

THE INFLUENCE OF LEARNING STYLE ON ACHIEVEMENT THROUGH MOTIVATION AS A MODERATOR VARIABLE

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ABSTRACT

The aim of the research is to describe and analyse: (1) to know how the students' motivation, learning style and achievement are. (2) To know how far (a) the influence of motivation on achievement, (b) the influence of learning style on achievement, and (c) the influence of learning style on motivation. And (3) to find out whether there is any significance *influence of learning style on achievement through motivation* as a moderator variable. This research used quantitative approach as the research design. This research used 113 students as samples, who are selected randomly from a population of 334 *seventh grade student* of UPTD SMPN 02 Ngadiluwih Kediri. Meanwhile, the instrument used to collect data is a questionnaire. The result showed that: (1) the achievement is a low category, the motivation is a high category and the learning style is a low category. (2) (a) there is a significance influence of motivation on achievement. (b) There is a significance influence of learning style on their achievement. And (c) there is a significance influence of learning style on motivation. (3) There is not significance influence of learning style on their students' achievement through motivation as a moderator variable.

Key word: English achievement, motivation, learning style

INTRODUCTION

Achievement is a noun used to describe something that is successfully completed or the act of accomplishing. Achievement is a result that someone has achieved in carrying out activities. As well as in learning activities, it is expected that student can get a good achievement. According to Bloom in Suharsimi (1990) that learning achievement is divided into three aspects, namely cognitive, effective and psycho-motor.

In addition, learning achievement is an outcome or concrete skill that can be achieved in a certain time or period. In this study based on this opinion, the achievement is the result that has been achieved by students in the learning process at a certain time or period.

While in learning English process, the school students generally have to learn four skills that support learning achievement in English. Those skills that generally learned in school are listening, speaking, reading, and writing. Genc (2007) said that when we learn a language, there are four skills we need for complete communication. When we learn our native language, we usually learn to listen first, then speak, then read and listen, and finally write. These are called the four "language skills". These skills must be mastered by students and proven

through the results of learning English. Student learning outcomes in learning English are certainly influenced by the learning process. In providing teaching, teachers have guided the curriculum that regulates teaching activities.

Meanwhile in learning process, the students are faced various problems in achieving their learning achievements. There are students who often achieve satisfactory achievements but some of them are not. Many factors affect student's learning, so that can determine students' achievement. According to Syah (2010) the learning achievement can be effected by several factors, namely : the first is physiological or we could say physical health; what is meant by psychological are cleverness, attitude, aptitude, interest and motivation (*internal aspects*), the second is environmental or we could say social and non-social (*external aspects*) and the last is learning approach. Based on Syah's statement we can conclude that motivation is factor that can effect learning achievement. Hattie (2009), he said that the important thing that can improve student' achievement is motivation. But still there are educators who do not know how to make their students to achieve satisfactory achievements. It's because, the educator who is teaches in class without knowing what the students' condition.

For students, one of the biggest factors in learning is motivation. Hattie said (2009) that the important thing that can improve student' achievement is motivation. So we are able mention that low awareness or low motivation that students have in learning, they feels lazy for study and get unsatisfactory achievement. Not only motivation can influence the students' achievement, but the several factors that can affect the students' achievement.

There are several factors that can affect learning achievement, including those that come from themselves and the students' environment (Junianto, 2015). Achievement is influence by factors that arise from students, namely motivation and learning styles. Not only student motivation that can influence students' achievement, but learning style also can carry effect on students' achievement. Many research results indicate that learning style are s key factor and give influence on academic achievement in learning.

In learning environments, it is often found that different students present different learning approaches to the same question. These learning differences are mainly caused by students' learning styles. Learning styles refer to the personal preferences that students carry in certain learning situations; these preferences are the learning process and strategy variables that affect personal learning outcomes. For this reason, personal learning styles are considered in teacher teaching strategies and course activity design. Teaching strategies, motivation to curriculum design, play an important role in the learning process. Meaningful learning is a teaching strategy, which allows the K13 curriculum design to adjust to the willingness of students to actively and positively face learning to increase the benefits and learning achievement.

