

# Analysis of Learning Outcomes of Students Who Have High and Low Achievement Motivation in the Class XI Science Food Digestion System Material Medan 11 Public High School 2019/2020 Academic Year

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## ABSTRACT

This study aims to determine and examine the analysis of student learning outcomes that have high and low achievement motivation in the digestive system material of class XI science at SMA Negeri 11 Medan 2019/2020 academic year. This research was conducted on the 11th grade students of Natural Sciences 11 State Senior High School 11 Medan in 2020. The study population was all students of class XI which totaled six classes (216 students) with a total sample of 36 students. The sample of this study was determined by considering certain criteria (purposive sampling) where the selected class was class XI IPA5. The instrument used in this study was a test of student learning outcomes on the material of the digestive system of food and a valid and reliable achievement motivation questionnaire. Data analysis techniques used consisted of descriptive analysis, test requirements analysis and correlational analysis test at a significance level  $\alpha = 0.05$  with the help of SPSS 24.0. The results obtained: (1) There is a positive and significant relationship between high achievement motivation and student learning outcomes on the digestive system material with  $r$  count of  $0.924 > r$  table of  $0.280$ ; (2) There is a positive and significant relationship between low achievement motivation and student learning outcomes on the digestive system material with  $r$  count of  $0.841 > r$  table of  $0.280$ .

**Keywords:** High Achievement Motivation, Low Achievement Motivation

## 1. INTRODUCTION

A teacher, wherever he teaches, is tasked with presenting the knowledge he has to his students. In order to transmit this knowledge he needs experience, knowledge about who the students are, and how to convey the knowledge properly. He must know how to deal with students, help solve problems, manage classes, organize teaching materials, determine class activities, arrange learning assessments, determine methods or media; or even answer questions wisely. If a teacher realizes and understands the importance of these things, it is likely that he can produce effective and interesting learning. In addition, he found innovations in daily teaching and learning activities, or related to learning in general [1-3].

From observations I made in Medan 11 High School by hearing the opinions of the field of study teacher AlfridaSiregar, S.Pd. that the learning outcomes of students in class XI IPA for food digestive system material are still below the KKM standard of 7.7 and the average value obtained by students based on data from the Value Collection List in the 2017/2018 Academic Year is 7.5. The teacher uses remedial for students who do not pass the exam and produce 100% graduation after the remedial is given.

Responding to the problem above, there needs to be efforts made by the teacher to improve student learning outcomes. Student learning outcomes are influenced by various factors: (1) external factors (factors originating from outside students) such as: family, environmental and school factors, (2) internal factors (factors

originating from within students) such as: interests, talents and motivation [4].

One factor that comes from within students is achievement motivation, which is predicted to determine the effectiveness of learning strategies. Suggests achievement motivation is the driving force in students to achieve the highest level of learning achievement for the sake of appreciation to themselves [5]. Achievement motivation is the tendency of students to carry out learning activities that are driven by a desire to achieve the best possible achievement or learning outcomes [6] The characteristics of people who have high achievement motivation are: (a) diligently facing the task (can work continuously for a long time, never stop before completion), (b) resilient to face difficulties (not quickly discouraged). Does not require external encouragement to perform as well as possible (not quickly satisfied with the achievements he has achieved), (c) prefers to work independently, (d) shows interest in various problems "for adults" (eg problems of religious development, politics, economics, justice, fighting corruption, opposing criminal attitudes and others), (e) getting bored easily at routine jobs (mechanical things, repetitive) so that they are less creative, (f) can defend his opinion (if you are sure of something), (g) it is not easy to forget the things that are believed and (h) happy to find and solve problems [7].

**2. METHOD**

The population in this study were all students of class XI Department of Natural Sciences 11 SMA Medan 11 2019/2020 Academic Year consisting of 6 classes and totaling 216 students. The sample of this study was determined by the researcher by considering certain criteria (purposive sampling). Sampling is done based on the ability of students who are equal. The result of determining the chosen class is 36th grade XI IPA5. The method used is a correlational method that wants to find answers to fundamentally the relationship between the independent variable and the dependent variable.”

Data analysis techniques performed in this study are descriptive and inferential statistics. Inferential statistical analysis is performed to test the hypothesis in which the inferential technique used is a correlational technique. Before testing hypotheses, prerequisite tests are first carried out. After the test requirements are fulfilled, then the research hypothesis testing is performed using the correlational technique at the significance level  $\alpha = 0.05$  using SPSS 24.0.

