P-ISSN : 2339-2444
E-ISSN : 2549-8401
A University For The Excellence
Jurnal Karya Pendidikan Matematika
Universitas Muhammadiyah Semarang
HOME ABOUT LOGIN REGISTER SEARCH CURRENT ARCHIVES ANNOUNCEMENTS

THE IMPACT OF SELF-EFFICACY ON STUDENTS' MATHEMATICAL UNDERSTANDING

Rahman Rajab [1], Fahinu [1], Lambertus [1], Zulfaidil [2,3*]

[1] Department of Mathematics Education, Faculty of Teacher Training and Education, Universitas Halu Oleo
[2] Department of Mathematics, Faculty of Mathematics and Natural Sciences, Institut Teknologi Bandung
[c] Mathematics Teacher, SMAN 1 Kendari, Indonesia

* zulfaidil01@gmail.com

Keyword: Self-efficacy, Mathematical understanding, Regression.

Abstract

This study aims to describe the self-efficacy and mathematical understanding abilities of students at SMP Negeri 1 Kontukowuna and to analyze the influence of self-efficacy on the mathematical understanding abilities of these students. The population of this study consists of all 47 seventh-grade students at SMP Negeri 1 Kontukowuna. The sample was determined using a total sampling technique. Data analysis techniques include descriptive analysis and inferential analysis. Data collection techniques involve using a self-efficacy questionnaire and a mathematical understanding test. The results of the data analysis showed that 8.51% of students have very high self-efficacy, 19.15% have high self-efficacy, 42.55% have moderate self-efficacy, 27% have low self-efficacy, and 2.13% have very low self-efficacy. Furthermore, 17.02% of students have high mathematical understanding abilities, 70.21% have moderate mathematical understanding abilities, 12.77% have low mathematical understanding abilities, and no students fall into the very high or very low categories. Finally, it was found that there is a significant positive influence of self-efficacy on the mathematical understanding abilities of seventh-grade students at SMP Negeri 1 Kontukowuna, with a significance level of $\alpha = 0.05$. The regression equation is $\hat{Y} = 23.726 + 0.648X$, and the coefficient of determination (r^2) is 0.223, which means that self-efficacy (X) contributes 22.3% to mathematical understanding (Y), while the remaining 77.7% is influenced by other factors outside the independent variable (X) not discussed in this study.

1. INTRODUCTION

Education is the most important part of human life. Not only for human life itself, but education is also a crucial part of national development. The identity of a nation depends on the education of that nation. In essence, education aims to enlighten the life of the nation, as stated in the Undang-Undang Dasar 1945, paragraph 4. Education plays a very important role in human life in improving the quality of human resources (Alan & Afriansyah, 2017). Education is the influence of everything that school institutions strive for towards children and adolescents to have good abilities and awareness of their social relationships (Maunah, 2009). Thus, education is an effort that can enhance self-potential, solve life problems, and acquire various skills in facing challenges.

One effort to enhance self-potential and develop self-abilities is through schooling. School is a formal educational institution that teaches various fields of knowledge to achieve educational goals outlined in Undang-Undang No. 20 Tahun 2003. To achieve these goals, various fields of knowledge are taught in schools. One of the subjects taught is mathematics. Mathematics is the mother of all sciences and is almost always present in other fields of knowledge. Unconsciously, mathematics is always present in daily life, for example, in calculations during buying and selling transactions. Therefore, given the importance of mathematics in daily life, it needs to be understood and mastered by all layers of society, including students as the next generation (Misu et al., 2022; Zulfaidil, Haryanto, et al., 2024).

Mathematics is a very broad discipline, covering not only numbers, measurement, and number operations but also complex aspects such as triangle calculations or trigonometry, and the collection, processing, and presentation of data called statistics (Zakiyah et al., 2018). Mathematics is one of the subjects that must be learned by students at every level of education. The importance of mathematics is not only studied in the classroom but is closely related to everyday life activities. Mathematics is one of the subjects that students must learn because, in real-life applications, we constantly perform activities or processes such as weighing, selling, measuring, counting, and buying, which are simple processes (Ningsih, 2014).

