RELATIONSHIP OF ACHIEVEMENT MOTIVATION WITH
MATHEMATICAL LEARNING ACHIEVEMENTS IN CLASS VIII OF SMP 6 PALOPO

AUTHORS INFO
Fatimah
Institut Agama Islam As'adiyah Sengkang
fatimah.imah212@gmail.com
+6282237497877

ARTICLE INFO
o-ISSN: 2528-2026
p-ISSN: 2528-2468
Vol. 4, No. 1, June 2019
URL: http://doi.org/10.31327/jomedu.v4i1.881

Suggestion for the Citation and Bibliography
Citation in Text:
Fatimah (2019)

Bibliography:

Abstract

This study aims to (1) obtain an overview of the level of achievement motivation of class VIII students of SMP 6 Palopo (2) Know the level of mathematics learning achievement of class VIII students of SMP 6 Palopo. The method used in this study is a questionnaire and test of learning outcomes. The results showed that the average score of student achievement motivation was 20.05 from the ideal score of 26 and the standard deviation of 2.27 including the medium category, the average score of students’ mathematics learning achievement 75.81 from the ideal score of 100 with a standard deviation of 6.26 including the medium category. It can be concluded that there is a positive relationship between achievement motivation and mathematics learning achievement of class VIII Palopo 6 SMP with a correlation coefficient of 0.72 and efficiency determination of 0.52 (52%).

Keywords: motivation, achievement motivation, learning achievement

A. Introduction

Related to the world of education, to create high-quality and high-achieving human beings students must have good learning achievements. Learning achievement will be the maximum benchmark that has been achieved by students after conducting learning activities during a predetermined time. In an educational institution, learning achievement is an important indicator to measure the success of the teaching and learning process. However, it is undeniable that many high and low student achievements are influenced by other factors besides the teaching process itself (Arikunto, 2006).

There are several factors that influence student learning achievement, namely internal and external factors. Internal factors include intelligence, motivation, habits, anxiety, interests and
so on. While external factors include family environment, school environment, community environment, socio-economic conditions, and so on (Ahmadi and Supriyono, 2004). In this study the researcher focused on the relationship of one of the internal factors, namely achievement motivation that existed in students with student achievement.

Motivation is a very important factor in the learning process in order to achieve the expected achievement. This is because motivation is the driver and driver of individuals who can cause and provide direction for individuals to carry out certain activities to achieve their goals. The standard of learning and graduation completeness value set nationally which must be achieved by students can increase students’ motivation in learning and achievement. And make students sued to change their learning habits in a better direction. Related to this, the researcher wanted to give a significant picture to find out the effect of achievement motivation on the learning achievement of the eighth grade students of SMP Negeri 6 Palopo. For this reason the researcher formulated the research theme at:

"The Relationship between Achieving Motivation and Mathematics Learning Achievement of Class VIII Students of SMP Negeri 6 Palopo".

Based on the background stated earlier, the formulation of the research problem is as follows:
1. What is the achievement motivation of Grade VIII students of SMP Negeri 6 Palopo?
2. How big is the level of mathematics learning achievement of the eighth grade students of SMP Negeri 6 Palopo?
3. Is achievement motivation positively related to mathematics learning achievement of eighth grade students of SMP Negeri 6 Palopo?

B. Literature Review
The essence of Learning Mathematics
Mathematics is not solitary knowledge that can be perfect because of itself, but the existence of mathematics is mainly to help humans understand and master social, economic, and natural problems. Mathematics is a language that uses definitive terms carefully, clearly, and accurately in the form of symbolic representations of ideas rather than sounds.

Various reasons for the need for schools to teach mathematics to students in essence can be summarized because of the problems of everyday life. It seems that there is no doubt that mathematics is one of the pinnacles of intellectual glory. Aside from the knowledge of mathematics itself, mathematics gives language, processes, and theory. Mathematics is the basis for engineering design. In learning mathematics an active role is needed, mentally involved, namely by finding relationships between concepts and mathematical structures using learning methods to find, so that the intellectual potential of learning individuals can develop.

