

Prediction Of Junior High School National Examination Score On The Learning Achievement In High School Students In Medan

Babby Hasmayni
Faculty of Psychology, Universitas Medan Area
babbyhas@gmail.com

Abstract: Learning achievement is very successful with the learning process. The learning process and achievement are positively correlated, meaning that the learning process done well and successfully will produce good and high learning achievements. Therefore it is necessary to know the factors that influence the learning process itself. The purpose of this study is to study and test the predictive power of the National Examination Score (NES) of SMP on the learning achievement of high school students in the city of Medan. The research location is in Medan City which is in 21 state high schools spread across several districts. The analysis used in this study uses regression analysis and A-B variant analysis. Before conducting a regression analysis, the normality test for the distribution of criteria is carried out, and the linearity test between the predictors and the criteria. The results of the study showed a significant relationship between the National Examination Score (NES) with student achievement, this result is evidenced by the coefficient $F = 10,564$ with $p < 0.01$. The predicted value of the National Examination Score (NES) has not been satisfactory for predicting student achievement, this proves with a lower correction coefficient for the National Examination Score predictor. There is a significant difference between the learning achievements of male students and female students, this is calculated by the coefficient $F = 52.187$ with $p < 0.01$, and it turns out that female students have higher learning achievement compared to male students. Obtained a significant difference between students who pass through the National Examination Score (NES) with students who pass through written tests.

Keywords: prediction, national, examination, score, achievement

1. Introduction

The Indonesian people put education as one unified and fundamental field in the development process. The quality of education itself needs to get the main attention, because the advancement of education of a nation is not only seen from the quantity of the number of graduates, but also from the quality. According to Arikunto (2009), if a school is likened to a place to process something and

prospective students are likened to raw material (input), then graduates from the school can be equated with processed products that are ready for use (output).

Therefore assessments in schools cover many aspects, which are broadly seen from prospective students, graduates, and the overall education process. Decision on the National Examination (UN) as an evaluation of student learning processes that have been nationally standardized, the schools also use the results of the National Examination (UN) which is then called the National Examination Score (NES) which was formerly called the Pure Ebtanas Value (NEM) as the admission standard new student. The efforts of schools in improving their quality begin with trying to accept students with certain National Examination Score (NES) standards, with the hope that students who obtain high National Examination scores will have high academic achievements. With the use of the National Examination Score (NES) as a requirement for admission of new students (input process), there are several things as one of the impacts is that all parties both schools, parents and students attach great importance to obtaining a high National Examination Score (NES) (Ministry of National Education, 2003).

It is still vividly remembered in our minds that around the year 2010 fraud often occurred during the National Examination (UN), one example of fraud that occurred at that time was a student who bought a National Exam answer key from his teacher or other persons who sold keys the answer. Cases of fraud have also occurred in several schools in the city of Medan, as quoted by the Daily Tribun, April 19, 2011.

Of course the government does not want this cheating to continue. To avoid these cheats, the school devotes its attention to the National Examination exercises, especially in class XII students, besides the other impact that parents tend to prioritize the acquisition of a high National Exam Value (NES) as proof of their children's learning success, so that many parents are not afraid to spend a lot of money to put their children into tutoring, even though there are also students who tend to underestimate the learning process on subjects that are not tested nationally and only focus on subjects that are tested nationally only.

In essence, with all of its human existence, it differs from one another in terms of enthusiasm, perseverance, effort, motivation and so on, so that it can be said that humans are unique, the same values for different people will have different meanings. The process of transformation is more directed at the relationship of individuals with individuals. To know the ability of students as a whole can not be revealed only by the numbers listed on a paper (Slameto, 2010).

Based on the above, the problem here is to what extent the prediction of the National Examination Score (NES) itself as a predictor in student learning achievement. Do students who pass the National Examination Score (NES)

perform better compared to students who pass the entrance screening test? The information obtained by the researcher from the results of an interview with one of the teachers in SMA X, it turns out that students' learning achievements are ranked in the top 10 in their class, eight of them are students who enter the school through the entrance screening test, then students who pass the National Examination Score (NES) which is included in the ranking of the top 10 is only one student and one other student through the insert which is included in the ranking of the top 10 in his class. From this it turns out students who pass through the National Examination Score (NES) are not necessarily more achievers than students who pass through the admission test.

Departing from this reality, the question is how far the National Examination Score (NES) can function as a benchmark in the acceptance of new students and be able to accurately describe student learning achievements. Therefore, researchers are interested in conducting research by testing the predictions of the National Examination Score (NES) of SMP on the learning achievements of high school students in the city of Medan.

