

THE EFFECTS OF INTELLECTUAL INTELEGENCE LEVEL AND STUDENTS' MOTIVATION TOWARDS STUDENTS' ENGLISH LEARNING ACHIEVEMENT

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Abstract: The Purpose of this research is to know about: the effect of intellectual intelligence level and student's motivation towards student's English learning achievement as itself or together. The mode that used in this research is descriptive model. The data that used through technic test and quantitative analysis, show that 1). There are a significant effect of Intellectual intelligence Level and Student's Motivation towards Student's English Learning Achievement as itself or together. The Mode that used in this research is Descriptive Model. The Data that used through technic test and quantitative analysis, show that There are any significant effects of intellectual intelligence level and student's motivation together towards student's English learning achievement at Vocational High School in Sukabumi District of West Java Province. It is approved by the score of Sig. $0,000 < 0,05$ and $Fh = 20.833$. 2). There is a significant effect of intellectual intelligence level towards student's English learning achievement at Vocational High School in Sukabumi District of West Java Province. it is approved by the score of Sig. $0,000 < 0,05$ and $th = 3.782$. 3). There is a significant effect of student's motivation toward student's English learning achievement at Vocational High School in Sukabumi District of West Java Province. it is approved by the score of Sig. $0,000 < 0,05$ and $th = 4.116$. its mean there is a significant effect of student's motivations and student's English learning achievement.

Key Words: Intellectual Intelligence Level, Students' Motivation, and Students' English Learning Achievement

INTRODUCTION

Every human being has a common mental ability termed intelligence. Alfred and Theodore Simon define intelligence as an ability consisting of three components: (a) the ability to direct action, (b) the ability to change the course of action when done, and (c) the ability to self-criticize (Azwar,2004). It is mean when people learn from the experience time by the time people could understand well how to direct action and every one could do this action has a good intelligence, and when they realize that something happen and need to change the direct action, then they are really aware about this situation.

And also, when people have an ability to evaluate themselves, what is a good or bad for them and then they change action into a better one. In parallel with that, Wechler defines intelligence as the totality of a person's ability to act with a particular purpose, think rationally, and deal with his environment effectively (as cited in Azwar, 2004).

The intelligence or ability to accept and solve problems is the factor that drives the student, so that he succeeds or fails in the face of his learning environment. Intelligence as a course of learning potential has many definitions. According to Gart, "Intelligence, includes at least the abilities demanded in the solution of the problems which require the comprehension and use of symbols" (Soemanto, 2006:142). In Gart's definition is emphasized that intelligence at least includes the abilities necessary for solving problems that require understanding and use symbols. Still in Soemanto, Bishop an American psychologist says "Intelligence is the ability to solve problems of all kinds" which means intelligence is ability to solve various types of problems.

The definition has a different definition but still has same understanding with that proposed by Gart and Bishop proposed by Heidenrich is "Intelligence refers to the ability to learn and to utilized what has been learned in adjusting to unfamiliar situation, or in the solving problems" (as cited in Soemanto 2006:142). Heidenrich says that intelligence involves the ability to learn and use what has been learned in an adjustment to lesser known situation, or in solving problems.

From the theories above we can conclude that intelligent is an awareness from every human being what must to do or not related on their experience of their life to do better, what should do after realize that something must change directions in every actions after they know and criticize themselves according to what they learned every situations in solving theirs problems.

Definitions of Intellectual According to Stern, intellectual is the power to adjust the new circumstances by using the tools of thought according to its purpose (Djaali,2007). Here it appears that Stern focuses on the matter of adjusting to the problems encountered. Thus, people who have high intelligence will more quickly adjust to new problems encountered. While Terman gives understanding of intellectual as abstract related abilities (Djaali, 2007). A person can be categorized as an intellectual person, if they have the ability to think abstract correctly or incorrectly. While, Sutopo (1998), revealed that intellectual is the ability to solve all kinds of problems. According to E.L. Thorndike, intellectual is an ability to solve problems in a short time effectively (Zulkifli L, 1986).