While learning, students do not have to be in the classroom but can occur in any condition, because learning is a process of transforming from not knowing to knowing. In mathematics learning, mathematical abilities are recognized. Mathematical abilities can be classified into five groups: mathematical problem-solving, mathematical understanding, mathematical connections, mathematical reasoning, and mathematical communication. One of the goals of mathematics learning is to understand mathematical concepts, explain the interrelationships between concepts, and apply concepts correctly, efficiently, and appropriately in problem-solving. From this goal, it is clear that mathematical understanding is crucial in achieving the goals of mathematics learning (Mutiara KH, 2021).

Mathematical understanding is a fundamental basis for thinking in solving mathematical problems and everyday life problems (Anapit & Aswani, 2017). Furthermore, it is said that mathematical understanding is a very important aspect of the principles of mathematics learning. Developing mathematical understanding, besides being one of the goals in the curriculum, also supports other mathematical abilities such as mathematical communication, mathematical reasoning, mathematical connections, mathematical representation, and problem-solving. Mathematical understanding encourages students to develop their thinking abilities. The indicators of mathematical understanding can be seen in Table 1.

Table 1. Indicators of Mathematical Understanding

Aspect of Understanding Measured	Indicators
Instrumental Understanding	Ability to memorize concepts/principles without connection to others, apply formulas in simple calculations, and perform calculations algorithmically.

Relational Understanding	Ability to relate a concept/principle to other concepts/principles.
Logical Understanding	Ability to construct a proof based on existing ideas and the ability to discover relationships.

The reality of the mathematics learning process does not yet align with the desired expectations. As expressed by (Kesumawati, 2008), the learning process for children is not sufficiently encouraged to develop their thinking abilities, particularly in classroom learning, where children are directed towards using formulas and memorizing mathematical formulas to solve problems. Based on interviews conducted by researchers with mathematics teachers of seventh-grade students at SMP Negeri 1 Kontukowuna, it was found that the average score for the mid-semester exams in the odd semester of the 2022/2023 academic year was 49.62. This indicates that the level of mathematical understanding among students at SMP Negeri 1 Kontukowuna needs improvement, as their understanding ability is still relatively low.

The low level of mathematical understanding among students is influenced by several factors. Firstly, some students are not yet able to solve the problems given by the teacher effectively. For example, students are less meticulous in identifying important information presented in the problems and struggle to understand the questions, leading to frequent mistakes in solving the problems. Secondly, students tend to be passive, merely receiving the material presented by the teacher without asking questions about what they do not understand. For instance, when the teacher asks if there is anything unclear, students often remain silent or say they understand. However, when tested, it becomes evident whether the students truly understand the material. Thirdly, there is a lack of concentration during the learning process, such as students daydreaming, playing with their phones, chatting with friends, or being distracted by a noisy classroom environment. Lastly, there is a low level of self-confidence among students; during the learning process, they are often hesitant to express their opinions and prefer to remain silent and listen.

Some students at SMP Negeri 1 Kontukowuna also struggle with homework assignments, often unable to complete them. They claim they do not understand the material taught and lack confidence in solving the problems. This indicates the presence of psychological factors affecting the students, specifically regarding their self-confidence during the learning process and while solving mathematical problems. Solving mathematical problems requires students' affective abilities. This aligns with (Masri et al., 2018), who state that in addition to cognitive abilities, students must also possess affective abilities in mathematics learning. One of the affective abilities students must have in mathematics learning is self-efficacy. Self-efficacy is an individual's belief in their ability to organize and complete tasks required to achieve certain results (Damanik, 2021). Self-efficacy significantly influences students' success in completing tasks and solving problems effectively (Jatisunda, 2017). Self-efficacy involves understanding human functioning in terms of self-control, thought process regulation, motivation, affective states, and psychological conditions.

