THE EFFECT OF THE THINK PAIR SHARE TYPE COOPERATIVE LEARNING MODEL ON STUDENTS' SELF-EFFICACY

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Abstract

The purpose of this study is to determine the influence of the *Think Pair Share (TPS)* type cooperative learning model on the level of self-efficacy of students compared to the expository model. The population in this study is all grade VIII of SMP Negeri 7 Tegal which totals 254 students. Sampling was carried out by *cluster random sampling* technique selected by the experimental class of class VIII H, the control class of class VIII F, and the trial class of class VIII G. these research studies through questionnaires, tests and documentation. The data analysis used was *the Likert Summated Rating* (LSR) method and the right-sided single-sided t-test, where the data had been tested for normality and homogeneity. The results of the study stated that: (1) the assessment of the level of self-efficacy of the experimental class exceeded 50% with a score of 80%. (2) the level of self-efficacy of students taught using the Think Pair Share (TPS) type cooperative learning model is better than using the expository model. So it can be said that the TPS learning model has a positive effect on the level of self-efficacy of students.

Keywords: Influence, TPS, self-efficacy.

1 INTRODUCTION

Significant changes and advancements occur over time, especially in the education sector. One form of formal path, education aims to improve and develop the quality of human resources. According to Syafriatna (2018), education also plays an important role in achieving national development goals. The goal is to prepare students for the challenges of a developing world. Mathematics is one of the areas of knowledge taught in schools. According to Fauzan & Syarif (2019), mathematics is expected to help students communicate a concept, model problems, and solve problems. According to Nataria Oktaviani and Shaefur Rokhman n.d., mathematics is also a universal science that contributes to the development of modern technology, as well as advancing human thinking.

In solving math problems, confidence is very important so that students do not make the wrong decision. Self-efficiency is a very important component in the learning process because it allows students to cultivate an interest from within themselves in activities that they find interesting. Self-efficacy is a psychological component that greatly affects students' ability to solve problems and complete tasks (Gilar Jatisunda, 2017). A person's belief in their ability to organize and complete the tasks necessary to achieve a particular outcome is known as self-efficacy (Bandura in Adicondro & Alfi 2011). In fact, self-efficacy already exists and is embedded in every student. Teachers can help and grow this self-efficacy to achieve certain goals, because the goal in question is achievement. In the same regard, Sihaloho. (2018) that achieving academic success really depends on a person's self-confidence.

Based on interview findings with mathematics teachers SMP Negeri 7 Tegal, Mrs. Noer Zilla Ayu Widiyasari, S.Pd., on December 21 revealed that the level of self-efficacy and mathematical reasoning ability of grade VIII students at SMP 7 Tegal is still relatively low. Students are reluctant to ask questions when facing difficulties because they are worried that they will get questions back from the teacher. Learning activities at SMP Negeri 7 Tegal also still use an expository learning model that emphasizes the process of delivering material orally from educators to students. Learning activities like this tend to make students passive and not actively involved during the learning process.

The application of existing learning models can allow the development of new learning models. One example is the cooperative learning model. Think Pair Share (TPS) is one of the many types of cooperative learning. It is possible to create new learning models by the application of current ones. The cooperative learning approach is one illustration. Consider Pair Share (TPS) is among the various forms of cooperative education.

In this type, students are given the opportunity to think, discuss, ask questions, answer, and help each other according to their opinions (Kamil et al., 2021). This model can create an effective and engaging learning experience (Kamil et al., 2021). Thus, this learning model can increase students' self-efficacy because it gives them many opportunities to think, respond, and share (Trianto, 2011).

From the various descriptions above, An effective learning model is needed to improve students' mathematical reasoning abilities and independence. Therefore, there needs to be a lot of variation of the model to prevent students from getting bored.

METHODOLOGY

This research was conducted using a quantitative approach. This research was conducted through an experimental method. How the TPS learning model influences students' self-efficacy is the researcher's goal.This is in line with the idea that experiments are causal research, but by changing causal variables. (Barlian, 2016)

The design used is *Posttest-Only Control Group Design*. The experimental group and control group in this study were randomly selected. This study was only conducted post-test because we wanted to find out the effect of the TPS model on the level of self-efficacy in both groups, namely the experimental group that was subjected to the TPS learning model and the control group that was subjected to the expository learning model.

Table 1. Research Design

He	Group	Early observations	Treatment	Post tests
1	Eksperimen	T_1	X_1	Q_1
2	Control	T_2	X_2	Q_2

Research variables concern the difference between an object and other objects in a population, with varying values. These variables are categorized into two types, namely independent variables and *dependent variables* (Barlian, 2016) The independent variable is the TPS learning model (X), while the variable is bound by self-efficacy (Y).

