Learning Motivation Viewed from Goal Orientation, Self-Confidence Control, Test Anxiety and Student Assignment Value

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Article Info	Abstract
	Students' confidence will be more curious, willing to try new things, and take chances. Self-confidence is a state of mind where a person feels confident in his ability to carry out various tasks and dares to voice his opinion in front of others. The importance of students' work as a learning outcome depends on their level of self-confidence. This study aims to determine whether there is a significant influence between learning motivation and learning outcomes in mathematics. This study uses a quantitative approach using regression analysis. The population in this study were all grade 9 students at SMPN 11 Pasuruan City, while the sample in this research was 118 grade 9 students. The sampling technique used was random sampling. Learning motivation data was collected through a learning motivation questionnaire while learning outcomes data was taken from UAS score data at the school. The data was then analyzed using the t-test. The results showed a significant influence between learning motivation and students' mathematics learning outcomes. The study results prove that goal orientation, control beliefs, and bag anxiety strongly influence the value of the task; therefore, to foster a self-confident attitude, students must have a target score or grade to achieve. These three things influence students' learning motivation to influence the value of assignments. The motivation to learn mathematics in class IX of SMP Negeri 11 Pasuruan City.

INTRODUCTION

Education is usually provided by those who train, educate, or conduct research to pass on knowledge and skills from generation to generation. Achieving the nation's goal of realizing a more innovative and more successful life, as stated in the 1945 Constitution, depends on quality education [1], [2]. Quality education can be obtained with the knowledge and perseverance of teachers and students working together as one generation to achieve educational goals.

The teacher influences the quality of education [3]–[6]. The extent to which teachers inspire their students to learn can impact the quality of their education [7]. Motivating students and ensuring motivation to learn mathematics is critical to improving educational standards. Teachers realize that many students lack interest in mathematics and self-confidence and that mathematics is a scary subject that should be avoided.

Mathematics education is essential to determine a person's thinking and can shape a person's character. Students in math classes often need clarification to ensure they understand the concepts and exercises taught by the instructor. This is related to the fact that teaching and learning strategies are ineffective in inspiring students to learn and fail to arouse their interest in mathematics [8]. Students' self-confidence in mathematics is often challenging and uninteresting, and they are right. Additionally, because professors often use traditional teaching strategies, students tend to be less engaged in mathematics learning [2], [8]–[10].

Between students and teachers, there is active interaction during the learning process. However, because students are accustomed to learning by memorizing theories and concepts, several variables contribute to the decline in students' interest in mathematics [11], [12]. This continues, and so many formulas must be memorized that students lose interest in mathematics and quickly get bored. A situation or environment is approached and adapted through orientation. If students have a goal orientation toward the learning process, this may influence their initial motivation or learning intentions and the importance of the tasks they complete [13]. A student's orientation can be internal and extrinsic. A fundamental element in student orientation is the student's self-confidence. Controlling children's self-confidence is very important. A person can know about himself and engage with others by having confidence in control [14], [15].

Students' confidence will be more curious, willing to try new things, and take chances. Self-confidence is a state of mind where a person feels confident in his ability to carry out various tasks and dares to voice his opinion in front of others. The importance of students' work as a learning outcome depends on their level of self-confidence. Apart from a lack of self-confidence, test anxiety can prevent students from demonstrating their skills. The motivation to learn will decrease and impact test scores the more anxious students will be during the test [16].

According to the description above, learning motivation is needed to improve education. The urge to learn can be seen from various angles. At SMPN 11 Pasuruan City, researchers wanted to test students' mathematics learning motivation regarding goal orientation, self-confidence, and test anxiety.

METHODS

This type of research is qualitative, which means understanding the phenomenon of what is experienced by research subjects holistically by descriptive means in the form of words and language in a context, especially natural ones, using various natural methods [12]. This research was carried out at SMP Negeri 11 Pasuruan City, with the population being all 9th-grade students; samples were taken randomly by giving instruments to all 9th-grade students, and 118 students returned instruments. The data collection technique is a questionnaire using a list of questions that respondents must fill in [17]. Data collection was carried out by distributing an instrument in the form of an online questionnaire in the form of a *Google Form* regarding motivation to learn mathematics with 36 items consisting of intrinsic goal orientation, extrinsic goal orientation, assignment values, self-confidence control for learning, self-confidence and anxiety during tests.

