

The Influence of Students' Initial Knowledge and Students' Learning Motivation on the Learning Outcomes

Ike Pratiwi Br Limbong¹, Toni Nasution¹

¹Universitas Islam Negeri Sumatera Utara, Medan, Indonesia

Corresponding author e-mail: ikepratiwilimbong22@gmail.com

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Abstract: This research aims to analyze the influence of prior knowledge and learning motivation on the learning outcomes of class VII students at SMP IT Al Ikhwan Tanjung Morawa. Carried out in May-June 2024 with a population of 126 students, the research used a total sampling method. Data analysis includes validity, reliability, normality, correlation, regression and hypothesis tests. The research results showed that all measurement instruments for initial knowledge and learning motivation were declared valid and reliable. The normality test shows that the data is normally distributed. The correlation test revealed a significant relationship between prior knowledge ($r = 0.601$) and learning motivation ($r = 0.486$) on learning outcomes. Multiple linear regression analysis produces the equation $Y = 32.638 + 0.393X_1 + 0.259X_2$, which shows that both prior knowledge and learning motivation have a significant positive influence on student learning outcomes. Hypothesis testing shows that the t-values for prior knowledge and learning motivation are 6.017 and 3.172 respectively, with a significance of 0.000 and 0.002, both of which are smaller than 0.05. The F test shows that the simultaneous influence of the two independent variables on learning outcomes is also significant, with an F-calculated value of 42.662. These results emphasize the importance of prior knowledge and motivation in improving student learning outcomes.

Keywords: Initial Knowledge, Learning Motivation, Learning Outcomes

A. Introduction

Education has an important role in forming a quality generation, where the success of the learning process is very dependent on various factors. One important factor is students' initial knowledge, which is the basis for understanding subsequent learning material. Good initial knowledge allows students to more easily link new concepts with the understanding they already have, thereby increasing the effectiveness of learning (Buchari, 2018). Apart from that, learning motivation is also a key factor that determines the extent to which students are able to strive to achieve optimal learning outcomes (Cook & Jr, 2016). Learning motivation, both intrinsic and extrinsic, encourages students to be more active and enthusiastic in participating in the learning process (Khasanah, 2019; Fen & Ng, 2015).

In the modern educational era, relevant and effective learning approaches increasingly demand attention to these factors. However, in reality, not all students have an adequate level of initial knowledge and motivation to learn (Vhalery et al., 2022). This is a challenge for teachers, especially at the junior high school level, where students are in the transition phase from primary to secondary education, which requires academic and emotional adaptation (Zaim, 2020).

Learning outcomes play an important role in the entire learning process. Learning outcomes are used as a benchmark to assess the degree of student development that occurs as a result of their learning (Lina, 2013). The transformation process can be monitored and measured in terms of knowledge, attitudes and abilities (Raradhita et al., 2022). Therefore, learning outcomes are used as a benchmark. Legal case. According to (Rusman, 2015), learning outcomes can be interpreted as the peak of students' educational experience (Damanik et al., 2023). This experience includes cognitive, emotional, and physical dimensions. Furthermore, as stated by (Hamzah B. Uno and Satria Koni, 2013), learning outcomes are related to lasting modifications of individual behavior that arise from interactions with the surrounding environment. This change is caused by the process of acquiring knowledge or skills.

While these learning outcomes are important, as previously determined, there is still potential for improvement. Based on program research, points are compared to previous years. When one considers the very important function played by mathematics, this situation is very concerning. Therefore, at Al Ikhwan IT Middle School there is a problem that must be resolved in order to improve student learning outcomes in social studies subjects. Based on the findings of a preliminary study conducted by the author at SMP It Al Ikhwan Tanjung Morawa, researchers found that student learning results in social studies courses were still classified as poor. It is clear from the table provided below.