1.1. Significance of the study

The results of this study shall be beneficial to the school administration, the faculty, the students, and the public in general and this research is expected to make a good contribution to science and psychology, especially in the field of educational psychology and generally to determine the test equipment used. appropriate as a selection for entry into education at the level of high school (SMA) and schools equivalent to high school (SMA)

1.2. Scope and Limitation of the study

The limit of this study is only to know and test the predictive power of the National Examination Score (NES) of SMP on the learning achievement of high school students in the city of Medan.

1.3. Setting of the study

The research location is in Medan City which is in 21 state high schools spread across several districts. The subdistricts that are state high schools are Medan city, Medan johor, Medan polonia, Medan Medan, Medan Medan, Medan Medan, Medan area, Medan Harbor, Medan Tembung, Medan Helvetia, Medan Medan, Medan Medan, Medan Sunggal, Medan Marelan and Medan Tuntung.

2. Research Design And Methodology

Table 1. Respondents of the study

Schools' name	Population
SMA Negeri 2 Medan	244 Students
SMA Negeri 3 Medan	210 Students
SMA Negeri 4 Medan	238 Students
SMA Negeri 6 Medan	107 Students
SMA Negeri 8 Medan	132 Students
SMA Negeri 12 Medan	200 Students
SMA Negeri 13 Medan	103 Students
SMA Negeri 16 Medan	177 Students
SMA Negeri 17 Medan	198 Students
SMA Negeri 21 Medan	105 Students
TOTAL	1714 Students

2.1. Research Instrument

The research instrument is documentation. in the form of notes, transcripts, photographs, books and so on.

2.2. Data Gathering Procedure

This research in data collection uses the documentation method. To obtain data on the National Examination Score (NES) of SMP, student report cards (in connection with student achievement) and gender can be obtained from the computer and administrative center of the high school which is the place of research.

2.3. Statistical Analysis

The analysis used in this study is to use regression analysis and A-B variant analysis. Before conducting a regression analysis, the normality test of the distribution of criteria is held, and the linearity test between the predictors and the criteria is held.

3. Findings And Conclusions

In line with the system used in this study, the National Examination Score (NES) data and learning achievement will be seen whether the National Examination

Score (NES) of SMP can predict student learning achievement at the high school level. Where the predictor variable is the National Examination Score (X) and the criterion variable is learning achievement (Y).

Homogeneity test results showed that both groups based on sex and NES status or non-NES showed homogeneous conditions with a large coefficient of homogeneity (Levene Statistics) = 0.480 with $p > 0.05$ (for sex), and 2,839 with $p > 0.05$ (for $p < 0.05$) NES and not NES).

The results of the distribution normality test showed that the learning achievement data had a normal distribution of data indicated by the Kolmogorov-Smirnov coefficient = 0.061 with $p > 0.05$

From the results of the linearity assumption test it is known that the predictor variables (Indonesian Language, English, Mathematics and Natural Sciences) are linearly related to learning achievement, which is shown by the coefficients of F sequentially are 8,452, 21,733, 9,601, and 7,557 with $p < 0.05$.

Table 2. Summary of Regression Analysis Results

Statistic	R	R ²	F	p	BE %	Ket
X	0.19	0,0	10.	0.00	3.6	Signifikan
Y	1	3	56	0		

Information :

- X = National Examination Score (NES)
- Y = Learning achievement
- R = The coefficient of the relationship between X and Y
- R² = Determinant coefficient X with respect to Y
- p = Chance of error
- BE% = Weight of effective contribution X to Y in percent
- Ket = Very significant at 1% significance level or $p < 0.01$

Table 7. Summary of the correlation coefficients of each preceptor with criteria

Predictor	T	p
Indonesian Language	3.402	0.000
English	4.475	0.001
Math	3.242	0.000
Science	1.093	0.275

3.1. Analysis of Variance A-B

Based on the results of the analysis of variance AB it was found that there were very significant differences in learning achievement between male students and female students, indicated by the coefficient $F = 52,187$ with $p < 0.01$, and it turned out that female students had higher learning achievement compared to students man.

In addition, there are also very significant differences in learning achievement between students entering through the National Examination Score (NES) and those not through the National Examination Score (NES) or through tests indicated with a coefficient of $F = 8.955$ with $p < 0.01$, and it turns out that students who enter school through the National Examination Score (NES) have higher learning achievement compared to students who enter school through the test path.