Implementing policies encouraging thoughtful and deliberate responses is critical to increasing respondents' conscientiousness and reducing the likelihood of random responses to survey items. Establishing appropriate teaching guidelines and procedures is critical to ensuring students use devices correctly and understand declarative statements accurately. The Rasch model assesses responses to each statement on a Likert scale with five possible alternatives or answers. Research subjects were selected using a random sampling strategy to ensure a random selection of themes. Apart from primary data, the literature review approach used in this research uses secondary data to collect studies or information about increasing enthusiasm for learning. Carrying out documentation studies is the data collection method used in this research. The documentation study process requires organized and thorough steps to provide, collect, use, research, search, and disseminate data to users. The use of specific media and secondary data sources makes this possible. The study concentrated on the Class 9 SMPN 11 Pasuruan City results and the questions used to calculate UAS scores.

Regression analysis using IBM SPSS 24 software is the data analysis method used in this research. Descriptive findings were categorized based on typical response rates.

Table 1. Research Category Distribution

Mean (x)	Category
$4 \leq \bar{x} \leq 5$	Very Good
$3 \leq \bar{x} < 4$	Good
$2 \leq \bar{x} < 3$	Moderate
$1 \leq \bar{x} < 2$	Weak
$0 \leq \bar{x}$	Very Weak

RESULTS AND DISCUSSION

The results of distributing questionnaires to grade 9 student respondents at SMPN 11 Pasuruan City with a total of 118 students will be presented and analyzed as follows:

Table 2. Intrinsic Goal Orientation

No	Statements	Score					Mean
		1	2	3	4	5	
1	In math class, I would like to have some challenging materials that will make me learn more	4 3.4%	19 16.1%	35 29.7%	47 39.8%	13 11%	3.37
7	I would like to have curiosity-initial materials in math class, even if they are pretty difficult	4 3.4%	10 8.5%	10 8.5%	45 38.1%	49 41.5%	4.03
13	My biggest wish is to understand the content of the learning material used in the math class	5 4.3%	13 11.1%	30 25.6%	53 45.3%	16 13.7%	3.48
18	In math class, I would like to have more projects and homework which will help me learn more, even though these will not improve my scores	5 4.3%	11 9.4%	15 12.8%	59 50.4%	27 23.1%	3.74
24	Learning math can improve my thinking logic.	7 6%	13 11.1%	21 17.9%	56 47.9%	20 17.1%	3.53
30	get better scores in math, I will learn harder	12 10.3%	14 12%	31 26.5%	44 37.6%	16 13.7%	3.27
	Average	6.1 5,16%	6.1 5.16%	13.3 11.27%	23.6 20%	50.6 42.88%	3.57

The overall average for the six statements in the table above, determined based on research data tested on target respondents, is 3.57. According to intrinsic orientation, this indicates that the goal is included in the superior group. The statement with the highest average value of the six statements is in item 7, where the average value is 4.03. 94 (79.6%) students agreed they wanted the best math score. In addition, 59 students (50.4%) agreed with test item 18, which gave the highest score. Students agreed that mathematics benefits humanity, and the two least favourite elements were number one and seven, for a combined total of four (3.4%).