Table 1. Class VII Student Learning Results SMP IT Al Ikhwan Tanjung Morawa

Class	> 70	< 70	Number of Students	Grade Average
VII-1	22 (68,75%)	10(31,25%)	32	69,9
VII-2	31(100%)	0(0%)	31	74,80
VII-3	22 (68,75%)	10 (31,25%)	32	68,25
VII-4	20(64,51%)	11 (35,48%)	21	69,61
Total	95 (45,72%)	31(735,89%)	126	282,56

Of all Class VII-1 students, there were 22 students out of 31 Class VII-2 students who achieved scores exceeding the minimum completion score (KKM), all 31 students received a perfect score, namely 100%. Otherwise, the same value. 31.25 percent. In addition, of the 31 Class VII-4 students who achieved scores above the minimum passing threshold (KKM), 20 students obtained a percentage of 64.51%, while 11 students obtained scores below the KKM. Based on my observations of daily test scores, there are many Al Ikhwan IT SMP students whose scores are below the KKM.

From the author's observations on May 20 2024 at SMP IT Al Ikhwan Morawa, the following conclusions can be drawn. Regarding learning outcomes, students in social studies subjects still show a level of proficiency that is below standard.

In a preliminary investigation conducted by the author at SMP IT Al Ikhwan Tanjung Morawa, the researcher found that initial understanding in the field of social studies was still relatively low. In accordance with the findings of observations made by the author on 30 and 31 May 2024 at SMP IT Al Ikhwan Tanjung Morawa school regarding the beginning of students' understanding, especially in the field of social studies, can be described as follows: rather low. It can be seen from the observation table above that the initial knowledge of class VII-1 students has the highest score on the question Students Can Answer the Influence of Climate on Cultural Diversity. This score is based on a percentage of 37.5% and a frequency of 12 students.

Class VII-2 has the highest score on the indicator that students are able to answer questions about the importance of social change with a percentage of 32.25 percent and a student frequency of 10 percent. The indicator that students were able to answer questions on examples of social change received the highest score, namely VII3 which had a presentation of 28.125% and a student frequency of 20, so there were 20 students. For Student Indicators, VII4 has the highest score. They are able to provide answers to questions about examples of societal change. because the presentation rate is 32.258% and the frequency of students is 10. Based on the findings. Based on the author's observations on May 20 2024 at the Al Ikhwan Tanjung Morawa IT SMP school, it appears that students' basic abilities in social studies subjects are still relatively lacking.

Various factors influence the rise of activity, including the existence of students who lack motivation to learn. There are allegations that the level of good student learning outcomes in class VII SMP IT Al Ikhwan Tanjung Morawa is still low, while the level of negative student learning outcomes is still high. In addition, the teaching methodology used by educators in the learning process mostly relies on a lecture-based approach, especially because there is no effective collaboration in the existing learning model. As a result, teachers take a more proactive role, while students have fewer opportunities to provide input. Often, instructors will have students take written notes on the material being taught, and during explanations, they will prioritize the content in the textbook. Sometimes, students face challenges in understanding the intended meaning of questions asked by teachers during the teaching and educational process. This is the result of the students. not understanding the questions asked, which causes them to be afraid to express their thoughts for fear of being wrong. The following table is a compilation of data that provides support for the concept of learning motivation.

**Table 2. Learning Motivation for Class VII Students
at SMP IT Al Ikhwan Tanjung Morawa**

Class	Motivation To Learn	Frequency	Percentage
VII-1	1. There is high learning activity	6	18,75%
	2. There is passion and desire to succeed	8	25%
	3. Be tenacious when facing difficulties	3	9,375%
	4. There is a conducive learning environment	4	12,5%
	5. Prefer to work independently	11	34,375%
VII-2	1. There is high learning activity	3	8,108%
	2. There is passion and desire to succeed	5	16,129%
	3. Be tenacious when facing difficulties	5	16,129%
	4. There is a conducive learning environment	6	19,354%
	5. Prefer to work independently	11	35,483%
VII-3	1. There is high learning activity	3	9,375%
	2. There is passion and desire to succeed	13	40,625%
	3. Be tenacious when facing difficulties	0	0%
	4. There is a conducive learning environment	16	50%
	5. Prefer to work independently	0	0%
VII-4	1. There is high learning activity	24	77,419%
	2. There is passion and desire to succeed	0	0%
	3. Be tenacious when facing difficulties	5	16,123%
	4. There is a conducive learning environment	1	3,225%
	5. Prefer to work independently	1	3,225%