Table 3 Summary of analysis results for A-B variance

learning achievement	JK	Df	RK	F	ρ
By gender	28058 7.265	1	280587.2 65	52.187	0.000
Based on the NES path and not the NES	49356. 83	1	49356.83	8.955	0.003
Total	32994 4.09	2	329944.0 9	61.14	0.003

Information :

JK: Number of squares

RK: Average squared

F: Coefficient value

ρ : Opportunity corrections

4. Discussion

Based on the results of the calculation of regression analysis, it can be seen that there is a very significant relationship between the National Examination Score (NES) with learning achievement. This result is proved by the coefficient $F = 10.564$ with $p < 0.01$. Effective contributions shown from the coefficient $R^2 =$

0.036, this shows that the results of the National Examination Score (NES) Indonesian, English, Mathematics and Science are able to predict learning outcomes or student achievement with a contribution of 3.6%. Based on the results of this analysis, the hypotheses that have been proposed in this study, are accepted.

Based on the results of this study, it can be said that learning achievement can be influenced by the National Examination Score (NES). Furthermore, by looking at the magnitude of the determinant coefficient (R^2) of the National Examination Value variable (NES) on learning achievement of 0.036, this shows that the effective contribution of the National Examination Value (NES) to learning achievement is 3.6% and 96.4% of other influencing factors such as environmental factors, factors motivation, interest factors and so on. Overall, the predictor of the National Examination Score (NES) from the above analysis shows that the predictive power is not satisfactory so it does not meet the criteria of the correlation coefficient of $r = 0.30$ (Azwar, 2007).

This is indicated by the low correlation coefficient for the predictor of the National Examination Score (NES) on learning achievement of $R = 0.191$ and the effective contribution of 3.6% (determinant coefficient of 0.036). Then from the four subjects that made the strongest contribution to learning achievement were English ($t = 4,475$), then Indonesian ($t = 3,402$), Mathematics ($t = 3,242$) and the smallest contribution was Science ($t = 1,093$).

However, the selection process through the National Examination Score (NES) has a small effective contribution (amounting to 3.6%) to the learning achievement but this relationship shows a very significant correlation so that its influence cannot be ignored. The small contribution is effective because the National Examination Score (NES) is not the only one that affects student achievement but there are still 96.4% other factors that influence such as environmental factors, motivation factors, interest factors, talent factors, intelligence factors, learning methods factors and others (Slameto, 2010). Therefore every student has the opportunity to be able to excel at school.

There is a difference in learning achievement of students who enter school through the National Examination Score (NES) and students who enter school through the written test, where students who enter school through the NES have higher learning achievement than students who pass the written test. This is because the quality of the National Examination (UN) questions is better than the quality of the written test given by the school at the time of admission of new students to stage II. Because the written test questions made by the school are not known how the validity of the questions is, the difficulty index of the questions so that the assessment is not satisfactory with what is expected. Therefore selection through NES is better able to select students who excel rather than through tests,

therefore students who enter school through the NES track have higher performance than students who enter school through the written test.

It is as seen in the field that students who pass through the National Examination Score (NES) and who pass through written tests can still compete. This can be seen from the top 10 in the class blend into students who pass through the National Examination Score (NES) and written tests and the top 10 are still dominated by female students.

Based on the results obtained in this study, the following conclusions can be concluded:

1. There is a significant relationship between the National Examination Score (NES) with student achievement, this result is proved by the coefficient $F = 10,564$ with $p < 0.01$.
2. Prediction power of the National Examination Score (NES) has not been satisfactory for predicting student achievement, this is indicated by the low correlation coefficient for the predictor of the National Examination Score (NES) on learning achievement of $R = 0.191$ and effective contribution of 3.6% (R^2 coefficient of 0.036). Then of the four subjects that made the strongest contribution to learning achievement were English ($t = 4,475$), then Indonesian ($t = 3,402$), Mathematics ($t = 3,242$) and the smallest contribution was Science ($t = 1,093$).
3. There is a significant difference between the learning achievement of male students and female students, this is indicated by the coefficient $F = 52.187$ with $p < 0.01$, and it turns out that female students have higher learning achievement compared to male students.
4. There is a significant difference between students who pass through the National Examination Score (NES) and students who pass through the written test, this is indicated by the coefficient $F = 8.955$ with $p < 0.01$, and it turns out students who enter school through the National Examination Score (NES) has a higher learning achievement compared to students who enter school through the test path.

5. Recommendations

In line with the conclusions that have been made, the following can be given a number of suggestions, among others:

1. Advice to Schools

It is suggested to the school to improve the test equipment used as a tool for selecting new student admissions. So students who pass the test are expected to be able to excel and compete with students who pass through the National Examination Score (NES).

2. Advice to parents

It is recommended that parents register their children for additional tutoring activities (tutoring), group discussions, repeating lessons learned and so on. So that children have good achievements and are able to compete with other students in their schools.

3. Advice to Next Researchers

It is recommended to the next researcher who wants to continue this research, in order to examine other factors that influence learning achievement, such as the level of intelligence, motivation, learning methods, interests, talents, living environment and so on.

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