

The Effect of Learning Model and Learning Independence on the Economic Learning Outcomes of the 11th Grade Students of SMA Bhayangkari 2 Rantauprapat

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Keywords: Learning Outcomes, Learning Model, Learning Independence.

Abstract: This research was aimed to knowing: (1) whether the students' economic learning outcomes who are taught using the ARIAS learning model are higher than students are taught using conventional learning models; (2) whether the students' economic learning outcomes that have higher independence to learn than students who have lower learning independence; (3) the interaction between learning model and the learning independence of economic learning outcomes. The population of this research is all the 11th grade students of SMA Bhayangkari 2 Rantauprapat. The sampling technique used is cluster random sampling. The research methods used is quasi experimental method with 2x2 factorial research design, while the data analysis techniques use two-way Anova. The results obtained: (1) the average of students' economic learning outcomes who are taught with ARIAS learning model is higher than the average of students' economic learning results taught by conventional learning model; (2) The average of students' economic learning outcomes with higher independence is higher compared to lower learning independence; and (3) there is an interaction between learning model and learning independence to the economic learning outcomes.

1 INTRODUCTION

Education is related to learning and the process of human learning to continue to develop its potential. Learning is the process of change that occurs in a person as a result of his own experience in interaction with his environment. Learning is the stages that are done to achieve changes both from the cognitive, affective, and psychomotor aspects. Learning outcomes are evidence of the achievement and change of the learning process that students have undergone which can be seen from the change in their understanding. Therefore, learning is a process of change while learning outcomes are proof of the change.

Sudjana (2005) stated that the main factors that influence student learning outcomes are divided into two, which are internal factors and external factors. Internal factors are factors that come from within students, especially motivation and interest in learning that will encourage students to be independent in learning. External factors are factors

that come from the outside the student, one of them is the quality of learning. The quality of learning refers to whether or not the teaching and learning process is effective in order to achieve learning objectives.

Learning independence is one of the factors that can affect student learning outcomes. Students who have learning independence are able to analyze difficult problems, able to work individually or cooperate with groups, and brave to express ideas. Success in the process of learning economics is not only determined by the accuracy of the teacher in explaining, the independence of students in the learning process also play a very important role.

One strategic effort that can be done by a teacher to improve the students' learning outcomes in economic learning is selecting and using the appropriate learning model. The appropriate learning model will help students to achieve high learning outcomes.

ARIAS learning model is a learning model that includes five interrelated components and is a unity

that needs to be applied in learning activities. The five components of the ARIAS learning model are Assurance, Relevance, Interest, Assessment, and Satisfaction which are compiled based on learning theory.

Based on observations made at Bhayangkari 2 High School 2 students about the economic learning outcomes of 11th grade students, it was obtained data that their learning outcomes were not satisfactory. This was evident from the fact that there were still many students who do not complete the daily test because they get scores below the KKM (Minimum Learning Mastery Standard) set by the subject of Economics, which is a score of 75. That of 108 11th grade students, there were 68 students who did not pass daily test with a percentage of failure in passing the score reached 62.96% and only 40 students who passed the standard with a percentage of 37.04%.

In the observations made, it was also found that teachers of Economics still used conventional learning models in delivering the learning material so that learning still took place in one direction and was only centered on the teacher (Teacher Centered). This has an impact on students who are passive and less enthusiastic in participating in learning. In fact, the teacher have mastered the learning material well but they were not in carrying out the learning activities correctly. This happens because the teachers do not choose the learning model correctly and are monotonous in choosing the learning model and this makes students tend to get low learning outcomes.

Observation in class 11 IIS-2 consisted of 36 students showed that there were still many students with low learning independence. Low learning independence could be seen from students who were brave to present in front of the class with only 6 students or 16.67%. Students who were brave to ask questions or give opinions are only 4 students or 11.11%. Students who were able to work on individual test questions independently are only 15 people or 41.67%. Students who did homework assignments are only 25 people or 69.44%.

The aims to be achieved in this study are to find out: (1) whether the economic learning outcomes of students taught using the ARIAS learning model are higher than students taught using conventional learning models; (2) whether the economic learning outcomes of students who have high learning independence are higher than students who have low learning independence; (3) interaction between learning models and learning independence on the economic learning outcomes.