Learning styles are the methods taken in the learning process. Law and Glover (2000) recognize that the successfully lesson is highly dependent on the teaching and to maximize students' abilities need learning strategies. Other than that, the teachers need to adjust learning strategies that match students' learning styles. Learning styles have benefits for learning. The teacher must know the

students' condition and the students also must know their abilities and their learning styles.

Identifying student learning styles here is intended to be able to overcome the problems faced by student in learning process. There are many learning style that can help students in learning process, according to their personality. There are three learning styles according to Oxford in Reid: visual, auditory, and kinaesthetic. Visual learning style is a style of learning that tends to learn through the visual channel. Auditory learning style is a style of learning that tends to learn through their hearing sense. Kinaesthetic learning style is a style of learning that tends to learn through a hands-on approach. Those learning style can help students in learning process.

As described above, in helping the learning process to be successful. The student needs supporting factors to obtain good learning achievement. Like the factors previously mentioned, namely motivation and learning styles. Here the researcher wants to prove there is direct and indirect influence between learning style and motivation with student achievement. And which is greater between direct relationship and indirect relationships described above. In helping learning process to be successful, students need supporting factors to obtain good learning achievement. Like the factors previously mentioned, namely motivation and learning styles. Here the researcher wants to prove there is direct and indirect influence between learning style and motivation with student achievement. And which is greater between direct and indirect relationship.

From the explanation above, it can be seen that in helping the learning process to be successful. The student needs supporting factors to obtain good learning achievement. Like the factors previously mentioned, namely motivation and learning styles. So the researcher uses it as The Influence of Learning Style on Achievement through Motivation as a Moderator Variable of Seventh Grade of UPTD SMPN 02 Ngadiluwih Kediri.

RESEARCH METHOD

Research design

The design used in this research is quantitative approach. The research method used in this research is regression analysis and the technique used is surveyed by using questionnaire.

Population and sample

UPTD SMP Negeri 2 Ngadiluwih is selected as the research location. It is located in Jln Raya Ds. Mangunrejo. Mangunrejo, Kec. Ngadiluwih, Kab. Kediri. East Java.

The subjects of this research were the students UPTD SMP Negeri 2 Ngadiluwih VII class in the academic year 2019 – 2020. This research used 113 students as sample, which is selected randomly from a population of 334 students. The sample is taken by using a determining the number of sample the researcher is using Slovin formula.

Research Instrument

The instrument used in this research is questionnaire. In this research, the researcher gives the questionnaire to the students to know their achievement, motivation and learning style score. The researcher uses close questionnaire in determining students score. The respondents must response provided in the questionnaire. The questionnaire used five alternatives based on the Likert's Scale Types. The questionnaire is fulfilling which consist of 25 items questions about their motivation, learning style and achievement in learning English. From 25 items questions, every number is classified into four categories answer (1,2,3,4 and 5).

The questioner judgement is: (a) the score is 5. It means that it is always, (b) the score is 4. It means that it is often, (c) the score is 3. It means that it is sometimes, (d) the score is 2. It means that it is rarely, and (e) the score is 1. It means that it is almost never. To find out the instrument quality, the researcher was done some test. They were; its validity, its reliability, its normality, its linearity, its multicollinearity, and its heteroscedasticity.

1. Validity of instrument

The validity of the study is explained in one degree of measurement accuracy about the contents of the statement / questionnaire the researcher made. From the results of validity test by using SPSS 20, According to Anwar (1999) the instrument can be said valid if the value of Pearson correlation is higher than 0,30. And the outputs of three variables are more than ($>$) 0,30. While from the outputs, it can be seen that the questions of this study were valid.

2. Reliability of research instrument

A group of data can be said reliable if two or more researchers on the same object produce the same data, or the same researcher at different times produces the same data or a set of data when broken down but shows the same data. The criteria to determine the reliability of the instrument is if value of alpha is higher than 0.60 which the instrument can be relied upon, and vice versa if it is smaller than 0.60 which is not reliable instrument. The results of the reliability testing from three variables are reliable.