From various definitions of intellectual advanced by the experts, Freeman classified the definition into three groups, such as; (a) groups that emphasized adaptability, (b) groups that emphasize learning achievement, and (c) groups that emphasize abstraction ability (Fudyatanta, 2006). Intellectual is the ability to act rationally and face the environment effectively. Intellectual is a mental ability that involves the thought process in a rational manner. Therefore, the intellectual received the attention of psychologists, resulting in various theories about it. Intellectual as a potential source of learning has various factors that can affect the high low ability that can be applied by learners in the learning process.

The ability factors related to verbal and nonverbal/performance potential are: (1) verbal ability, (2) memory ability, (3) perception ability, (4) ability to use numbers, (5) ability of imagination, and (6) ability to understand relationship between things.

From the notions above, it can be concluded that intellectual is the ability or strength that a person has to solve or solve various problems it faces. Therefore, intellectual is a component of success in the learning process of students in the school. As much as they adapt and resolve every problem their intellectual will increases rapidly. Till all student could do something effective and efficient.

Meanwhile, there are some definition of motivation stated by some experts. Everyone must have a good motivation to make a better thing in a life. Morgan et al. (in Marwansyah and Mukaram, 2002: 151) explains that motivation is the one that controls and moves people to do acts or behaviors directed at a particular purpose. It means, motivation emerges when people have desires to do something and they really hope their wants may come into real. Soemanto (2006) agrees that motivation is a change in energy that is marked by an effective drive and reactions to achieving goals.

because human power is always aiming, we can conclude that the change of power that gives strength to the behavior of achieving the goal, has occurred in a person. As, also, said by Weiner (in Elliot 2000), "motivation is defined as an internal condition that awakens us to act, encourages us to achieve certain goals, and keeps us interested in certain activities. Moreover, motivation can be interpreted as an internal impulse and existence in a person indicated by existence; passion and interest, encouragement and need; hopes and ideals; awards and honors. Motivation is one that makes a person. Motivation is the impact of an interaction with the situation they are facing (Siagian, 2004).

From the definition or definition of the experts above it can be concluded that motivation is a condition or a condition that encourages stimulating or grinding someone to do an activity that he does so that he can achieve the goal.

Definition of Achievement is Learning achievement is a series of sentences consisting of two words, namely achievement and learning, where the two words are interrelated and between them have different meanings. Therefore, before reviewing more about learning achievement, we first trace the word one by one to find out what the learning achievement is. According to Merriam-Webster (2018) the word 'achievement' is defined as (1) the act of achieving something or the achievement of an ambition, (2) a result gained by effort : accomplishment or being honored for her academic achievements and a major scientific achievement or a great or heroic deed (3) the quality and quantity of a student's work or standardized tests to measure achievement.

This achievement cannot be achieved or produced by someone as long as he does not engage in serious activities or with a persistent struggle. To get an achievement is not as easy as turning the palm of the hand but must be full of struggle and various obstacles and obstacles that must be faced to achieve it. Only with tenacity, achievement and optimism can the achievement be achieved.

Experts provide different interpretations of learning achievement, according to which perspective they are highlighting. But in general, they agreed that learning achievement was "the result" of an activity of the Vice Minister. Poerwadarminta argues that achievement is a result that has been achieved, whereas according to Mas'ud Hasan Abdul Qohar argues that achievement is what has been created, the result of work that pleases the heart to obtain it by means of tenacity, while Nasrun Harahap argues that achievement is an educational assessment of students' development and progress relating to the mastery of the subject matter presented to them and the values contained in the curriculum. From some of the above definitions, it can be concluded that achievement is the result of an activity that has been done, created, which pleases the heart, which obtains by working tenaciously, both individually and in groups in a particular field.

METHOD

The method in this research is using correlation and regression analysis technique, that is looking for relationship and influence between two independent variables with one dependent variable. This method provides an overview of the variables found, as well as investigating the relationship and influence between variables, therefore this method uses factual data based on the information found.