Students' self-confidence and attitudes toward mathematics are considered crucial and influential in their mathematical understanding. Consistent with this, (Hamdi & Abadi, 2014) state that self-efficacy greatly impacts students' academic achievements. Further, self-efficacy is defined as the belief in oneself to find solutions and maintain a positive attitude in facing situations. Operationally, self-efficacy refers to students' beliefs or assessments of their mathematical abilities in solving problems to achieve desired goals. Self-efficacy is an individual's assessment of their ability or competence to perform a task, achieve a goal, or overcome learning obstacles. Santrock states that self-efficacy significantly influences behavior (Damanik, 2021). For example, a student with low self-efficacy might not try to study for an exam because they do not believe that studying will help them solve the problems. Self-efficacy is crucial for individuals to possess. The indicators of self-efficacy are shown in Table 2.

Table 2. Indicators of Self-Efficacy

Dimension	Indicators

Level/Magnitude	Belief in one's abilities
	Confidence to overcome difficulties
Strength	Confidence in performing specific behaviors
	Individual consistency in facing obstacles or difficulties
Generality	Belief in one's ability to relate their skills
	Belief in one's ability to apply their skills

Self-confidence encourages individuals to understand their experiences of failure and success. These experiences will enable a person to express their self-confidence. The self-confidence derived from these experiences will serve as a reference for determining their attitudes and behavior. Self-efficacy (self-confidence) is a very important aspect in the current educational world, where students are required to have certain competencies within themselves to accomplish tasks. Some of the important competencies in learning mathematics today include a student's ability to solve problems, whether in the form of homework, answering questions in front of the class, or responding to exam questions based on what they have understood. Based on the above explanation, the researcher is interested in conducting this study.

2. METHOD

This type of research is ex post facto with a quantitative approach, aiming to examine the relationship or influence between self-efficacy and students' mathematical understanding abilities. In this study, there are no controls for independent variables, and no interventions are made in the learning process, as the learning has already been conducted by the mathematics teacher beforehand as shown in Figure 1.

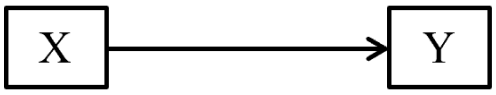

Figure 1. Research Design.

The research population consists of 47 seventh-grade students from SMP Negeri 1 Kontukowuna, divided into two parallel classes, as detailed in Table 3 below. The sampling technique used is total sampling, meaning all students from the population are included as research samples. The variables studied consist of an independent variable, which is self-efficacy (X), and a dependent variable, which is students' mathematical understanding ability (Y).

Table 3. Population of Students

Class	Number of Students
VII_1	23
VII_2	24
Total	47

The aspects measured include instrumental, relational, and logical understanding. The instruments used in this study consist of a self-efficacy questionnaire and a mathematical understanding ability test. The blueprint for the questionnaire and test was designed to measure pre-determined indicators (see Tables 1 and 2). Content validity was tested using Aiken's formula, and the analysis results showed that the instrument had high validity. Next, the reliability of the instrument was tested using the reliability coefficient, which indicated that the instrument had high reliability. Furthermore, data were collected through questionnaires and written tests. A Likert scale was used to measure self-efficacy, with four answer categories: strongly agree (SA), agree (A), disagree (D), and strongly disagree (SD). Students' mathematical understanding was classified according to the five-scale PAP assessment. Lastly, data analysis was performed using both descriptive and inferential analysis. Descriptive analysis was used to describe the characteristics of data distribution, with student self-efficacy grouped based on standard deviations. On the other hand, inferential analysis was conducted to test the hypothesis using normality and linearity tests.

3. RESULTS

3.1. Descriptive Analysis

Based on data processing using SPSS, the self-efficacy scores at SMP Negeri 1 Kontukowuna ranged from 50 to 86. The median self-efficacy score was 64, with a mode of 57. The standard deviation of the self-efficacy scores was 7.577, and the mean was 64.64. The complete distribution of the students' self-efficacy scores can be seen in the following Table 4.

Table 4. Distribution of Students' Self-Efficacy

Interval	Frequency	Percentage (%)	Criteria
$X > 76.00$	4	8.51	Very High
$68.34 < X \leq 76.00$	9	19.15	High
$60.85 < X \leq 68.43$	20	42.55	Moderate
$53.27 < X \leq 60.85$	13	27.66	Low
$X \leq 53.27$	1	2.13	Very Low

Table 4 shows that the self-efficacy of seventh-grade students at SMP Negeri 1 Kontukowuna is distributed as follows: 4 students (8.51%) fall into the very high category, 9 students (19.15%) in the high category, 20 students (42.55%) in the moderate category, 13 students (27%) in the low category, and 1 student (2.13%) in the very low category.

