive ability but is also shaped by affective beliefs regarding their competence. Students who believe in their capacity to overcome difficulties are more likely to demonstrate perseverance and active involvement in learning tasks, whereas those who lack such confidence may disengage from the learning process. This finding supports previous research indicating that self-efficacy plays a significant role in influencing students' learning interest and motivation (Dewi et al., 2023; Ismayanti et al., 2022; Nurrindar & Wahjudi, 2021).

From a pedagogical perspective, these results highlight the importance of fostering students' self-efficacy as part of instructional practice in mathematics classrooms. Teachers are encouraged to create supportive learning environments that provide opportunities for successful learning experiences, constructive feedback, and gradually increasing task challenges. Such strategies may help strengthen students' confidence in their abilities and promote sustained interest in mathematics learning (Anggraini, 2025; Latifah & Ratnaningsih, 2022).

This study not only confirms previous quantitative findings regarding the relationship between self-efficacy and learning interest, but also extends the literature by providing qualitative evidence of how self-efficacy operates at the behavioral level in real classroom contexts. By exploring students' lived

experiences, this study highlights the affective mechanisms through which self-efficacy shapes engagement in mathematics learning, particularly within the Indonesian madrasah setting.

This finding highlights that self-efficacy not only influences students' cognitive performance but also shapes their behavioral engagement in learning. The novelty of this study lies in its qualitative exploration of how self-efficacy manifests in observable classroom behaviors, particularly within the madrasah context, which has been rarely examined in previous studies. These findings imply that instructional strategies should not only focus on cognitive aspects but also prioritize psychological empowerment to enhance students' confidence and engagement.

CONCLUSION

This study aimed to explore students' interest in learning mathematics in relation to their levels of self-efficacy. The findings indicate that students with high self-efficacy demonstrate more positive learning interest, characterized by greater engagement, active participation, persistence in solving mathematical problems, and timely completion of assigned tasks. In contrast, students with low self-efficacy tend to exhibit lower interest in learning mathematics, as reflected in hesitation when facing mathematical challenges, reduced participation during classroom activities, and avoidance of tasks perceived as difficult.

These findings suggest that students' interest in mathematics learning is not solely determined by cognitive ability but is also influenced by affective factors, particularly their beliefs in their own capabilities. Students who possess stronger self-efficacy are more likely to approach mathematical tasks with confidence and perseverance, while those with lower self-efficacy may disengage from the learning process due to self-doubt and anxiety.

Therefore, enhancing students' self-efficacy should be considered an essential component of mathematics instruction. Teachers are encouraged to design learning experiences that foster students' confidence through supportive feedback, opportunities for successful task completion, and gradual exposure to increasingly challenging problems. Such efforts may contribute to the development of sustained interest in mathematics learning.

Future research may involve a larger number of participants or integrate mixed-method approaches to further validate and expand the findings. Additionally, intervention-

based studies focusing on strategies to enhance students' self-efficacy may provide deeper insights into improving mathematics learning interest.

ACKNOWLEDGMENT

The author would like to express sincere gratitude to all parties who have supported the completion of this study. Appreciation is extended to the academic community of the Mathematics Education Program at UIN Datokarama Palu for their support throughout the research process. The author also thanks the eleventh-grade students of MAN 2 Kota Palu who participated in this study and contributed valuable data.

REFERENCES

Anggraini, F. L. (2025). Menguatkan self-efficacy untuk meningkatkan pemecahan masalah matematis: studi kualitatif pada siswa madrasah Ibtidaiyah Fatik. *Kartika:Jurnal Keislaman*, *5*(1), 622–637. https://doi.org/10.56667/dejournal.v5i1.1214

Dewi, A. K., Lestari, S. M. P., & Sandayanti, V. (2023). Can self-efficacy have a role in learning interest. *Psikostudia: Jurnal Psikologi*, *12*(2), 302–308. https://doi.org/10.30872/psikostudia.v12i2

Gusteti, M. U., Rahmalina, W., Azmi, K., Mulyati, A., Wulandari, S., Hayati, R., & Fajriah, N. (2024). Menggungkap potensi self efficacy melalui analisis lieteratur dalam pembelajaran matematika. *JOURNAL (Dharmas Education Journal)*, *5*(1), 168–179. https://doi.org/10.56667/dejournal.v5i1.1214

Hamid, A. (2025). Hubungan Self-efficacy Matematis dengan Prestasi Belajar Siswa pada Mata Pelajaran Matematika. *VENN: Journal of Sustainable Innovation on Education, Mathematics and Natural Sciences*, 408–415. https://doi.org/10.53696/venn.v4i3.348

Hidayanti, N. (2023). Implikasi self efficacy albert bandura dalam pendidikan agama islam. *Risalah: Jurnal Pendidikan Dan Studi Islam*, *9*(4), 1626–1636. https://doi.org/10.31943/jurnal_risalah.v9i4.618

Ismayanti, W., Santosa, C. A. H. F., & Rafianti, I. (2022). Minat Belajar , efikasi diri , dan kemampuan berpikir kritis berpengaruh terhadap hasil belajar matematika siswa. *Jurnal Education*, *8*(3), 943–952. https://doi.org/10.31949/educatio.v8i3.2847