**3. RESULTS AND DISCUSSION**

Correlation testing is conducted to determine the relationship between: (1) High achievement motivation with student learning outcomes in the food digestive system material and (2) Low achievement motivation with student learning outcomes in the food digestive

system material. The proposed hypotheses are: (1)  $H_0$  : There is no positive and significant relationship and (2)  $H_a$ : There is a positive and significant relationship. To find out there is a positive and significant relationship done by comparing the price of r arithmetic with r tables at the significance level  $\alpha = 0.05$  with the provisions: (1) If  $r_{arithmetic} > r_{table}$  of significance level  $\alpha = 0.05$  then there is a positive and significant relationship and (2) If  $r_{arithmetic} < r_{table}$  at the significance level  $\alpha = 0.05$  then there is no positive and significant relationship.

*A. Correlation between Achievement Motivation Higher Student Learning Outcomes on Food Digestion System Material*

The results of the analysis of the correlation coefficient between high achievement motivation and student learning outcomes in the food digestive system material (r count) of 0.924  $>$  rtable of 0.280 for a total sample of 18 people at a significance level  $\alpha = 0.05$  means  $H_0$  is rejected. Thus it can be concluded that there is a positive and significant relationship between high achievement motivation and student learning outcomes in the food digestive system material [8]. The results of the correlation test between high achievement motivation and student learning outcomes on the material of the food digestive system can be seen in Table 1.

Table 1. Correlation between high achievement motivation and student learning outcomes on food digestive system material

Model	R	r <sup>2</sup>	Adjust r <sup>2</sup>	Estimate Standard Error
1	,924*	,854	,845	2,449

Based on the results of the correlation test in Table I it can be seen that the coefficient of determination (r<sup>2</sup>) of 0.854 means that 85.4% of the contribution of high-achieving motivation to student learning outcomes in the food digestive system material.

*B. Correlation between Motivation Low Achievement with Results Student Learning on System Materials Food Digestion*

The results of the correlation coefficient analysis between low achievement motivation and student learning outcomes in the food digestive system material (r count) of 0.841  $>$  rtable of 0.280 for a total sample of 18 people at a significance level  $\alpha = 0.05$  means  $H_0$  is rejected. Thus it can be concluded that there is a positive and significant relationship between low achievement motivation and student learning outcomes in the food digestive system material. The results of the correlation test between low achievement motivation and student learning outcomes in the food digestive system material are seen in Table II.

Table II. Correlation between low achievement motivation and student learning outcomes on the food digestive system material taught by the model nht type cooperative learning

Model	R	r <sup>2</sup>	Adjust r <sup>2</sup>	Estimate Standard Error
1	,841*	,708	,689	3,814

Based on the results of the correlation test in Table 5 it can be seen that the results of the coefficient of determination (r<sup>2</sup>) of 0.708 means that 70.8% contribution of low-achieving motivation to student learning outcomes in the food digestive system material.

Based on the results of hypothesis testing it can be seen that: (1) There is a positive and significant relationship between high achievement motivation and student learning outcomes on the material of the digestive system and (2) There is a positive and significant relationship between low achievement motivation with student learning outcomes on the digestive system material food. Furthermore, based on the results of calculations that the average value of student learning outcomes who have high achievement motivation in the material digestion system is higher than the average value of student learning outcomes who have low achievement motivation in the material digestion system. The findings of this study are in accordance with the results of Pandin's research which found that the learning outcomes of students who had high achievement motivation in mathematics were higher than those of students who had low achievement motivation [9].

#### 4. CONCLUSION

The conclusion of this study is based on the findings of research data, systematic presentations carried out with regard to research objectives that have been formulated. The conclusions obtained include:

1. Class XI IPA5 has 36 students in which 18 people (50%) have high achievement motivation with an average score of 129.11 and 18 people (50%) have low achievement motivation with an average score of 107.56.
2. There is a positive and significant relationship between high achievement motivation and student learning outcomes in the food digestive system material. Contribution of high achievement motivation to student learning outcomes in the material of the food digestive system is  $r^2 \times 100\% = 0.854 \times 100\% = 85.4\%$ .
3. There is a positive and significant relationship between low achievement motivation and student learning outcomes in the food digestive system material. Contribution of low achievement motivation to student learning outcomes in the food digestive system material is  $r^2 \times 100\% = 0.708 \times 100\% = 70.8\%$ .

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