Meanwhile, the mathematical understanding scores at SMP Negeri 1 Kontukowuna ranged from 40 to 83. The median mathematical understanding score was 68, with a mode of 72. The standard deviation of the mathematical understanding scores was 10.396, and the mean was 65.62. The distribution of students' mathematical understanding scores, based on the five-scale PAP assessment according to (Suherman et al., 2003), can be seen in the following Table 5.

Table 5. Distribution of Students' Mathematical Understanding

Interval	Frequency	Percentage (%)	Criteria
$90 \leq Y \leq 100$	0	0	Very High
$75 \leq Y < 90$	8	17.02	High
$55 \leq Y < 75$	33	70.21	Moderate
$40 \leq Y < 55$	6	12.77	Low
$0 \leq Y < 40$	0	0	Very Low

Table 5 shows that the mathematical understanding scores at SMP Negeri 1 Kontukowuna are distributed as follows: 8 students (17.02%) fall into the high category, 33 students (70.21%) in the moderate category, and 6 students (12.77%) in the low category. There were no students in the very high or very low categories.

3.2. Inferential Analysis

In this analysis, several stages serve as prerequisites for conducting hypothesis testing, namely the normality test and linearity test analyses. The normality test is used to determine whether the students' self-efficacy data and mathematical understanding data are normally distributed. Meanwhile, the linearity test is used to determine whether the two data sets have a linear relationship (Misu et al., 2022; Zulfaidil, Rumadaul, et al., 2024). Once both tests meet the requirements, hypothesis testing can proceed.

Firstly, the normality test is used to determine whether the sample comes from a normally distributed population. In this analysis, the Kolmogorov-Smirnov test was employed with the assistance of SPSS software. The results of the normality test can be seen in Table 6.

Table 6. The Results of The Normality Test

Variable	Asymp. Sig. (2-tailed)	Significance Level
X	0.200	$\alpha = 0.05$
Y	0.074	

Table 6 shows that the results of the normality test using the Kolmogorov-Smirnov test for variable X (self-efficacy) yielded an Asymp. Sig. (2-tailed) value of 0.200, which is greater

than the α-value (0.200 > 0.05), indicating that H_0 is accepted. For variable Y (mathematical understanding), the Asymp. Sig. (2-tailed) value was 0.074, which is also greater than the α-value (0.074 > 0.05), meaning H_0 is accepted. Based on these analysis results, it can be concluded that the self-efficacy data and mathematical understanding data are normally distributed, or that the sample comes from a normally distributed population.

Next, the linearity test is used to determine whether the two variables being tested have a significant linear relationship. The results of the linearity test can be seen in Table 7.

Table 7. Results of The Linearity Test

Model	F_{result} value	Sig.	Significance Level
X → Y	0.948	0.548	$\alpha = 0.05$

A regression model is considered linear if the Sig. (P-value) is greater than $\alpha = 0.05$. From Table 7 above, it can be seen that all linear regression models have the following characteristics: The model X → Y has a Sig. (P-value) of 0.548, which is greater than $\alpha = 0.05$. In other words, it can be concluded that H_0 is accepted, indicating a significant linear relationship between self-efficacy (X) and mathematical understanding (Y).

Since the normality and linearity tests have been satisfied, this means that the self-efficacy and mathematical understanding data are normally and linearly distributed. Next, hypothesis testing is conducted using simple linear regression analysis to examine the effect of the self-efficacy variable (X) on the mathematical understanding variable (Y), with the estimated function:

$$\hat{Y} = a + bX$$

Simple linear regression analysis is intended to determine the effect of the independent variable on the dependent variable. The calculation results are presented in the following Table 8.