2 THEORETICAL FRAMEWORK

According to Purwanto (2011), learning outcomes are the achievement of educational goals for students who follow the teaching and learning process. Learning outcomes are the realization of the achievement of educational goals. Therefore, the learning outcomes measured are very dependent on the goals of education. Learning outcomes can be affected by several factors, two of which are student learning independence and the learning model used by the teacher.

Ahmadi (2011) states that the learning model is a pattern or a plan that is used as a guide in planning classroom learning and tutorial learning and to determine learning tools. According to Rahman and Amri (2014), ARIAS learning model is the first attempt at learning activities to instill a sense of confidence in students. Learning activities have relevance to students' lives, trying to attract and maintain student interest or attention. Then, an evaluation is held and it grows a sense of pride in students by providing reinforcement.

According to Tirtarahardja and Sulo (2000), independence in learning is defined as learning activities which are driven more by their own will, their own choices, and their own responsibilities from learners when taking place. Here, independence is more about individuals who learn and their obligations in learning are done on their own and fully controlled by themselves. The characteristics of learning independence according to Laird (in Mujiman, 2011) include learning activities which are self-directed or independent from others, able to answer questions during learning not because of the teacher or other assistances, more active rather than passive, having the awareness of what must be done, learning evaluations are carried out together, learning by applying, collaborative learning means utilizing experience and exchanging experiences, problem-based learning, and always expecting benefits that can be applied in life.

3 RESEARCH METHOD

This research was conducted at SMA Bhayangkari 2 Rantauprapat at Jalan Cik Ditiro Rantauprapat in the even semester of academic year of 2017/2018. The population of this research is all 11th grade students of SMA Bhayangkari 2 Rantauprapat consisted of nine classes with 108 students in total. The sample

in this research consisted of two classes, classes 11-IIS 1 as the experimental class and class 11-IIS 2 as control class. Technique used in sample collecting is *cluster random sampling*. The method used is *quasi-experimental research* with factorial design 2 x 2.

Questionnaire and Test were used for data collecting. Questionnaire was used to get data about the independence of the students' learning and Test was used to get data about the economic learning outcomes of the students. The testing of the instruments of the research used tests of validity, reliability, difficulty level and discrimination power. Classic assumption test was done using normality test with *Levene* statistic test. The hypothesis test was done using the analysis of *two way ANOVA*.

4 RESULT

The testing of the first, second and third research hypothesis were done using the *two way ANOVA*. The data used in the hypothesis test are listed in Table 1 below:

Table 1: Learning Outcomes Data for Hypothesis Test.

Descriptive Statistics				
Dependent Variable: LearningOutcomes				
Learning Models	Learning Independence	Mean	Std. Deviation	N
ARIAS	Higher	83.52	6.477	27
	Lower	74.44	1.667	9
	Total	81.25	6.905	36
Conventional	Higher	73.93	4.009	14
	Lower	59.32	4.704	22
	Total	65.00	8.452	36
Total	Higher	80.24	7.327	41
	Lower	63.71	8.059	31
	Total	73.13	11.210	72

Source: Data Processing using SPSS 20.

The hypothesis test on analysis of two way variance, the criteria to reject or accept H_0 are based on the *Significance* (abbreviated as Sig.). If the Sig. value $\leq \alpha 0.05$, then H_0 is rejected, If the Sig. value $> \alpha 0.05$, then H_0 is accepted. Below are the data of analysis of calculation result of *two way ANOVA* in Table 2.

Table 2: Calculation of *Two Way ANOVA*.

Tests of Between-Subjects Effects					
Dependent Variable: LearningOutcomes					
Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	7135.211 ^a	3	2378.404	90.521	.000
Intercept	319973.943	1	319973.943	12178.129	.000
LearningModels	2304.977	1	2304.977	87.727	.000
LearningIndependence	2116.557	1	2116.557	80.556	.000
LearningModels * LearningIndependence	115.650	1	115.650	4.402	.040
Error	1786.664	68	26.274		
Total	393925.000	72			
Corrected Total	8921.875	71			

a. R Squared = .800 (Adjusted R Squared = .791)

Source: Data Processing using SPSS 20.