According to Behavioristic theory, learning is a change in behavior as a result of the interaction between stimulus and response. In other words, learning is a form of change experienced by students in terms of their ability to behave in new ways as a result of interactions between stimulus and response. Someone is considered to have learned something if someone can show changes in his behavior. Learning mathematics means studying abstract ideas that are given symbols and arranged hierarchically with deductive reasoning. Therefore, learning mathematics is a high mental activity that involves various abilities. The form of learning mathematics is a process of thinking reflective, creative, and appropriate in gaining new experience or knowledge in the field of mathematics (Tiro, 2000). True or false values are determined by existing laws. Various symbols in mathematics are generally still empty of meaning, meaning the symbols can be given a certain meaning in accordance with the universe of conversation.

Based on the description above, then the essence of learning mathematics is a mental activity to understand the meaning of structures, relationships, symbols then applied in concepts produced to real situations that cause a change in behavior.

Learning achievement
To measure the extent to which the level of success of students in mastering the learning material they are learning requires a measuring instrument. The measuring instrument commonly used is a test. But the test is one form of measuring instrument that is often used to measure the level of success of students in mastering the subject matter. According to Supriyanto (2010) learning outcomes or learning achievements are patterns of changes in values, attitudes, appreciation and skills. According to Purwanto (2009) learning outcomes are quantitative measures that represent students' abilities. Furthermore Abdurahman (1999)
suggested that learning achievement is the ability obtained by children after learning activities. As according to Keller (Abdurahman, 1999) learning achievement is the actual achievement displayed by the child through the effort to complete learning tasks.

Based on several definitions above, it can be concluded that learning achievement is the result of learning efforts achieved by a student in the form of a skill from academic field learning activities in school at a certain period of time recorded at the end of each semester in a report book called report cards. A student can be said to be accomplished if he has obtained an advance on the effort he has done. Achievement of these achievements often must be accompanied by a hard effort.

The ideal learning achievement according to Bloom's Taxonomy (Daryanto, 2001) is required to fulfill 3 aspects at once namely cognitive, affective, and psychomotor aspects.

Motivation

The term motivation refers to all the symptoms contained in the stimulation of actions towards a particular goal where previously there was no movement towards that goal. Motivation can be in the form of basic or internal impulses and incentives outside the individual self or gifts (Hamalik, 1990). Whereas in the Large Indonesian Language Dictionary (MONE 2008) Motivation is an impulse that arises in a person consciously or unconsciously to carry out an action with a specific purpose, in line with that, according to Nasution (1993) motivation is a psychological condition that encourages someone to do something. Whereas according to Malayu (2003) motivation is the provision of driving force that creates the enthusiasm of one's work, so that they will cooperate, work effectively, and be integrated with all their efforts to achieve satisfaction. Motivation is a change of energy in a person's person that is characterized by the emergence of effective (feelings) and reactions to achieve goals (Sumanto, 1990). Motivation is an effort to provide conditions so that the child wants and wants to do something (Nasution, 2000). Motivation is anything that encourages someone to act something (Purwanto, 2007).

Seeing the various opinions above, it can be concluded that motivation is anything that encourages and directs individual behavior to carry out an action caused by influences from both inside and outside the individual to achieve certain goals. In general, it can be said that the function of motivation is to encourage, move or arouse someone to arise the desire and willingness to do something so that they can get results or achieve certain goals (Purwanto, 2007).

Achievement motivation

Humans as living things have various kinds of needs, both material and psychological. One of the psychological needs is the need for achievement. According to Muhkal (Fitriani, 2009) explained that someone is considered to have achievement motivation if the person has the desire to do something work that achieves better than the work performance of others. Also said that people have high achievement motivation, work very hard, do something more than they have done before, work more efficiently and faster. Whereas Wainer (Fitriani, 2009) suggests that people who have high achievement motivation see themselves as more capable than people who have low achievement motivation, and also try to do more tasks for that achievement. Thus achievement motivation is needed in order to improve mathematics learning achievement for a student. By paying attention to these matters, indicators of achievement motivation can be formulated, namely working hard, hoping for success, worrying about failure and competition.