Table 8. Results of the Regression Model

Model	Regression Coefficients	t	Sig.
Constanta	23.726	2.023	0.49
Self-Efficacy	0.648	3.595	0.001

Table 8 shows that the constant value is 23.726 (as a in the regression estimation function) with a significance value of 0.49, which is greater than 0.05. This means that H_0 is accepted, indicating that the constant value does not have a significant effect. The regression coefficient value is 0.648 (as b in the regression estimation function) with a significance value of 0.001, which is less than 0.05, leading to the rejection of H_0. This indicates a significant positive effect of self-efficacy on students' mathematical understanding. Thus, the regression estimation function formed is

$$\hat{Y} = 23.726 + 0.648X$$

The obtained regression equation indicates that for each 1-point increase in self-efficacy (X), the mathematical understanding score (Y) will increase by 0.648 points, with a constant value of 23.726. The distribution of data for the linear regression estimation function can be seen in Figure 2 below

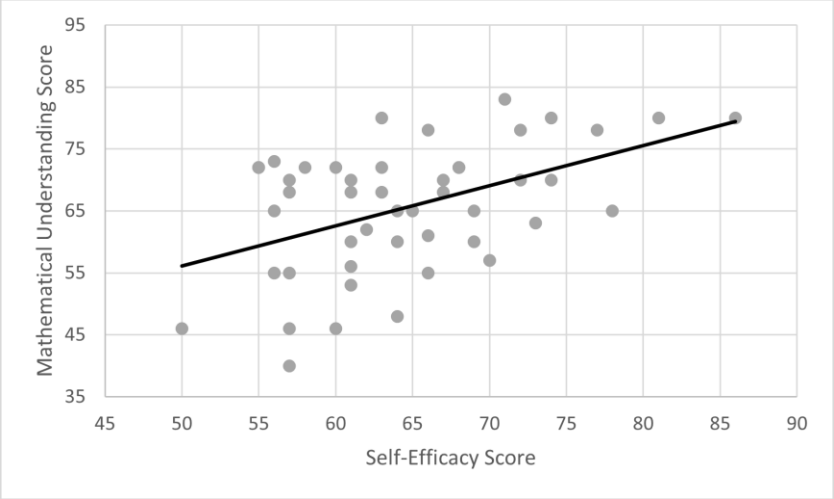

Figure 2. Scatterplot

Based on Figure 2, the results obtained can assist researchers in understanding the data distribution and help predict the regression values (black line) between self-efficacy and students' mathematical understanding.

Moreover, the coefficient of determination is used to indicate the extent to which the independent variable (X) in the regression model explains the variation in the dependent variable (Y). The calculation results can be seen in the following Table 9.

Table 9. Results of the Coefficient of Determination

Model	r	r^2
X → Y	0.472	0.223

Based on Table 9, the coefficient of determination (r^2) is 0.223, indicating that self-efficacy (X) contributes 22.3% to the variation in mathematical understanding (Y), while the remaining 77.7% is influenced by other factors outside the independent variable (X) that are not discussed in this study.

The analysis results above show that the research hypothesis is accepted, meaning there is a significant positive effect of self-efficacy (X) on the mathematical understanding (Y) of seventh-grade students at SMP Negeri 1 Kontukowuna.

4. DISCUSSION

This study aimed to determine the effect of self-efficacy on the mathematical understanding of seventh-grade students at SMP Negeri 1 Kontukowuna. To measure students' self-efficacy, a self-efficacy questionnaire was used, while students' mathematical understanding was assessed using an essay test for the seventh grade during the odd semester of the 2022/2023 academic year, aligned with indicators of mathematical understanding. To achieve the research objectives, the sample comprised all seventh-grade students, totaling 47 students.

Based on the descriptive analysis of the self-efficacy of seventh-grade students at SMP Negeri 1 Kontukowuna, there were 4 students (8.51%) categorized as very high, 9 students (19.15%) categorized as high, 20 students (42.55%) categorized as moderate, 13 students (27%) categorized as low, and 1 student (2.13%) categorized as very low. This indicates that the students' self-efficacy at SMP Negeri 1 Kontukowuna is generally categorized as moderate. This means that while some aspects of students' self-efficacy are good, others still need improvement.