Based on table 2 it can be seen that the R Squared value of 0.791 can mean that the learning model and learning independence variables explain learning outcomes by 79.10%.

The testing of the first hypothesis: the economic learning outcomes of students taught by using ARIAS learning model were higher than the economic learning outcomes of students taught by using conventional learning model. The statistic of the hypothesis is:

$$H_0 : \mu A_1 = \mu A_2$$

$$H_a : \mu A_1 > \mu A_2$$

Based on the two-way ANOVA calculation, the sig. value was obtained. $0.00 < \alpha 0.05$ so testing the hypothesis rejected H_0 . Thus, it can be concluded that the economic learning outcomes of students taught using ARIAS learning models were higher than students taught using conventional learning models could be accepted and tested empirically. It is also seen from the average economic learning outcomes of students taught by the ARIAS learning model ($\bar{X} = 81.25$) were higher than the economic learning outcomes taught by conventional learning models ($\bar{X} = 65.00$).

The testing of the second hypothesis: the economic learning outcomes of students who had higher learning independence was higher than those who had low learning independence. The statistic of the hypothesis is:

$$H_0 : \mu B_1 = \mu B_2$$

$$H_a : \mu B_1 > \mu B_2$$

Based on the two-way ANOVA calculation, the sig value is obtained. $0.00 < \alpha 0.05$ so testing the hypothesis rejected H_0 . Therefore, it can be concluded that the economic learning outcomes of students who had higher learning independence were higher than students who had low learning independence could be accepted and tested empirically. It is also seen from the average economic learning outcomes of students who had high learning independence ($\bar{X} = 80,24$) were higher

than the economic learning outcomes of students who had low learning independence ($\bar{X} = 63,71$).

The testing of the second hypothesis: there was an interaction between learning model and learning independence toward the economic learning result. The statistic of the hypothesis is:

$$H_0 : \mu A >> \mu B = 0$$

$$H_a : \mu A >< \mu B = 0$$

Based on the two-way ANAVA calculation, the sig value was obtained. $0.04 < \alpha 0.05$ so testing the hypothesis rejected H_0 . Thus it can be concluded that there was an interaction between the learning model and the independence of learning on economic learning outcomes can be accepted and tested empirically.

5 DISCUSSION

In the first hypothesis test, it was obtained that sig. value was $0.00 < \alpha 0.05$. This showed that the economic learning outcomes of students taught using ARIAS learning models were higher than students taught using conventional learning models. The results of this research support the research conducted by Praptinasari *et al.* (2012) who studied the effect of the application of ARIAS learning model on the biology learning outcomes of 11th science students of SMA AL Islam 1 Surakarta. The results showed that there were significant differences between the application of the ARIAS learning model and conventional learning models of the learning outcomes of biology of the 11th science students of SMA AL Islam 1 Surakarta

For the results of the second hypothesis, it was obtained that the sig. value was $0,00 < \alpha 0,05$. This showed the economic learning outcomes of students who had high learning independence were higher than students who had low learning independence. The results of this study support the research conducted by Prayuda *et al.* (2014) who studied the effect of learning independence on the learning outcomes of economic subject in a senior high school. The results showed that learning independence had an influence on student learning outcomes in economic subjects of tenth grade class in SMA Negeri 1 Sungai Kunyit.

In the third hypothesis test, it was obtained that sig. value $0.04 < \alpha 0.05$. This showed that there were interactions between learning models and learning independence on economic learning outcomes. The results of this study support the research conducted by Ansori and Munoto (2015) who studied the effect of direct learning models and ETH-type cooperative

learning models as well as learning independence on student learning outcomes in basic subjects and electrical measurements. The results showed that there were interactions between learning models and learning independence on learning outcomes in the cognitive and psychomotor domains.

6 CONCLUSIONS

Based on the results of the research and discussion that have been described, the conclusions can be drawn as follow:

1. The average economic learning outcomes of students taught by the ARIAS learning model were higher than the average economic learning outcomes of students taught by conventional learning models.
2. The average economic learning outcomes of students with higher learning independence are higher than low learning independence.
3. There was an interaction between the learning model and learning independence on the economic learning outcomes.

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