Based on the observation table previously displayed regarding student learning motivation that the author carried out on May 20 2024 at the Al Ikhwan Tanjung Morawa IT SMP school, especially in the field of social studies subjects, it is still relatively low. The observation table shows that class VII-1 students have the greatest score on the student indicator, namely that they prefer to work alone. This is a high score, with a percentage of 34.375% and a frequency of 11 people. This indicates that the children in this class have a strong desire to learn. Class VII-2 students indicated that they liked working alone the most with a percentage of 35.483% and a frequency of 11 students. This is the most common student indicator. With a percentage of 40.625% and a frequency of 13 students, high enthusiasm and desire are indicators of students who have the highest proportion in class VII-3. Meanwhile, for students in class VII-4, the highest indicator is high learning activity.

SMP IT Al Ikhwan Tanjung Morawa as an educational institution has special attention to student learning outcomes. However, there is still variation in academic achievement that requires further analysis to understand influencing factors. Therefore, this research was conducted to answer the main question: "How do students' initial knowledge and learning motivation influence the learning outcomes of class VII students at SMP IT Al Ikhwan Tanjung Morawa?"

B. Methods

The location of this research was at Al Ikhwan Tanjung Morawa IT Middle School, which is located on Jalan Location No. 549, Tanjung Morawa, Deli Serdang Regency, North Sumatra. This research will take place from May to June 2024. The selection of this location is based on the relevance of the school to the research objectives which want to explore the influence of students' initial knowledge and learning motivation on their learning outcomes. The population in this study were class VII students at SMP IT Al Ikhwan Tanjung Morawa, with a total of 126 students consisting of four classes. In sampling, the total sampling method was applied, considering the small population size. By using total sampling, the entire population is sampled to ensure that the data obtained can accurately represent students' conditions, so that the research results can provide a comprehensive picture of the influence of initial knowledge and learning motivation on student learning outcomes.

This research used quantitative methodology to analyze the influence of students' initial knowledge and learning motivation on student learning outcomes (Sugiyono, 2023). In this quantitative approach, the data analysis techniques used include validity, reliability, normality, correlation, regression and hypothesis testing. Validity tests are carried out to ensure that the measurement instrument can accurately measure what it is supposed to measure, while reliability tests measure the consistency of the results obtained from the instrument (Sugiyono., 2019). The normality test is used to evaluate whether the data is normally distributed, which is an important requirement for further statistical analysis.

Next, the correlation test analyzes the relationship between the independent variables (initial knowledge and learning motivation) and the dependent variable (learning outcomes), while the regression test is used to measure the magnitude of the impact of the independent variable on the dependent variable. Finally, hypothesis testing is carried out to determine whether there is a significant relationship between these variables. This combination of techniques ensures that the research produces valid and reliable data, thus providing an accurate picture of the influence of initial knowledge and learning motivation on the learning outcomes of class VII students. This quantitative approach allows researchers to identify patterns, relationships, and the impact of variables in an objective and measurable manner.

C. Results and Discussion

Test Research Instruments

Before the actual research is carried out, a trial of the research instrument is first carried out to determine the validity and reliability of the research instrument. The research instrument was tested on 32 students in class VIII-1 of SMP IT Al-Ikhwan Tanjung Morawa. The instrument in the form of a questionnaire used for research data was designed with 10 items for Student Initial Knowledge (X_1) and 10 items for Student Learning Motivation (X_2). Testing the validity and reliability of this research questionnaire was carried out using Product Moment and Cronbach's Alpha with the provisions that if $r_{count} > r_{table}$ then the question items were considered valid and reliable at a significance level of 95% or ($\alpha = 0.05$) with $N = 32$.