Self-efficacy measured in this study refers to the students' belief in their ability to face and complete given tasks. The aspects of self-efficacy used by the researcher include: 1) The level dimension, which refers to students' belief in their abilities and confidence in overcoming difficulties, 2) The strength dimension, which is the belief in performing certain behaviors and the individual's consistency in facing obstacles or challenges, 3) The generality dimension, which refers to the individual's belief in linking their abilities and their confidence in applying

those abilities. Overall, the most dominant aspect of self-efficacy among students was their belief in performing specific behaviors, with a percentage of 24.29%, followed by the belief in their abilities and the ability to link their abilities with 23.35% and 22.58%, respectively. This might occur because students with high self-confidence are not afraid of tests, feel capable in mathematics, and actively participate in the learning process. However, these aspects were not followed by the belief in overcoming difficulties, consistency in facing challenges, and the ability to apply their abilities, which had percentages of 15.19%, 12.78%, and 17.55%, respectively. Students' lack of interest in mathematics may cause them to give up easily when facing challenges, preventing them from fully developing their potential.

The characteristics of students with very high self-efficacy include excellent mathematical skills, the ability to complete tasks given by the teacher correctly, viewing difficult tasks as challenges rather than threats, quickly recovering from failure or unsatisfactory results, showing enthusiasm and great interest in mathematics learning, and excellent independent learning skills. The characteristics of students with high self-efficacy include strong mathematical skills, the ability to complete tasks given by the teacher correctly, viewing difficult tasks as challenges, quickly recovering from failure, showing interest in mathematics, and developing a strong interest in classroom learning activities.

The characteristics of students with moderate self-efficacy include average mathematical skills, the ability to complete some of the tasks given by the teacher correctly, feeling worried when faced with difficult tasks, giving up easily when failing, having their attention easily distracted during math lessons, showing a lack of enthusiasm in participating actively in class, and difficulty solving math problems independently. The characteristics of students with low self-efficacy include poor mathematical skills, difficulty completing tasks given by the teacher correctly, avoiding challenging tasks, poor focus on tasks, difficulty recovering from failure, lack of interest in math lessons, lack of enthusiasm and participation in class, and difficulty learning independently. The characteristics of students with very low self-efficacy include poor mathematical skills, inability to complete tasks given by the teacher, avoidance of challenging tasks, poor attention in math lessons, indifference to failure, lack of enthusiasm and participation in class, dislike for math, and inability to learn independently.

These characteristics of self-efficacy are supported by (Bandura, 1995) theory, which suggests that individuals with high self-efficacy believe they can effectively handle events and situations they encounter, persist in completing tasks, trust their abilities, view challenges as opportunities rather than threats, set challenging goals, commit strongly to their goals, and increase their efforts when faced with failure. They focus on tasks and develop strategies for overcoming difficulties, quickly recovering from failure, and dealing with stressors or threats with confidence in their ability to control them. Individuals with low self-efficacy, on the other hand, tend to feel powerless, become easily upset, avoid difficult tasks, give up quickly, have low aspirations, and are slow to regain their sense of capability after failure.

Given that students' self-efficacy levels vary, teachers must play a significant role in managing their teaching techniques, especially in classroom learning. The average percentage of self-efficacy indicators shows that while all indicators are positive, they need improvement. Students' ability to learn mathematics is related to their difficulty in solving math problems, inconsistency in facing obstacles, completing math tasks, and participating in math lessons, which can be influenced by the learning system at school. Additionally, students' attitudes toward learning math, particularly regarding interest and motivation for independent learning, also need improvement (Rahmi et al., 2020).

Based on the descriptive analysis of the mathematical understanding of seventh-grade students at SMP Negeri 1 Kontukowuna for the odd semester of the 2022/2023 academic year, it was found that 8 students (17.02%) were categorized as having a high level of understanding, 33 students (70.21%) were categorized as having a moderate level of understanding, 6 students (12.77%) were categorized as having a low level of understanding, and no students were categorized as having very high or very low levels of understanding. This shows that students' mathematical understanding at SMP Negeri 1 Kontukowuna is generally categorized as moderate. While some aspects of students' mathematical understanding are good, others still need improvement (Anapit & Aswani, 2017).