C. Methodology

This study is a correlational Ex-Post Facto study consisting of two variables, namely achievement motivation as independent variables and mathematics learning achievement as the dependent variable. The instruments in this study were achievement motivation questionnaires and learning outcomes tests. The sample of this study was the eighth grade students of Palopo 6 Junior High School who were randomly selected as many as 20% representatives from each class.

The steps in the research process are:
1. The researcher selects samples randomly from each class in class VIII of SMP 6 Palopo to be given instruments and test results.
2. The selected samples were 34 people who were subsequently given an achievement motivation questionnaire to obtain data on achievement motivation of Grade VIII students of Palopo 6 Middle School.

3. Providing learning outcomes tests to selected samples to obtain data on the learning achievement of class VIII students of SMP 6 Palopo.

4. After the data is collected in full, then the data is tested for truth using statistical formulas, with stages: preliminary analysis, hypothesis test analysis, further analysis to obtain valid data.

5. Interpret and conclude the results of the study.

D. Findings and Discussion

1. Findings

The results of the study were processed using SPSS. V.20. Of the 34 number of respondents obtained the highest score of 24, the lowest score of 16 and a range of scores of 8 and an average score of 20.05 of the ideal score of 26 with a standard deviation of 2.27 and variance of 5.18. These achievement motivation scores are grouped in frequency distributions in the following table.

<table>
<thead>
<tr>
<th>Interval</th>
<th>Category</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 – 18</td>
<td>Low</td>
<td>10</td>
<td>23.30</td>
</tr>
<tr>
<td>19 – 21</td>
<td>Moderate</td>
<td>19</td>
<td>44.10</td>
</tr>
<tr>
<td>22 – 24</td>
<td>High</td>
<td>14</td>
<td>32.60</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>43</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: results of primary data analysis (2014)

Based on Table 1 shows that the achievement motivation of Grade VIII students of SMP Negeri 6 Palopo is mostly in the medium category with a percentage of 44.10% with a frequency of 19, and 32.60% of students who have high achievement motivation with a frequency of 14, then 32.60% students who have low achievement motivation with a frequency of 10.

The results of the study were processed using SPSS. V.20. Of the 34 respondents, the highest score was 89, the lowest score was 60 and the score was 29 and the average score was 75.81 from the ideal score of 100 with a standard deviation of 6.26 and variance of 39.25. These scores on mathematics learning achievement are grouped in frequency distributions in the following table 2.

<table>
<thead>
<tr>
<th>Interval</th>
<th>Category</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 – 69</td>
<td>Low</td>
<td>6</td>
<td>13.80</td>
</tr>
<tr>
<td>70 – 79</td>
<td>Moderate</td>
<td>22</td>
<td>51.30</td>
</tr>
<tr>
<td>80 – 89</td>
<td>High</td>
<td>15</td>
<td>34.90</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>43</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: results of primary data analysis (2014)

The normality test of the data in this study uses the assumption of the Limit Central Theorem (TLC). Tiro (2008) suggested that n values that are large (n ≥ 30) are distributed t close to the standard normal distribution. This is in line with the opinion of Slakter (Fitriani, 2009) who suggested that the number of samples 30 or more would provide the appropriate approximation (normal data). Even though we set limits on the normality of data, the number of samples of 30 or more has met the standards of educational research. Because the number of samples in this study were 43 students and more than 30 samples, it can be said that the data in this study were normally distributed and met the standards of educational research.

The hypothesis testing of the research conducted by researchers first was to find a correlation between achievement motivation (X) and students' mathematics learning achievement (Y). As for the correlation between achievement motivation (X) and student mathematics learning achievement (Y) can be seen in the following table.
Table 3. Correlation between achievement motivation and student mathematics learning achievement

<table>
<thead>
<tr>
<th>Achievement motivation</th>
<th>Learning achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.708**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>43</td>
</tr>
</tbody>
</table>

Source: results of primary data analysis (2014)

Based on table 3 shows that the correlation coefficient between achievement motivation (X) and mathematics learning achievement (Y) is 0.70. Based on the results of hypothesis testing, the probability value $\rho = 0.00$ is obtained compared with the value of $\alpha = 0.05$ so that $\rho < \alpha$ means that $H_0$ is rejected and $H_1$ is accepted. This indicates that the correlation between the two variables is significant. Thus the proposed hypothesis is accepted so that it can be concluded that achievement motivation has a positive and significant relationship to mathematics learning achievement of class VIII students of SMP Negeri 6 Palopo with a correlation coefficient $r = 0.70$ and a coefficient of determination $r^2 = 0.52$ (52%).