Based on the results of the validity test of the student initial knowledge variable questionnaire (X_1), it was concluded that of the 10 questionnaire items that were tested, all the questions in the questionnaire were declared valid because after the data was processed all the statement items had a calculated $r_{value} > r_{table}$. In this way, all statement items will be used for the data collection process in the research. Below we will present a table of calculation results for the validity test of students' initial knowledge (X_1).

Table 3. Validity Test of Students' Initial Knowledge (X_1)

No	r_{count}	r_{table}	Information
1	0,813	0,3494	Valid
2	0,380	0,3494	Valid
3	0,600	0,3494	Valid
4	0,466	0,3494	Valid
5	0,685	0,3494	Valid
6	0,543	0,3494	Valid
7	0,464	0,3494	Valid
8	0,571	0,3494	Valid
9	0,513	0,3494	Valid
10	0,367	0,3494	Valid

Based on the results of the validity test of the student learning motivation variable questionnaire (X_2), it was concluded that of the 10 questionnaire items that were tested, all the questions in the questionnaire were declared valid because after the data was processed all the statement items had a calculated $r_{value} > r_{table}$. In this way, all statement items will be used for the data collection process in the research. Below we will present a table of calculation results for the validity test of student learning

motivation (X_2)

Table 4. Validity Test of Student Learning Motivation (X_2)

No	r_{value}	r_{table}	Information
1	0,401	0,3494	Valid
2	0,600	0,3494	Valid
3	0,387	0,3494	Valid
4	0,600	0,3494	Valid
5	0,389	0,3494	Valid
6	0,780	0,3494	Valid
7	0,725	0,3494	Valid
8	0,593	0,3494	Valid
9	0,780	0,3494	Valid
10	0,454	0,3494	Valid

Table 5. Reliability Test of Student Initial Knowledge Questionnaire (X_1)

Reliability Statistics	
Cronbach's Alpha	N of Items
.711	10

The minimum requirement that is considered to meet the requirements is if the Cronbach's Alpha coefficient obtained is 0.6, if the coefficient obtained is less than 0.6 then the research instrument is declared unreliable. If the Cronbach's Alpha coefficient obtained is greater than 0.6 then it is declared reliable. From the results of the reliability testing in table 4.6, it can be seen that, in the student initial knowledge questionnaire (X_1) using the Cronbach's Alpha formula, a value of 0.711 was obtained. This figure shows that the questionnaire is proven to be reliable because the coefficient value is greater than 0.6 ($0.711 > 0.6$).

Normality Test

One of the conditions that must be met in regression analysis is that the data and regression model must have a normal distribution. The normality of the data can be seen from the Kolmogorov-Smirnov normality test for each research variable. Data were analyzed with the help of the SPSS 26 program. The basis for decision making was based on significance. If $\text{sig} > 0.05$, then the research data from each variable is

normally distributed. Complete normality test results can be seen in the following table.

**Table 6. Normality Test Using the Kolmogrov-Smirnov Test
 One-Sample Kolmogorov-Smirnov Test**

		Unstandardized Residual
N		126
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	5.76986140
Most Extreme Differences	Absolute	.059
	Positive	.048
	Negative	-.059
Test Statistic		.059
Asymp. Sig. (2-tailed)		.200 ^{c,d}

1. Test distribution is Normal.
2. Calculated from data.
3. Lilliefors Significance Correction.
4. This is a lower bound of the true significance.