The mathematical understanding measured in this study includes instrumental understanding, relational understanding, and logical understanding. Instrumental understanding relates to how students apply memorized rules or formulas to solve simple or routine problems. Relational understanding involves how students connect one concept with another to solve problems. Logical understanding involves how students build proofs based on their ideas and find relationships in solving more complex problems.

Students with strong logical understanding must first have strong relational understanding, which is built on good instrumental understanding. The instrumental understanding of seventh-grade students at SMP Negeri 1 Kontukowuna is reflected in the percentage of correct answers for test questions 1 and 2, which measure instrumental understanding at 90.24% and 87.23%, respectively. The percentage of correct answers for test questions 3 and 4, which measure relational understanding, was 63.28% and 73.40%, respectively. The percentage of correct answers for test questions 5 and 6, which measure logical understanding, was 54.26% and 13.33%, respectively. When compared, instrumental understanding is higher than relational understanding, and relational understanding is higher than logical understanding. Overall, the percentage of instrumental understanding reached 88.825%, relational understanding 68.34%, and logical understanding 33.795%. The difference is evident in the high achievement of instrumental understanding for questions 1 and 2, while relational understanding for questions 3 and 4 is categorized as moderate and needs improvement. Logical understanding for questions 5 and 6 is categorized as low and needs significant improvement. This indicates that some students have difficulty accurately connecting concepts to problems and some students struggle to break down a whole into interrelated parts.

The influence of students' self-efficacy on their mathematical understanding is a positive influence, as indicated by the positive regression values. As seen in Appendix 12, the regression equation obtained is $\hat{Y} = 23.726 + 0.648X$. This regression function shows that the constant value of 23.726 represents students' mathematical understanding without the support of their self-efficacy. The regression coefficient for X is 0.648, indicating that students' self-efficacy has a positive impact on their mathematical understanding. Thus, if students' self-efficacy increases, their mathematical understanding will also improve, with the contribution of self-efficacy to mathematical understanding being 0.223 or 22.3%. The remaining 77.7% is influenced by other factors not examined in this study.

Based on the significance level of simple linear regression, the significance value was 0.001, which is less than $\alpha = 0.05$ ($0.001 < 0.05$). Therefore, it can be concluded that students' self-efficacy has a significant positive effect on their mathematical understanding in seventh-grade students at SMP Negeri 1 Kontukowuna. This is consistent with previous research conducted by(Auliya & Munasiah, 2016), which concluded that there is a direct positive effect of self-efficacy on mathematical understanding. With self-efficacy, students are motivated to complete their tasks effectively, leading to academic success. Self-efficacy is important for students because it drives positive behavior. In classroom learning, the teacher constantly assigns tasks, and if students' self-efficacy is positive, they will complete the tasks and pay serious attention to learning mathematics. Moreover, students with positive self-efficacy are encouraged to study independently and are persistent in tackling complex tasks. Self-efficacy enables students to continuously develop their abilities. Strong self-efficacy also allows students to view failure as a learning opportunity rather than defeat, helping them to recover and believe that their abilities will lead to future success.

5. CONCLUSION

Based on the results of data analysis and discussion, several conclusions were drawn as follows: The self-efficacy of seventh-grade students at SMP Negeri 1 Kontukowuna in the first semester of the 2022/2023 academic year was categorized as moderate, with 8.51% of students in the very high category, 19.15% in the high category, 42.55% in the moderate category, 27% in the low category, and 2.13% in the very low category. The mathematical understanding of the seventh-grade students at SMP Negeri 1 Kontukowuna was also categorized as moderate, with 17.02% of students in the high category, 70.21% in the moderate category, 12.77% in the low category, and none in the very high or very low categories. There was a significant positive influence of self-efficacy on the mathematical

understanding of the seventh-grade students at SMP Negeri 1 Kontukowuna, with a significance level of $\alpha = 0.05$ and a regression equation of $\hat{Y} = 23.726 + 0.648X$. The contribution of self-efficacy to mathematical understanding was 0.223 or 22.3%.

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