2. Discussion

The results showed that the achievement motivation of Grade VIII students of SMP Negeri 6 Palopo in the 2014/2015 academic year included the medium category. This can be seen from the average score of achievement motivation questionnaire obtained which is 20.05 from the ideal score of 26 and the mathematics learning achievement of the eighth grade students of SMP Negeri 6 Palopo in the 2014/2015 academic year including the medium category, this is seen from the average score of achievement students’ mathematics learning is 75.81 from the ideal score of 100. The things that cause it are there are still students who are less happy about the lesson so that the student is lazy to take lessons and even tends to avoid lessons that he considers difficult and lazy to complete the task given by the teacher so that the child is underachieved.

In addition, there are still students who feel afraid of failure so they do not have high aspirations resulting in these students not wanting to excel. There are also students who do not want to be the smartest students in school so that the desire for achievement is lacking. However, there are also students who are very happy with the lesson, doing schoolwork tirelessly to improve their performance so that they become the smartest students in the school, and even those students prefer to hang out with people who excel and these students like to take part in the activities held in school it shows that the achievement motivation possessed by students is high so that their learning achievement is high.

Another thing that causes achievement motivation and learning achievement of class VIII students of SMP Negeri 6 Palopo includes the category that the researcher can see when the researcher conducts the research, there are students who are enthusiastic in answering the questions given, there are even students who ask questions about things they consider not understood. However, there are also students who answer only a few questions and some even cheat on their friends’ jobs.

Based on the descriptions above and based on the results of hypothesis testing, it shows that achievement motivation has a positive relationship with mathematics learning achievement of class VIII students of SMP Negeri 6 Palopo with a determination coefficient of 0.52. The results of this study reinforce the theoretical study presented in CHAPTER II that achievement motivation possessed by students includes being independent in learning mathematics, having a great willingness to solve mathematical questions, being passionate, active and passionate in completing mathematical tasks so that they play a large role in improving achievement learn math.
Likewise expressed by Firtiani (2009) that achievement motivation has a positive relationship to mathematics learning achievement of eighth grade students of SMP Negeri 4 Palopo. The results of this study also support the research conducted by Kadir (2008) which revealed that achievement motivation has a positive relationship to the learning achievement of mathematics in grade VII MTs Junaidiyah Burau East Luwu. Thus it can be concluded that achievement motivation has a positive relationship to students' mathematics learning achievement so students who have high achievement motivation are also high learning achievement and vice versa, students whose achievement motivation is low then their learning achievement is low.

The advantage of this research is that when the research of all students is ready in the classroom so that no students are late into the room, the prepared questionnaire exceeds the number of students so that no student does not get a questionnaire, students can solve all questions on time. The weaknesses that researchers get when carrying out research is the presence of students who are difficult to regulate, when researching it during the second lesson so that the concentration of students is reduced due to hunger and fatigue so that students' thoughts go to the canteen, there are also students who are not complete write it so that it is too late to solve the problem and there are also students who always leave the room with excuses to the toilet so that it reduces order in the class and disrupts the concentration of other students, also there are students who cheat on their work.

E. Conclusion

Based on the results of data analysis and the results of the discussion, the conclusions from this study are as follows:

1. Achievement motivation of Grade VIII students of SMP Negeri 6 Palopo in the 2014/2015 school year included in the medium category with a percentage of 44.10%. The average score achieved by respondents was 20.05 from the ideal score of 26 and the standard deviation of 2.27.

2. Mathematics learning achievement of students of class VIII of SMP Negeri 6 Palopo in the 2014/2015 academic year included the moderate category with a percentage of 51.30%. The average score achieved by respondents was 75.81 from the ideal score of 100 and standard deviation of 6.26.

3. Motivation for mathematics achievement has a positive relationship to mathematics learning achievement of class VIII students of SMP Negeri 6 Palopo with a determination coefficient of 0.52 (52%).

F. References