3. Normality of research instrument

This test is intended to find out whether or not the variable data distribution is normal as a requirement for hypothesis testing. The normality test is carried out using Kolmogorov-Smirnov in SPSS 20 at a significance level of 5%. Scores are distributed normally if the Sig. Kolmogorov- Smirnov is greater than 0.05 and vice versa if the Sig. Kolmogorov-01 Smirnov less than 0.05 score is said to be not normally distributed. The value of Sig. Kolmogorov- Smirnov (2-tailed) can be said normal because the value is higher than 0,05. This shows that the data normally distributed.

4. Linearity of research instrument

This test is taken to know whether there is or no a linear relationship between the independent variable and the dependent variable. Variables are said to be linear if the value of deviation from linearity > 0.05 . Linear tests are calculated with the help of the IBM SPSS Statistics 20 version.

- a. The linearity test result between motivations of student' achievement. That the significance value of the Linearity obtained is smaller than 0,05, its mean that the motivation variable for achievement is linear. And the significance value of the Deviation From Linearity obtained is greater than 0,05. And its mean that the learning style variable for achievement is linear.
- b. The linearity test result between learning style of students' achievement. The significance value of the Linearity obtained is smaller than 0,05). And the significance value of the Deviation From Linearity obtained is greater than 0,05. And its mean that the learning style variable for achievement is linear.
- c. The linearity test result between learning style of students' motivation. The significance value of the Linearity obtained is smaller than 0,05. And the significance value of the Deviation From Linearity obtained is greater than 0,05. And its mean that the learning style variable for motivation is linear.

5. Multicollinearity of research instrument

Multicollinearity test is taken to determine whether there is a strong correlation between the independent variables. Benchmarks shown are the VIF (Variant Inflation Factor) value and the correlation coefficient between the independent variables. The criteria used are (1) if the VIF value is around 1 or has a tolerance of close to 1, it is said that there is no multicollinearity problem between variables; (2) if the correlation coefficient between independent variables is less than 0.5, there is no problem with multicollinearity.

The multicollinearity test results for X1 and X2 have a VIF value is around 1 and tolerance value is close to 1, it is said that there is no multicollinearity problem between variables. And The correlation test results for X1 and X2 have sig value less than 0,5, its mean there is no problem with multicollinearity.

6. Heteroscedasticity of research instrument

Heteroscedasticity is a condition where there is a variant in the residual variant for all observations in the regression model. The regression model is said to be good if no problems are found from the results of the heteroscedasticity test. One method of heteroscedasticity test is the Glejser test. Glacier tests are performed by regression of the independent variable to the absolute residual value. As a basic understanding, residuals are the difference between the observed value and the predicted and absolute value. If the significance value is between the independent variable with a residue of more than 0.05, there is no heteroscedasticity problem. And the significance value for motivation and learning style are more than 0,05, thus it can be conclude that in regression model there is no heteroscedasticity problem.

Data Collection Method

In this study the questionnaire is used as a data collection method. The questionnaire the researcher used is because it is to find out the research problem. Using the questionnaire can make it easier for respondents to provide answers that match their choices or alternative answers available in them and require a relatively short time to answer them.

In this research, the researcher did regression and descriptive analyse as the data technique. Data description includes measurement of concentration and data distribution. The data focus measurement includes the median, mode and median values. While the size of the data distribution, includes variants and standard deviations. According to Mardapi (2008) data description is done by grouping every variable score. The score is divided into 4 categories. This categories are divided based on the ideal Mean (Mi) and the ideal Standard Deviation (SDI) obtained.

RESULT FINDING AND DISCUSSION

Description of research results

The following explanations are the results of the influence of learning style on students' achievement through learning motivation of class VII students of UPTD SMP Negeri 2 Ngadiluwih.

1. Descriptive statistics

- a. The description of achievement by Class VII students of UPTD SMPN 02 Ngadiluwih.