As can be seen from the table in the One-Sample Kolmogorov Smirnov Test, it is known that the asymp. Sig (2 tailed) value is 0.200. As explained above, if sig > 0.05 then the research data is normally distributed. Thus, it can be concluded that sig 0.200 > 0.05, so this data is normally distributed. Normal distribution results can also be seen in the P-Plot graph. If the points are spread around the diagonal line and the distribution follows the direction of the diagonal line, then the data is said to be normally distributed as shown in the following picture:

Table 7. Correlation Test Bivariate Pearson

		Correlations		
		Initial Knowledge (X1)	Motivation to Learn (X2)	Learning Outcome (Y)
Initial Knowledge (X1)	Pearson Correlation	1	.489**	.601**
	Sig. (2-tailed)		.000	.000
	N	126	126	126
Motivation to Learn (X2)	Pearson Correlation	.489**	1	.486**
	Sig. (2-tailed)	.000		.000
	N	126	126	126
Learning Outcome (Y)	Pearson Correlation	.601**	.486**	1
	Sig. (2-tailed)	.000	.000	
	N	126	126	126

** . Correlation is significant at the 0.01 level (2-tailed).

Correlation Test

Correlation analysis is a study that focuses on significant correlations between variables expressed in correlation coefficients. The relationship between two variables can be positive or negative. Obviously, there are no independent and dependent variables in correlation analysis (X, Y). Due to the clear relationship between the independent and dependent variables, the dependent and independent variables will also have the same relationship. However, in practice, many of us immediately conclude that there is a relationship between the independent and dependent variables. This is not a problem because, apparently, the purpose of the naming above is only to serve as a guide so that readers can more easily understand the relationships that researchers want to convey during their research.

Researchers will carry out regression analysis based on the output table above, specifically focusing on the fourth basis of the regression decision in the bivariate Pearson analysis above. Based on the significance level (Sig 2-tailed), between initial knowledge (X1) and learning outcomes (Y) is $0.000 < 0.05$, meaning that there is a significant correlation between the initial knowledge variables and learning outcomes. Based on the level of significance (Sig 2-tailed), between learning motivation (X2) and learning outcomes (Y) is $0.000 < 0.05$, meaning that there is a significant correlation between the learning motivation variables and learning outcomes.

Based on Pearson Correlation (calculated r value): As can be seen, the correlation coefficient between initial knowledge (X1) and learning outcomes (Y) is $0.601 > r$ table 0.1757 . This shows that there is a relationship between initial knowledge variables and learning outcomes. Furthermore, it can be observed that the correlation coefficient between learning motivation (X2) and learning outcomes (Y) is $0.486 > r$ table 0.1757 . This shows that there is a relationship or correlation between learning motivation variables and student learning outcomes. Because the calculated r, or Pearson Correlation, in this analysis is positive, this shows that there is a positive correlation between the two variables, or in other words, the higher the initial knowledge and learning motivation, the higher the student learning outcomes.

Multiple Linear Regression Analysis Test

Multiple linear analysis functions to determine the direction and influence between the variables studied, namely variables X1 and X2 on variable Y, whether each variable X1 and X2 has a positive or negative effect on variable Y. The results of multiple linear analysis between the variables of student initial knowledge and student learning motivation on student learning outcomes can be seen in the table below.

Table 8. Multiple Linear Regression Analysis

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	32.638	6.300		5.180	.000
Initial Knowledge (X1)	.393	.065	.478	6.017	.000
Motivation to learn (X2)	.259	.082	.252	3.172	.002

a. Dependent Variable: Learning outcomes (Y)

Based on the results of multiple linear regression calculations with the help of the SPSS 26 program in the table above, the multiple regression coefficient for X1 = 0.393 and X2 = 0.259 is obtained, while the regression constant is 32.638, so the multiple linear regression equation is:

$$Y = a + b_1 X_1 + b_2 X_2$$

$$Y = 32.638 + 0.393 X_1 + 0.259 X_2$$

The multiple linear regression calculation is explained as follows:

1. The constant (a) of 32.638 states that if the variables of student initial knowledge (X1) and learning motivation (X2) are assumed to have a value of zero, then the student learning outcome variable (Y) still has a value of 32.638.
2. The regression coefficient (b1) of 0.393 states that if the student's initial knowledge variable (X1) experiences an increase of 1 percent, while the learning motivation variable (X2) is considered constant, then the student learning outcome variable (Y) will experience an increase in value of 39.3 %.