Table 3. Extrinsic Goal Orientation

No	Statements	Score					Mean
		1	2	3	4	5	
2	My greatest want is to get the best grades in math class	6 / 5%	13 / 10.9%	13 / 10.9%	55 / 46.2%	32 / 26.9%	3.81
8	To me, taking math classes can improve my overall academic score	4 / 3.4%	12 / 10.2%	26 / 22%	54 / 45.8%	22 / 18.6%	3.65
14	I hope I can get higher grades in math than any other classmates	7 / 6%	18 / 15.4%	33 / 28.2%	42 / 35.9%	17 / 14.5%	3.32
19	I want to get higher scores in math class because I want to demonstrate my capability to my classmates	4 / 3.4%	14 / 11.9%	16 / 13.6%	53 / 44.9%	31 / 26.3%	3.76
25	My best wish is to attend the ideal university by learning math	6 / 5.1%	13 / 11.1%	17 / 14.5%	62 / 53%	19 / 15.2%	3.6
31	My best wish is to attend the ideal university to learn math	8 / 6.8%	19 / 16.2%	17 / 14.5%	55 / 47%	18 / 15.4%	3.43
	Average	5,8 / 4,95%	5.8 / 4.95%	14.8 / 12.61%	20.3 / 17.28%	53.5 / 45.46%	3.81

Extrinsic goal orientation is rated as good based on the total average in Table 3 of 3.6. The data collected shows that an average of 3.81 students are still curious about mathematics. The average number of students less interested in mathematics learning material is 3.32, below average. However, item 19 and item 25 obtained an average score of 3.76 and 3.6, respectively. Therefore, students are less interested in studying mathematics. However, they are confident they used the proper method to obtain the subject, so they will work harder and think they got a good grade.

The six aspects that form the flexibility component of extrinsic orientation are in Table 2. The average score for the category that measures students' interest in mathematics is 3.32. The highest score in the high category, with an average of 3.81, is for students' interest in mathematics content. Therefore, extrinsic orientation flexibility is generally rated high.

Table 4. Assignment Value

No	Statements	Score					Mean
		1	2	3	4	5	
3	The skills I learn from the math class can be applied in other classes	7 5,9%	11 9,2%	21 17,6%	49 41,2%	31 26,1%	3,56
9	I am interested in the learning material in math class.	7 5,9%	7 5,9%	18 15,3%	44 37,3%	42 35,6%	3,87
15	I feel the learning materials used in math class are useful	3 2,5%	10 8,5%	29 24,6%	55 46,6%	21 17,8%	3,65
20	I like every topic and content in math class	3 2,6%	10 8,5%	17 14,5%	60 51,3%	27 23,1%	3,77
26	What I learn in the math class can be applied in my daily life	9 7,8%	16 13,8%	35 30,2%	45 38,8%	11 9,5%	3,04
32	Mathematics contributes a lot to all human beings	13 11,4%	10 8,8%	22 19,3%	52 45,6%	17 14,9%	3,3
	Average	7 6%	10,6 9,1%	23,6 20,25%	50,8 43,4%	29,3 21,1%	3,53

The Assignment value variable with a total of 118 respondents at SMPN 11 Pasuruan City is explained in Table 3 above. Following are details of the respondents' responses. A mean score of 3.56 was achieved for item 3, higher than the mean of 3.53. In this case, the grade component of the assignment is included in the perfect category. As many as 64.5% of respondents agreed with each statement above. Question 20 received the highest score, with 60 (51.3%) students answering in the affirmative.

In contrast, 15.1% of students did not agree with any of the six statements above. Item 15 received the lowest score, with 3 (2.5%) responses disagreeing with the statement. In addition, 23.6 (20.5%) respondents were students who had no opinion about the six statement items.

Table 5. Self-Confidence Control for Learning

No	Statements	Score					Mean
		1	2	3	4	5	
4	If I have the correct learning pattern to learn math, I will learn better in class.	15 12.6%	15 12.6%	39 32.8%	41 34.5%	9 7.6%	2.75
10	If I do not learn better in the math class, I believe it is my fault	8 6.8%	8 6.8%	22 16.6%	45 38.!%	35 29.7%	3.74
16	If I study hard enough, I can understand the content of the learning materials used in math class	9 7.6%	16 13.6%	37 31.4%	41 34.7%	15 12.7%	3.29
21	If I could not understand every topic in math class, that is because I did not work hard enough	6 5.2%	6 5.2%	22 19%	64 55.2%	18 15.5%	3.62
27	If I pay full attention in math class, I can get better grades	8 6.8%	21 17.9%	39 33.3%	37 31.6%	12 10.3%	3.15
33	If I have enough time to practice in math, I will have a better performance	12 10.3%	12 10.3%	20 17.1%	44 37.6%	29 24.8%	3.51
	Average	9,6 8,21%	9.6 8.21%	13 11.03%	29.8 25.03%	45.3 38.61%	3.34

Based on the survey results in Table 4, the overall average is 3.34, which places the control of trust in learning in the excellent range. The desire to learn mathematics from the most vital sense of control is owned by 64 students in the table above, with a percentage of 55.2% in item number 21. This shows that students agree that they will be better if they try harder in studying.