The mean score of students is 65,88, with a minimum score is 38, a maximum score is 100 and a standard deviation is 10,721. By using to Mardapi (2008) from the results show that the majority of students in class VII of UPTD SMPN 01 Ngadiluwih for the achievement variable are in the low category.

- b. The description of Motivation by Class VII students of UPTD SMPN 02 Ngadiluwih.

The mean score of students is 82,51, with a minimum score is 54, a maximum score is 100 and a standard deviation is 8,717. By using to Mardapi (2008) from the results show that the majority of students in class VII of UPTD SMPN 01 Ngadiluwih for the motivation variable are in the high category.

- c. The description of Learning Style by Class VII students of UPTD SMPN 02 Ngadiluwih.

The mean score of students is 72,57, with a minimum score is 52, a maximum score is 100 and a standard deviation is 9,287. By using to Mardapi (2008) from the results show that the majority of students in class VII of UPTD SMPN 01 Ngadiluwih for the learning style variable are in the low category.

Hypothesis test

After done with all steps of data requirements testing. Than can continue with the hypothesis testing. The following describes the testing of each hypothesis that has been stated.

1. The influence of motivation on student' achievement ($X_1 \rightarrow Y$)

The first hypothesis states that "there is an influence between motivation (X_1) and achievement (Y) in class VII students of UPTD SMPN 02 Ngadiluwih". This test is processed using simple linear regression analysis. This analysis process is assisted by using the IBM SPSS Statistics 20 version. From the model summary of regression' table, the value of R square is 0,061 its mean that student' motivation has contributed 6,1 % to student' achievement, while the rest is influence by other variables that not examined in this study. And after that doing the F test which get results:

Based on the regression results, the magnitude of the Constanta (a) = 40,908, and the regression coefficient (b) = 0,303. So the sample linear regression is as followings:

- a. Constants of 40,908; meaning that if the motivation is 0, then the achievement value is 40,908.
- b. The regression constant of motivation variable is 0,303; meaning that if the motivation experiences an increasing in one unit it will increase by 0,303 units.

Because the value of t count $>$ t table ($2,674 > 1,981$), then H_0 is rejected. This means that the motivation partially influence achievement. The value of t account is positive, meaning that the influence that accurse is positive, or it can be interpreted as higher or better motivation of student, hence increasing achievement.

2. The influence of learning style on student' achievement ($X_2 \rightarrow Y$)

The second hypothesis states that "there is an influence between learning style (X_2) and achievement (Y) in class VII students of UPTD SMPN 02 Ngadiluwih". This test is processed using simple linear regression analysis. This analysis process is assisted by using the IBM SPSS Statistics 20 version. From the model summary of regression' table, the value of R square is 0,147 its mean that student' learning style has contributed 14,7 % to student' achievement, while the rest is influence by other variables that not examined in this study. And after that doing the F test which get results:

Based on the regression results, the magnitude of the Constanta (a) = 33,724, and the regression coefficient (b) = 0,443. So the sample linear regression is as followings:

- a. Constants of 33,724; meaning that if the learning style is 0, then the achievement value is 33,724.
- b. The regression constant of the learning style variable is 0,443; meaning that if the learning style experiences an increasing in one unit it will increase by 0,443 units.

Because the value of t count $>$ t table ($4,379 > 1,981$), then H_0 is rejected. This means that the learning style partially influence student' achievement. The value of t account is positive, meaning that the influence that accure is positive, or it can be interpreted as higher or better the learning style of student, hence increasing student' achievement.