The regression coefficient (b2) of 0.259 states that if learning motivation (X2) experiences an increase of 1 percent, while the student's initial knowledge variable (X1) is considered constant, then the student learning outcome variable (Y) will experience an increase in value of 25.9%.

Hypothesis Testing

a. Partial Test (t-test)

Partial hypothesis testing (t test) was carried out to determine the partial influence of students' initial knowledge (X1) and learning motivation (X2) on student learning outcomes (Y). With the criteria if $t_{\text{count}} > t_{\text{table}}$ with a significance level of 0.05 then the hypothesis is accepted. And vice versa, if $t_{\text{count}} \leq t_{\text{table}}$ with a significance level of 0.05 then the hypothesis is rejected. Test results using the SPSS 26 program, obtained the following results:

Table 9. Partial Test (t test)

Model	Coefficients ^a			t	Sig.
	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta		
(Constant)	32.638	6.300		5.180	.000
1 Initial Knowledge (X1)	.393	.065	.478	6.017	.000
Motivation to learn (X2)	.259	.082	.252	3.172	.002

a. Dependent Variable: Learning outcomes (Y)

Based on the results obtained above, the student's initial knowledge t_{value} (X1) is 6.017 with a significance value of 0.000. Meanwhile, the t_{table} value with degrees of freedom (dk) = $126 - 3 = 123$ is 1.65714 at a significance level of 0.05. So, from these results the value of $t_{\text{count}} > t_{\text{table}}$ ($6.017 > 1.65714$) and the significance value is $0.000 < 0.05$. Thus, there is a positive and significant influence between students' initial knowledge on the learning outcomes of class VII SMP IT Al Ikhwan students.

For the student learning motivation variable (X₂), the t-count value was 3.172 and the significance value was 0.002. Meanwhile, the t_{table} value with degrees of freedom (dk) = $126 - 3 = 123$ is 1.65714 at a significance level of 0.05. So, from these results the value of $t_{\text{count}} > t_{\text{table}}$ ($3.172 > 1.65714$) and the significance value is $0.002 < 0.05$. Thus, there is a positive and significant influence between student learning motivation on the learning outcomes of class VII SMP IT Al Ikhwan students.

b. Simulation Test (F Test)

Simultaneous hypothesis testing (F Test) was carried out to determine the effect of students' initial knowledge (X1) and students' learning motivation (X2) on student learning outcomes (Y) simultaneously. With the help of SPSS 26 the test results are as follows:

Table 10. Simultaneous Test (F Test)

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	2886.746	2	1443.373	42.662	.000 ^b
Residual	4161.413	123	33.833		
Total	7048.159	125			

a. Dependent Variable: Learning outcomes (Y)

b. Predictors: (Constant), Motivation to learn (X2), Initial Knowledge (X1)

From the results of the calculation above, an f_{count} of 0.05 is obtained, then this value is compared with the f_{table} at the 95% significance level or $\alpha = 0.05$ and $df_1 = 3-1 = 2$, df_2

= $126 - 3 = 126$, the f_{table} is 3.07. So $f_{count} > f_{table}$ or $42.662 > 3.07$ with a significant value of $0.000 < 0.05$, so it can be concluded that there is a positive and significant influence between students' initial knowledge and students' learning motivation simultaneously on the learning outcomes of class VII SMP IT AL Ikhwan students.

Observation of Student Learning Results

The results of observations carried out during the period 3 June 2024 to 29 June 2024 provide a comprehensive picture of the influence of initial knowledge and learning motivation on student learning outcomes in social studies lessons. Based on observations, it appears that students who have stronger initial knowledge regarding the subject matter tend to grasp the new concepts being taught more quickly. This initial knowledge provides a solid foundation for students to link new information with the understanding they already have, so they are better able to follow the learning flow.