You can understand the material in mathematics learning material if you pay attention to the average number of 6 things that tend to agree (scores 4 and 5), totalling 55.87%. Disagree scores (1 and 2) have an average value of 19.24%.

Table 6. Self-Efficacy

No	Statements	Score					Mean
		1	2	3	4	5	
5	I believe that I will have excellent math grades in math class.	6 5.1%	14 11.9%	20 16.9%	53 44.9%	25 21.2%	3.59
11	I can understand the most challenging part of the math materials independently.	8 6.8%	8 6.8%	22 18.6%	45 38.1%	35 29.7%	3.74
22	I believe that I can master every topic in math class	8 6.8%	11 9.4%	21 17.9%	56 47.9%	21 17.9%	3.54
28	As for math, I am competent to teach other my classmates	14 12%	25 21.4%	40 34.2%	25 21.4%	13 11.1%	2.93
34	Math is not complicated to me.	11 9.5%	18 15.5%	20 17.2%	47 40.5%	20 17.2%	3.32
	Average	9,4 8%	9.4 8%	15.2 13%	24.6 20.9%	45.2 38.5%	3.42

The average value of the five questions is 3.42, which means the self-confidence component is included in the excellent category based on data from Table 5. In item 11, the average was 3.74, and item 28 had a small average of 2.93. Question number 34 had the most strongly disagree results, namely 11 students (9.5%), while test question number 5 had the most strongly agree results, namely 25 students (21.2%). This shows that 21.2% of students agree that studying mathematics helps improve logical thinking, while 9.5% disagree that taking a mathematics exam will cause a faster heart rate.

Table 6. Test Anxiety

No	Statements	Score					Mean
		1	2	3	4	5	
6	In taking math exams, I will have negative thoughts that I am inferior to other classmates	5 4.2%	7 5.9%	11 9.3%	55 46.6%	40 33.9%	3.97
12	In taking the math exam, I will keep thinking of the questions I can not answer in the previous part.	5 4.3%	13 11.1%	37 31.6%	40 34.2%	22 18.8%	3.48
17	When taking math exams, I think about the consequences of failing the exam.	4 3.4%	11 9.3%	32 27.1%	54 45.8%	17 14.4%	3.57
23	In taking exams, I feel nervous and worry	8 6.8%	11 9.4%	19 16.2%	58 49.6%	21 17.9%	3.56
29	When I take math exams, my heart beats faster.	18 15.5%	21 18.1%	42 36.2%	23 19.8%	12 10.3%	2.83
35	In taking math exams, I am blank and can not remember what I have learned before	8 6.9%	22 19%	27 23.3%	37 31.9%	22 19%	3.29
36	Before taking math exams, I am too wary to get a good sleep	10 8.6%	17 14.7%	22 19%	49 42.2%	18 15.5%	3.33
	Average	8,2 7,1%	8.2 7.1%	13 12.5%	27.1 23.2%	45.1 38.5%	3.4

The average of these seven items, as shown in Table 6, is 3.4. It falls into the healthy (tall) group according to a chart that divides many test research categories. Item 6 is above average, as are items 12 and 17. The item with the highest average is 6, and the item with the lowest average

of 29 has a 3.97. Based on the reaction of separating the two perspectives, the left side consisting of scores 1 and 2 indicates a low level of anxiety, a score of 3 indicates neutral anxiety and the right side indicates a high level of anxiety. Based on statement item number 6, there were 95 (80.5%) students who got high anxiety scores (scores 4 and 5), 11 (9.3%) students who got neutral scores (score 3), and as many as 12 (10.1%) students. Who got low scores (scores 1 and 2)? This indicates that students study mathematics to enter a reputable university.

