THE EFFECT OF GUIDED DISCOVERY LEARNING MODEL WITH THE ASSISTANCE OF PEER TUTORS ON THE SELF EFFICACY OF CLASS X STUDENTS

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Abstract

Keywords: Guided Discovery Learning Model, Peer Tutors, Self Efficacy.

This study aims to analysis: (1) Describe the comparison of Self Efficacy of students who are taught using the Guided Discovery Learning learning model with the help of peer tutors better than those taught using the expository learning model, (2) Describe the effect of the Guided Discovery Learning learning model with the help of peer tutors on the Self Efficacy of class X students.

This type of research is quantitative with experimental methods. The population used in this study were students of class X MAN Tegal City for the 2022/2023 academic year. Sampling using purposive sampling. The data collection method used is the questionnaire test method, evaluation test and documentation. Previously the test instrument was tested for validity, reliability, level of difficulty, and differentiability. Data analysis in this study used MANOVA test, the τ^2-Hoteling test and the Simple Linear Regression test.

The results of this study indicate that: (1) The results of the comparison of Self Efficacy of students who are taught using the Guided Discovery Learning learning model with the help of peer tutors are better than those who are taught using the expository learning model (2) There is an influence of the Guided Discovery Learning learning model with the help of peer tutors on the Self Efficacy of class X students.Keywords: Guided Discovery Learning Model, Peer Tutors, Self Efficacy.

1 INTRODUCTION

Learning is an interaction activity between teachers and students, where between the two there is reciprocal communication that takes place in order to achieve learning goals (Wahid, 2018). Education can develop starting from curriculum, strategies, media, and learning models (Ambarwati & Kurniasih, 2021). The very rapid development of technology has become one of the factors for prosecution so that they can have broad and up-to-date knowledge. The demands in this society are not just understanding related to conceptual knowledge, but must be supported by creative and critical thinking in solving a problem (Anderha & Maskar, 2021). The learning model can be interpreted as a frame of the learning process in which there are approaches, methods and learning techniques (Sudrajat, 2008). The Guided Discovery Learning learning model has the goal of increasing the activeness of students in the learning process, reducing dependence on the teacher as the only source of information needed by students, training students to explore or utilize their environment as information that will never be fully explored. Supriyadi (in Ahdiyat, 2014: 75) suggests that peer tutors are one or several students appointed and assigned to help students who have learning difficulties. Self-efficacy is the attitude that exists in a scientist or academic when facing problems related to scientific knowledge. Self-efficacy is considered a determining and important aspect of achieving an achievement, regardless of the ability it is based on. This is similar to the opinion of Fahmi, Syahrir & Kurniawan (2017), namely self-efficacy is an important support in achieving mathematics achievement. Based on the results of observations and interviews with one of the mathematics teachers at MAN Tegal City, namely Mr. Mohammad Ilmi Ilhamiansyah, S.Pd. it is said that the self-efficacy of class X MAN Tegal City students in Trigonometry material is still quite low in terms of the learning process and also seen from how to do the assignments given by the teacher. Students tend to work on assignments in accordance with the steps that already exist. Meanwhile, the learning approach used by teachers is still in the form of simple learning, where the teacher is the speaker and the students are the listeners. Therefore, it is necessary to develop and apply a mathematics lesson that does not only transfer teacher knowledge to students. The Guided Discovery Learning learning

model assisted by peer tutors is expected to be effective, so that students' numeracy literacy skills can be improved. Teaching and learning activities at MAN Tegal City are carried out face-to-face and some students when the teacher carries out the learning process are still many who do not understand and the activity of students is relatively low. So that the use of peer tutors can be used in the learning process to increase students' Self Efficacy.

2   METHODOLOGY

The type of research used is experimental research because in this study, researchers want to know the effectiveness of the Guided Discovery Learning learning model with the help of peer tutors on students' self-efficacy. The population is a generalized area consisting of objects/subjects that have certain qualities and characteristics determined by the researcher to be studied and then conclusions drawn. The population in this study were students of class X MAN Tegal City even semester of the 2022/2023 academic year. The samples taken in this study were three classes, namely, the trial class, the experimental class and the control class. Data collection techniques used are questionnaires, tests, and documentation. Data analysis techniques in this study included hypothesis prerequisite tests (normality test, homogeneity test and sample equivalence test), hypothesis testing.

3   RESULTS

The text included in the sections or subsections must begin one line after the section or subsection title. Do not use hard tabs and limit the use of hard returns to one return at the end of a paragraph.

Table 1 *Self-Efficacy Questionnaire for the experimental class and the control class*

No	Size	Eksperimental class (X_1)	Control class (X_2)
1.	Mean	56,87	55,07
2.	Median	58	56
3.	Mode	58	57
4.	Devitation	6,95	6,67
5.	Variant	48,42	44,58
6.	Max	67	65
7.	Min	42	43
8.	Koefisien Varian	0,122	0,121

Based on the results of the data description, it was found that students who were taught using the Guided Discovery Learning learning model with the help of peer tutors were higher than students who were taught using the expository learning model.

Table 2 Normality test of self-efficacy questionnaire

Variable	L_{count}	L_{table}	Information
Experimental class	0,918	2,023	NORMAL
Control class	0,836	2,023	NORMAL

Based on the table, the Self Efficacy values were obtained in the experimental class with Lcount = 0.918 and Ltable = 2.023 and in the control class with Lcount = 0.836 and Ltable = 2.023, thus Lcount is smaller than Ltable, so H0 is accepted, so the sample comes from a normally distributed population.

Table 3 Self-efficacy questionnaire homogeneity test

No	$\chi^2{}_{hitung}$	$\chi^2{}_{tabel}$	Information
1.	0,920	1,692	HOMOGEN

Based on the table, the Self Efficacy value is obtained with χ^2 count = 0.920 and χ^2 table = 1.692, because the χ^2 calculated value is smaller than the χ^2 table value, it can be concluded that the Self Efficacy data is homogeneous.

Table 4 Hypothesis test one τ^2 *Hoteling*

$\tau^2{}_{count}$	$\tau^2{}_{table}$	Information
12,480	6,303	DITOLAK

Based on the calculation results of the τ^2-Hoteling Test, it is obtained that τ^2count = 12.480 and τ^2table = 6.303 , because the value of τ^2count is greater than the value of τ^2table, H0 is rejected. This means that the Self Efficacy level of students who are taught using the Guided Discovery Learning learning model with the help of peer tutors is better than the expository learning model.

Table 5 Hypothesis test two simple linear regression

	Coefficientsa				
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
Model	B	Std. Error	Beta		
(Constant)	8.895	3.638		2.444	.019
Angket	1.037	.064	.936	16.330	.000
a. Dependent Variable: Tes					

Based on the output results of simple linear analysis, the resulting tcount value is 2,444. After knowing the tcount value, then determine the ttable value. The significance value level is 0.05 while the df (std. Error) value is 0.064, so the ttable value is 1.997 calculated using the help of Microsoft Excel 2010 by means of = TINV(0.05 ; 176). So it is obtained that the value of tcount > ttable, then H0 is rejected. So it can be concluded that there is an influence of the Guided Discovery Learning learning model with the help of peer tutors on the Self Efficacy of class X students.

4 CONCLUSIONS

1. Self-Efficacy of students who are taught using the Guided Discovery Learning learning model with the help of peer tutors is better than students who are taught using the expository learning model.

2. There is an influence of the Guided Discovery Learning learning model with the help of peer tutors on the Self Efficacy of class X students.

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REFERENCES [ARIAL, 12-POINT, BOLD, LEFT ALIGNMENT]

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