Latifah, A. T., & Ratnaningsih, N. (2022). Analisis self efficacy, minat, dan hasil belajar siswa SMA pada pembelajaran matematika secara daring. *Jurnal Pendidikan Indonesia Gemilang*, *2*(1), 1–8. https://doi.org/10.53889/jpig.v2i1.46

Leinonen, H., & Pesonen, M. (2021). Mathematics interest, anxiety, self-efficacy and achievement: Examining reciprocal relations. Learning and Individual Differences, 91, 102060. https://doi.org/10.1016/j.lindif.2021.102060

Lisfianisa, S., & Hasanah, A. (2025). Problem-solving ability based on math anxiety in senior high school students during the computer-based writen written exam. *M A T H L I N E Jurbal Matematika Dan Pendidikan Matematika*, *10*(November), 859–876. https://doi.org/10.31943/mathline.v10i4.1006

Loviasari, P. A., & Mampouw, H. L. (2022). Profil pemecahan masalah matematika pada materi himpunan ditinjau dari self efficacy. *Mosharafa: Jurnal Pendidikan Matematika*, *11*, 73–84. https://doi.org/10.31980/mosharafa.v11i1.688

Nurhidayati, L. (2024). Kecemasan matematika (math anxiety) dan dampaknya terhadap prestasi belajar. *J I I M Jurnal Ilmiah Ipa Dan Matematika*, *2*, 61–66.

https://doi.org/10.61116/jiim.v2i3.477

Nurrindar, M., & Wahjudi, E. (2021). Pengaruh self-efficacy Terhadap keterlibatan siswa melalui motivasi belajar. *Jurnal Pendidikan Akuntansi (JPAK)*, *9*(1), 140–148. https://doi.org/10.26740/jpak.v9n1.p140-148

Nurvadila, O., & Yuniati, S. (2025). Intervensi strategi deep learning guna meningkatkan self-efficacy belajar siswa 1,2. *JOEBAS : Journal of Education, Behavior, and Social Studies*, *1*(02), 65–82. https://doi.org/10.65624/joebas.v1i2.255

Putra, N. A., & Soetjiningsih, C. H. (2023). Exploring the relationship between self-efficacy and academic procrastination : A study among psychology students. *Bulletin of Counseling and Psychotherapy Exploring*, *5*(2), 251–269. https://doi.org/10.51214/00202305621000

Sakarti, H. (2025). Analisis hubungan antara self-efficacy dan persepsi mahasiswa terhadap strategi problem solving dalam konteks literasi matematika. *POLINOMIAL Jurnal Pendidikan Matematika Volume*, *4*(3), 671–678. https://doi.org/10.56916/jp.v4i3.2030

Setiawan, A., Nugroho, W., & Widyaningtyas, D. (2022). *Pengaruh minat belajar terhadap hasil belajar siswa Kelas VI SDN 1*. *2*(2). https://doi.org/10.55933/tjripd.v2i2.373

Setiowati, E., Hadi, S., Ulfa, M., Dainuri, A., Sholeh, F., Surur, M., & Munawwir, Z. (2024). Analisis kemampuan literasi matematika dalam meningkatkan kemampuan berpikir kritis siswa. *Jurnal Kajian Penelitian Pendidikan Kebudayaan (JKPPK)*, *2*(2). https://doi.org/10.59031/jkppk.v2i2.321

Shafajar, N., & Rohmah, N. (2025). Systematic literature refview: self-efficacy pendidik PAUD dalam praktik mengajar. *CJPE: Cokroaminoto Juornal of Primary Education*, *8*, 1162–1174. https://doi.org/10.30605/cjpe.8.3.2025.6562

Street, K. E. S., Malmberg, L., & Stanislaw Schukajlow. (2024). Students ' mathematics self - efficacy : a scoping review. *ZDM – Mathematics Education*, 265–280. https://doi.org/10.1007/s11858-024-01548-0

Sulhan, Ardana, I. M., & Margunayasa, I. G. (2025). Kontribusi perhatian orang tua, minat belajar, dan disiplin belajar terhadap prestasi belajar matematika peserta didik kelas iv sd. *PENDASI: Jurnal Pendidikan Dasar Indonesia*, *9*(1), 144–153. https://doi.org/doi.org/10.51158/1ajhhg51

Yulita, R., & Defrinal. (2025). Peranan self efficacy dalam meningkatkan minat belajar. *Journal of Learning and Teaching*, *02*, 9–15. https://doi.org/10.70692/p1a0zq35

Zakariya, Y. F. (2022). Improving students ' mathematics self-e cacy : A systematic review of intervention studies. *Frontiers in Psychology*. https://doi.org/10.3389/fpsyg.2022.986622 OPEN

Zamhariroh, N. M., & Muhid, A. (2025). Meningkatkan motivasi belajar siswa melalui integrasi self-efficacy bandura dan tawakal ibnu qayyim. *An-Nuha: Jurnal Pendidikan Islam*, *5*(2), 175–193. https://doi.org/10.24036/annuha.v5i2.615

Zhang, Y. (2025). Exploring the impacts of academic self-efficacy on learning engagement and academic success among Chinese master's students. *International Journal of Learning, Teaching and Educational Research*, *24*(4), 1–27. https://doi.org/10.26803/ijlter.24.4.1

Zuschaiya, D. (2024). *Faktor yang Memengaruhi Minat dan Kesulitan Belajar Matematika Siswa Tingkat Sekolah Dasar*. *2*(01), 41–49. https://doi.org/10.58812/spp.v2i01