Survey method is research that take samples from one population and use questionnaire as data collecting tool. (Singarimbun and Efendi, 1995: 3).

Survey methods are usually done to find clear information to solve problems, especially education problems. The direction of survey research interest is to make an accurate interpretation of the overall characteristics of the population.

Singarimbun stated that this type of research can be used for the purpose of 1). Exploration (explorative), 2). Descriptive, 3). Explanatory (explanatory) or confirmatory, i.e. to explain the causal relationship and hypothesis testing; 4). Evaluation, 5). Prediction or forecasting; 6). Operational research; and 7). Development of social indicators.

In this study there are three variables, namely two independent variables and one variable dependent. Independent variables are level of intelligence (X1), and interest in learning (X2). While the dependent variable is the English learning achievement.

In a study, the size of the sample to be used depends on several things, namely:



1. Degree of uniformity (degree of homogeneity) of the population, the more uniform a research population, so to obtain precise research results required fewer samples when compared with a population that is not uniform.
2. The level of accuracy of the desired analysis in the study. A larger number of samples can result in a greater level of accuracy of the analyzer.
3. Plan analysis.
4. Energy, cost, and time available.

One method that can be used to determine the number of samples is the purposive sampling method. In this method the size of the sample is determined by considering the research objectives based on predetermined criteria. Where the size of the sample to be used is calculated using the following Slovin formula:

$$n = \frac{N}{1 + N.e^2}$$

Information :

n = Many samples

N = Many populations

e = Percentage of inaccuracy tolerance (precession) due to sampling error

Based on data on the number of high school students in the district Sukabumi a total of 605 students. So in terms of determining the number of samples, the researcher considers the planned analysis, personnel, cost and time available. By taking precision or percentage of inaccuracy tolerance due to sampling errors that can still be tolerated by 0.3% then the number of samples is as follows:

$$n = \frac{N}{1 + N.e^2}$$

$$n = \frac{605}{1 + 605 \times (0,003)^2} = 206$$

From the calculation results using the slovin formula, obtained a lot of school samples are a number of 3 Private SMK in Sukabumi District. By using random sample method chosen 3 Privates SMK in Sukabumi, that are SMK YASPIM, SMK AL-Kautsar and SMK Al-Mustofa.

Test of Validity

Normality test

a. Normality Data Test

The Good Regrecy Aquirement if the data research follow normal distributions.

Tabel 1. Normality Data Test

One-Sample Kolmogorov-Smirnov Test

	Student's English Learning Achievement	Intellectual Intelligence	Student's Motivation
N	86	86	86
Normal Parameters ^{a,b}	Mean Std. Deviation	106.53 7.994	79.26 8.487
Most Extreme Differences	Absolute	.129	.104
	Positive	.104	.094
	Negative	-.129	-.104
Kolmogorov-Smirnov Z	1.196	1.295	.969
Asymp. Sig. (2-tailed)	.115	.070	.305

a. Test distribution is Normal.

b. Calculated from data.

From the table above show that hypothesis test that state the data distribution on this regreion analysis follow the normal distributions. This things showed by all scores *Asymp. Sig* > 0,05. Its mean all data distribut normaly.

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		86
Normal Parameters ^{a,b}	Mean	0E-7
	Std. Deviation	7.39171025
	Absolute	.081
Most Extreme Differences	Positive	.080
	Negative	-.081
Kolmogorov-Smirnov Z		.749
Asymp. Sig. (2-tailed)		.629

a. Test distribution is Normal.

b. Calculated from data.

b. Multicollinearity Test

Multicollinearity test supposed for examining is the regreion model found a perfect correlation between variable (*independent*). The good Regreion model should not corolated perfectly between independent variable. One way to detect the multicollinearity is by looking *tolerance* or *Varian Inflation Factor* (VIF). If *tolerance* < 0,1 or VIF value > 10 then multicollinearity happen.