In contrast, 35 (30.1%) students chose high, 42 (36.2%) students chose neutral, and 39 (33.6%) students chose low for item number 29 (lowest average). In other words, students decide not to be swayed by math challenges.

Multiple Regression Analysis

Test the hypothesis in this research using multiple linear regression analysis, namely looking at the influence of the independent variable on the dependent variable. Mathematically, the multiple linear regression equation is as follows.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3$$

X_1	= Goal Orientation
X_2	= Control Beliefs for Learning
X_3	= Test Anxiety
Y	= Assignment Value
α	= Constant
$\beta_{1,2,...,n}$	= Regression Coefficient

Variables	β	t-count	Sig (α)
Goal orientation Internal dan Eksternal (X1)	0.250	2.086	0,040
Control Beliefs for Learning (X2)	0.295	2.477	0.015
Test Anxiety (X3)	0.327	2.629	0.010
Constant		0.614	
R²; Adjusted R²		0.651; 0.637	
F-test		47.183 (signifikansi 0.000)	
DW		2,065	
Tolerance dan VIF		X1 (0.319; 3.134) X2 (0.325; 3.078) X3 (0,297; 3.367)	

Analysis of Regression Results

The variable shows that H_0 is refuted because the independent factors (Intrinsic and Extrinsic Goal Orientation) do not impact the dependent variable. Therefore, Ha is accepted, indicating that the independent variables (Intrinsic and Extrinsic Goal Orientation) impact the dependent variable (Assignment Value).

It shows no relationship between the independent variables, namely Control Trust and Self-Confidence, and the dependent variable, namely assignment value. The null hypothesis (H_0) is rejected. The result is that the alternative hypothesis (H_a) is accepted, which shows that there is

a relationship between the value of the assignment, which is the dependent variable, and anxiety about facing the exam, which is the independent variable.

The significance level of the X_3 calculation results or anxiety about facing the exam is smaller than the specified significance level (0.01-0.05) at t = 2.629, with a significance level of 0.010. As a result, the null hypothesis (H_0) is not accepted because there is no relationship between the assignment value, the dependent variable, and the independent variable exam anxiety. Therefore, the alternative hypothesis (H_a) is accepted, which shows that the independent variable, namely exam anxiety, affects the assignment score.

The existence of parameters for achieving student learning outcomes at school influences student behaviour in achieving goals. The application of goal orientation in learning is the fundamental reason or goal students have in their efforts to achieve. There are two student goal orientations, namely, the orientation that leads to task-involved orientation and ego-involved orientation. Students with a task-involved orientation pay more attention to task mastery and do not care whether their performance is better or not when compared to other students. They always try to improve their abilities when facing new tasks and act more independently to understand and master them. Meanwhile, students who are ego-involved are those who try to obtain positive assessments and avoid negative assessments regarding their competence.

Setting goals can strengthen students' learning motivation [18]–[20]. There are two types of motivation, namely intrinsic and extrinsic motivation. Intrinsic motivation encourages students to learn to fulfill their curiosity, be encouraged to do an activity/task because of the enjoyable feeling they feel, and actively participate in the task [21]. There are no material rewards and activities outside the task. Meanwhile, extrinsic motivation encourages students to get other things outside the learning activity.

So it can be assumed that the higher the student's learning achievement, the more the student's goal orientation will lead to a task-involved orientation and intrinsic motivation will be stronger and influence learning achievement. On the other hand, the lower the student's learning achievement, the more the student's goal orientation leads to an ego-involved orientation and the stronger the extrinsic motivation which influences learning achievement.

CONCLUSION

The study results prove that goal orientation, control beliefs, and bag anxiety strongly influence the value of the task; therefore, to foster a self-confident attitude, students must have a target score or grade to achieve. These three things influence students' learning motivation and the value of assignments. This is related to the influence between open and dependent variables: Goal Orientation, Self-Confidence Control, Test Anxiety, and Assignment value. So, it can be concluded that the mathematics learning motivation of grade 9 students at SMP Negeri 11 Pasuruan City is in the excellent category.

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