3. The influence of learning style on student' motivation (X2→ X1)

The third hypothesis states that "there is an influence between learning style (X2) and student' motivation (X1) in class VII students of UPTD SMPN 02 Ngadiluwih". This test is processed using simple linear regression analysis. This analysis process is assisted by using the IBM SPSS Statistics 20 version. From the model summary of regression' table, the value of R square is 0,103 its mean that student' learning style has contributed 10,3 % to student' motivation, while the rest is influence by other variables that not examined in this study. And after that doing the F test which get results :

Based on the regression results, the magnitude of the Constanta (a) = 60,704, and the regression coefficient (b) = 0,301. So the sample linear regression is as followings:

- a. Constants of 60,704; meaning that if the learning style is 0, then the motivation value is 60,704.
- b. The regression constant of the learning style variable is 0,301; meaning that if the learning style experiences an increasing in one unit it will increase by 0,301 units.

Because the value of t count $>$ t table ($3,561 > 1,981$), then H_0 is rejected. This means that the learning style partially influence motivation. The value of t account is positive, meaning that the influence that accure is positive, or it can be interpreted as higher or better the learning style of students, hence increasing motivation.

4. The influence of learning style on student' achievement through motivation as moderator variable (X2→ Y through X1) (path analysis)

The fourth hypothesis states that "there is an influence between learning style (X2) on achievement (Y) through motivation (X1) as a moderator variable in class VII students of UPTD SMPN 02 Ngadiluwih". This test is processed using simple and multiple regression analysis. This analysis process is assisted by using the IBM SPSS Statistics 20 version. A general hypothesis can be formulated that will be proposed in this path analysis are:

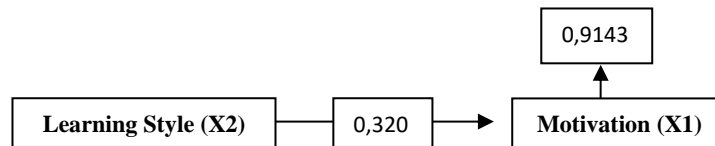
- a. The influence of learning style on motivation.
- b. The influence of learning style on students' achievement through motivation as a moderator variable.

From the model summary of regression' table, the value of R square is 0,164. So its mean, the motivation and learning style have contributed 16,4 % to student' achievement at UPTD SMPN 02 Ngadiluwih and the rest is influenced by another variable that not included in this study. From the

regression result show that the significance value is 0,001. With R square 0,103. Meanwhile the value of **e1** is obtained from:

$$e_1 = \sqrt{1 - R^1} = \sqrt{1 - 0,103} = \sqrt{0,897} = \mathbf{0,9471}$$

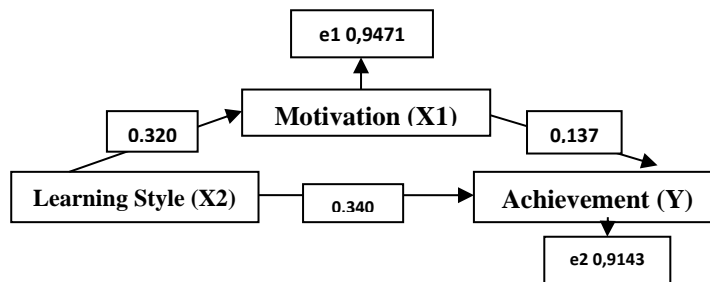
The obtained the path diagram of the structural model 1 as follow:



The following result is from regression test of the influence of learning style on students' achievement through motivation as a moderator variable, by using SPSS program vs. 20. From the regression result show that the significance value is 0,139 and 0,000. With R square 0,167. Meanwhile the value of **e2** is obtained from:

$$e_2 = \sqrt{1 - R^1} = \sqrt{1 - 0,167} = \sqrt{0,836} = \mathbf{0,9143}$$

The obtained the path diagram of the structural model 2 as follow:



Analysis of the influence of X2 on X1: note that the direct influence of X2 on X1 is 0,320. Based on the above calculation results obtained the value of the direct influence is 0.320. This result shows that indirectly X2 has significant influence on X1.