Table 2. Multicollinearity Test

Coefficients ^a			
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Intellectual Intelligence	.937	1.067
	Student's Motivation	.937	1.067

The multicollinearity test result on the table above known that the *Tolerance result* 0,937 > 0,1 or *Varian Inflation Factor* (VIF) 1,067 < 10. Then can be stated that there is not multicollinearity btween intellectual intelligence level with student's motivation on this regreion analysis.

c. Heteroscedacity Test



The definition of heteroscedacity is if error or recudial that observed has not constant variants. The condition of heteroscedacity often happen to *cross section data*, or the data taken from several respondens certain time.

One of the method to detect the heteroscedacity is with making a *scatter-plot* between *standardized Residual (ZRESID)* and *Standardized Predicted Value (Y topi)*. On this figure below show there is not change as long as Y hat, then stated there is no heteroscedacity on that's galat (*error/residual*).

d. Galat Normality Test

Conditional regreition is good if the research data follow the normal distribution.

Table 4.6. Galat Normality Test

From the table above shows that hypothesis show that hypothesis test that states recidual distribution on this regreition analysis follow the normal distributions. Its shown with the point $Z = 0,749$ and $Sig. = 0,629 > 0,05$. Its mean the assumption or condition regreition analysis reached.

1. Linearity Test

Linierity test done to decise technic in regreition analysis is independent variable (X_1 dan X_2) and dependent variable (Y) built linear. This Linierity test using the SPSS 20.0

a. The effect of Regreition Linaerity variable X_1 towards Y

The results of regreition linierity test between intellectual intelligence level with student's English learning achievement, the calculating 20.0 as follows:

Table 3. The result of regreition linierity Variabel Y towards X_1

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Student's English Learning Achievement * Intellectual Intelligence	Between Groups	(Combined)	1922.381	6	320.397	5.009	.000
		Linearity	1383.316	1	1383.316	21.626	.000
		Deviation from Linearity	539.065	5	107.813	1.686	.148
	Within Groups	5053.154	79	63.964			
	Total	6975.535	85				

Based on calculating above got the calculating result of *Deviation from Linearity* with $F_0 = 1,686$ and $Sig. = 0,148 > 0,05$. Its has definitions that intellectual intelliegence level variable with the student's English learning achievement has a linear corelations.

b. The effects of Regreition Linearity variable X_2 towards Y

The results of regreition linearity test between student's motivation with student's English learning achievement, calculation from SPSS 20.0 as follows:

Table 4. the Results of Regretion Linearity Variable Y towards X₂

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Student's English Learning Achievement *	Between Groups	(Combined)	2675.153	14	191.082	3.155	.001
		Linearity	1531.081	1	1531.081	25.278	.000
		Deviation from Linearity	1144.072	13	88.006	1.453	.158
Student's Motivation	Within Groups		4300.382	71	60.569		
	Total		6975.535	85			

Base on calculations above got a *Deviation from Linearity result* with $F_o = 1,453$ dan $Sig. = 0,158 > 0,05$. It has definition that student's motivation variable with student's English learning achievement students have linear corelations

CONCLUSION

On this conclusion part, writer describes shortly the research result that gets in the research field can be concluded as follows :

1. There are any significant effects of intellectual intelegence level and student's motivation together towards student's English learning achievement at Vocational High School in Sukabumi District of West Java Province. It is approved by the score of $Sig. 0,000 < 0,05$ and $F_h = 20.833$.
2. There is a significant effect of intellectual intelegece level towards student's English learning achievement at Vocational High School in Sukabumi District of West Java Province . it is approved by the score of $Sig. 0,000 < 0,05$ and $t_h = 3.782$.
3. There is a significant effect of student's motivation toward student's English learning achievement at Vocational High School in Sukabumi District of West Java Province . it is approved by the score of $Sig. 0,000 < 0,05$ and $t_h = 4.116$.

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