These students also showed higher self-confidence in interacting in class, both in answering teacher questions and participating in group discussions. They are able to cope with assigned tasks more efficiently and consistently demonstrate more critical and analytical thinking abilities. Researchers noted that students who had good initial knowledge were more often able to provide precise and in-depth answers, and demonstrated more mature problem-solving skills.

On the other hand, learning motivation, whether it comes from within students (intrinsic motivation) or from outside (extrinsic motivation), also plays a very significant role in determining their learning outcomes. Researchers found that students who had high motivation to learn, either due to strong curiosity or encouragement from the environment such as teachers or parents, seemed more enthusiastic about taking social studies lessons.

On the other hand, students who have limited initial knowledge appear to have more difficulty following the lesson material. They often take longer to understand new concepts and tend to be more passive in class participation. When given assignments or questions, they appear hesitant and often wait for help from teachers or friends. However, researchers note that high learning motivation may be a key factor that helps these students catch up. Even though their initial knowledge may be limited, students who have the drive to study seriously still show significant progress.

During observations, researchers also noted that the student attendance rate was quite high, with an average of 90%. This consistent level of attendance shows good commitment from students to teaching and learning activities. This high attendance also has a positive impact on student engagement in class. Their enthusiasm is clear, especially when involved in activities that involve interactive learning media, such as

group discussions or the use of technology in learning. These activities not only attract students' attention, but also help them focus better and understand the material presented in more depth. The use of visual media and interactive technology has proven to be very helpful, especially for students who are more responsive to visual stimuli. Some students who previously seemed passive in learning began to show greater interest and became more active after varied learning media were introduced

**Table 11. Learning Results for Class VII
 SMP IT Al-Ikhwan Tanjung Morawa Students**

Class	≥ 70	≤ 70	Number of Students	Grade Average
VII-1	32 (100%)	0 (0%)	32	87,4688
VII-2	31 (100%)	0 (0%)	31	87,1935
VII-3	32 (100%)	0 (0%)	32	87,9063
VII-4	31 (100%)	0 (0%)	21	83,7742
Total	126 (100%)	0 (0%)	126	346,343

The results of the formative evaluation carried out in the middle of the observation period also confirmed this finding. Researchers noted a significant increase in class average scores, with the majority of students scoring above average. In fact, students who were initially below class standards showed quite significant improvements in their evaluation results. This shows that interactive learning and the use of visual media and group discussion methods are successful in helping students improve their understanding of the material. Students who initially experienced difficulties were able to improve their learning outcomes through this approach. Researchers noted that students who were more responsive to visual media showed more rapid progress, especially when the material was presented through images, graphics and videos that were relevant to the lesson topic. Apart from improvements in cognitive aspects, researchers also observed positive changes in students' attitudes and engagement during the learning process. Students appear to collaborate more actively with each other, help each other understand difficult material, and are more open to discussions. The classroom atmosphere becomes more dynamic and conducive to learning, with more intensive interaction between students and teachers.

Overall, the results of these observations show that the learning approach implemented during June 2024 has succeeded in improving student learning outcomes, both in terms of understanding the material, active participation, and attitudes towards learning. The combination of strong initial knowledge and high learning motivation creates optimal conditions for students to achieve better achievements. Researchers emphasize the importance of maintaining students' learning motivation through interactive and interesting learning methods, as well as paying special attention to students with lower initial knowledge to ensure they get the necessary support to progress well in the learning process.

This research was conducted to determine the influence of students' initial knowledge

and students' learning motivation on the learning outcomes of class VII students at SMP IT Al-Ikhwan Medan. The results of this study show that partially there is a positive and significant influence between students' initial knowledge and student learning outcomes, there is a positive and significant influence between student learning motivation and student learning outcomes, and simultaneously there is a positive and significant influence between students' initial knowledge and learning motivation students on the learning outcomes of class VII SMP IT Al-Ikhwan Medan.