Analysis of the influence of X2 to X1 on Y: note that the direct influence of X2 on Y is 0,340. While the indirect effect of X2 to X1 on Y is the multiplication between the value of beta X2 against X1 with beta value X2 against Y, namely: $0,320 \times 0,137 = 0,0438$ (0,044). Then the total effect given X1 on Y is a direct effect plus an indirect influence namely: $0,340 + 0,0438 = 0,3838$ (0,384). From the results of the above calculations, it is known that the value of the direct effect is 0.340 and the indirect effect is 0.044, which means that the value of the indirect effect is smaller than the value of the direct effect ($0,044 < 0,340$), this shows that indirectly X2 to X1 does not have a significant effect on Y.

From the discussion above it can be concluded "there is the influence of learning style on students' achievement through students' motivation which

has an indirect influence greater than direct influence. Results X2 to X1 are 0,320 meaning that if the regression constant of learning motivation has increased in one unit it will increase amounted to 0,320 units. This means that learning motivation influence very little achievement. This is caused by a wrong questionnaire, respondent data does not vary, and respondents are lacking.

CONCLUSION

1. The Achievement in learning is in low category, the motivation is in high category and the learning style is in low category.
2. There is a positive and significant influence of the motivation on students' achievement.
3. There is positive and significant influence of the learning style on students' achievement.
4. There is positive and significant influence of the learning style on motivation.
5. There is positive influence but not significant of learning style on students' achievement through motivation as moderator variable.

REFERENCES

- Abdurrahman, Muhammad Sani. Garba, Ibrahim Musa. 2014. *The impact of motivation on students' academic achievement in kebbi state junior secondary school*. International Journal of Advance Research, IJOAR .org. Vol : 2.
- Azwar, S. 1999. *Realibilitas dan Validitas* .Yogyakarta :PustakaPelajar
- Asvio, Novita. 2016. *The influence of learning motivation and learning environment on undergraduate students' learning achievement*. International journal of social sciences research. Vol : 2.
- Brown, H-Douglas. 2000. *Principles of Language Learning and Teaching*. London: Longman.
- Dheny, Violita. 2014. *The influence of students' learning style on their learning achievement at the eleventh grade of SMK Muhammadiyah Kutowinangun*. Purworejo: Muhammadiyah University of Purworejo
- Han, Yu Sung. Gwo, Jen Hwang. Chun, Ming Hung. I, Wen Huang. 2012. *The Effect of learning styles on students' motivation and learning achievement in digital game-based learning*. International journal of sciences research.
- Hattie, J. 2009. *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. London & New York: Routledge.
- Junianto, Dwi. (2015). *Pengaruh Kinerja mengajar guru, keterlibatan orangtua, aktualisasi diri terhadap motivasi berprestasi*. Jurnal pendidikan Teknologi dan Kejuruan, Volume 22
- Law, S., and Glover, D. 2000. *Educational Leadership and Learning Practice, Policy, and Research*. Philadelphia: Open University Press Buckingham
- Mac, Keracher D. 2004. *Making sense of adult Learning*, (2nd ed). Canada University of Toronto Press Incorporate.
- Muhibbin Syah. 2010. *Psikologi Pendidikan dengan pendekatan baru*. Bandung: PT Remaja Rosdakarya.

- Nana Sudjana. 2010. *Penilaian Hasil Proses Belajar Mengajar*. Bandung: PT Remaja Rosdakarya.
- Ritho, Robinson. 2015. *The influence of student motivation on academic performance in public secondary schools in Dagoreti Subcounty*
- Suharsimi. 1990. *Dasar-Dasar Evaluasi Pendidikan*. Jakarta : Bumi Aksara
- Sulistiyarini, Dewi. Sukardi.2016. *The influence of motivation, learning styles, teacher leadership, and teaching intensity on students' leaning outcomes*. Yogyakarta State University
- Sumadi Suryabrata. 2006. *Psikologi Pendidikan*. Jakarta: PT Raja Grafindo Persada.
- Sari, Ifit Noovita. 2017. *The influence of motivation, learning styles, teacher leadership, and teaching intensity on students' leaning outcomes*. National Education Journal, vol 2.
- Wang, L. 2007. *Variation in Learning Style in a group Chinese English as a Foreign Language Learner*. International Education Journal, vol 8 (2): 408-407.