The research results showing that initial knowledge has a significant influence on student learning outcomes are very relevant to the theory of initial knowledge put forward by experts such as Piaget. In the learning context, students' initial knowledge functions as the main capital for understanding new concepts. Dochy, (2001) stated that the information previously possessed by students plays a big role in learning, because this knowledge becomes the basis for the process of constructing new knowledge.

The finding that students with better initial knowledge have higher learning outcomes is also consistent with research Susilo, (2016), which shows that initial knowledge can improve students' independent thinking abilities and learning skills. Hikmah, (2018) and Astuti, (2020) support these findings, stating that students' initial knowledge and desire to learn positively influence their academic achievement. This confirms that initial knowledge is not only an important prerequisite for learning, but also contributes to the development of lifelong learning abilities.

Apart from that, the finding that learning motivation has a significant influence on student learning outcomes is also consistent with the motivation theory put forward by (McClelland, 1987). Motivation to learn is the main driver that makes students more active, have clear goals, and try harder to understand the material. Wulandari, (2019) research shows that students with high learning motivation tend to have better learning outcomes because they show a higher level of participation in the learning process. Arifin's research (Arifin, 2021) also confirms that intrinsic and extrinsic motivation simultaneously make a significant contribution to student learning outcomes.

Combining these findings, it is important for educators to utilize students' initial knowledge as a basis for planning learning and creating an environment that can motivate students in a sustainable manner. Strategies such as pre-tests, initial discussions, and giving rewards can be used to increase learning effectiveness (Mumtaza, 2023).

The research results demonstrate a significant relationship between students' initial knowledge and learning motivation on their academic performance, observed both individually (partially) and collectively (simultaneously). Specifically, initial

knowledge contributes to shaping students' foundational understanding, enabling them to grasp new concepts more effectively, while learning motivation acts as a driving force that sustains their engagement and effort throughout the learning process. Together, these factors create a synergistic effect, enhancing students' ability to achieve better learning outcomes. The findings highlight the importance of designing instructional strategies that not only build on students' existing knowledge but also foster intrinsic and extrinsic motivation, thereby optimizing educational results across diverse learning environments (Ratu Meri Agust et al, 2024). This is strengthened based on research conducted by (Jainiyah, Jainiyah, Fuad Fahrudin, Ismiasih Ismiasih, 2023) which states that there is a positive influence on students' initial knowledge and student learning motivation in social studies subjects by using the question and answer strategy at State Elementary School 136 Palembang simultaneously or partially.

D. Conclusions

Based on the results of the validity test, all questionnaire items for the variables initial knowledge (X1) and learning motivation (X2) were declared valid because the calculated r-value was greater than r-table. The reliability test shows Cronbach's Alpha coefficients of 0.711 and 0.775 respectively, which indicates good reliability. Kolmogorov-Smirnov normality test with Asymp value. Sig. of 0.200 indicates the data is normally distributed, and the P-Plot graph confirms the distribution of data that is close to the diagonal line. The correlation test results found a significant relationship between initial knowledge and learning motivation and student learning outcomes. Pearson correlation coefficient shows that initial knowledge has a stronger positive correlation with learning outcomes than learning motivation. Multiple linear regression analysis shows that both variables influence learning outcomes significantly, with regression coefficients of 0.393 for initial knowledge and 0.259 for learning motivation, respectively. Hypothesis testing shows the t-count value is greater than t-table with significance below 0.05, indicating a positive and significant influence. The F test shows a significant simultaneous influence between initial knowledge and learning motivation on learning outcomes. During the period 3 to 29 June 2024, students with strong initial knowledge achieved an average score of 87.47, while students with high motivation recorded scores above 85. The increase in the average score from 83.77 to 87.91 shows significant progress, confirms the significant influence of initial knowledge and learning motivation on student learning outcomes simultaneously and partially.

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