To reach a conclusion, the term "population" refers to a generalized area that includes a subject or object with qualities and characteristics that the researcher has determined to investigate. This research involved students of SMP N 7 Tegal grade VIII, which were in 8 classes and totaled 254 students, during the even semester of the 2023/2024 academic year. In this study, three class groups from eight existing classes were taken as samples. Questionnaires, tests, and documentation are the data collection methods used in this study. Before the tool can be used in research, its validity must be tested. The results of the Microsoft Exel calculation show that the Y variable is declared valid as many as twenty questions.

RESULT

Analysis Prerequisite Test

Before conducting a hypothesis test, a prerequisite test is first carried out, namely the normality test and the homogeneity test.

Normality Test

Based on the results of the normality test using *Microsoft Exel*, it shows that in the experimental and control classes, the following values are obtained:

Table 2. Normality Test Results

Group	L_{hitung}	L_{tabel}	Information
Eksperimen	0,1193	0,1566	USUAL

Control	0,1358	0,1566	USUAL

Table 2 shows that the value is < or it can be concluded that the research data is normally distributed. $L_{hitung}\, L_{tabel}$

Homogeneity Test

Based on the results of the homogeneity test using *Microsoft Exel*, it shows that in the experimental and control classes, the following values were obtained:

Table 3. Homogeneity Test Results

Variable	X^2_{hitung}	X^2_{tabel}	Information
Y	0,0509	3,8410	HOMOGENEOUS

Table 3. shows that the value is < or it can be concluded that the research data is homogeneous. $X^2_{hitung} X^2_{tabel}$.

3. 2 Hypothesis Testing

Hypothesis

H_0 : There was no effect of the TPS-type cooperative learning model on students' self-efficacy compared to the expository model.

H_a : There is an effect of the TPS-type cooperative learning model on students' self-efficacy compared to the expository model.

Hasil Tes Likert Summarted Rating (LSR)

This method is used to determine the percentage of effectiveness of the TPS learning model at the level of self-efficacy reaching 50%. The summary of the analysis *of the Likert Summarted Rating* (LSR) Method is as follows:

Table 4. Quartile-Based Effectiveness Levels

Quartile Position	Level of Effectiveness
-B to D Q_1	Highly ineffective
> to $Q_1 Q_2$	Ineffective
> to $Q_2 Q_3$	Effective
$>Q_3$ to A	Highly effective

A = respondents x highest score x number of statements

= 32 x 4 x 20

= 2560

B = respondents x lowest score x number of statements

= 32 x 1 x 20

= 640

After specifying the values A (upper bound), B (lower bound), and n then define the quartile values:

Q_2 == $\frac{(A+B)}{2}\frac{(2560+640)}{2}$ =1600

$Q_1 = \frac{(B+Q_2)}{2} = \frac{(640+1600)}{2}$ =1120

$Q_3 = \frac{(A+Q_2)}{2} = \frac{(2560+1600)}{2}$=2080

Table 5. Quartile Calculation Results

Q_1	Q_2	Q_3	Assessment Score
1120	1600	2080	2059

Based on Table 4.11 obtained Quartile scores, it can be seen that the total assessment score is 1974 >Q_2, meaning that the TPS learning model is effective at the level of self-efficacy, this can be seen in Table 3.9. Next, to find out the percentage of effectiveness value with the formula:

Effectiveness percentage = x 100%$\frac{Skor\ penelitian}{A}$

= x 100%$\frac{2059}{2560}$

= 80%

From these results, it is proven that the Think Pair Share (TPS) *type cooperative learning model* is very effective in increasing student effectiveness because it has exceeded 50%.

Self-efficacy Right Hand One-Party Test

The data analysis using the right-hand one-party t-test is as follows:

T = $\frac{\bar{y}_E - \bar{y}_K}{S\sqrt{\frac{1}{n_E}+\frac{1}{n_K}}}$ the mana of S = $\sqrt{\frac{(n_E-1){s_1}^2+(n_K-1){s_2}^2}{n_E+n_K-2}}$

(The Devil's Nest, 2017:144)

Information:

$\bar{y}_E$: Average of the experimental class

$\bar{y}_K$: Average control class

n_E : Number of samples of the experimental class

n_K : Number of control class samples

S : Installment Deflect

${s_1}^2$: Variations of experimental classes

Table 6. Results of the Right One-Party T-Test

t_{hitung}	t_{tabel}	Conclusion
3,0743	1,6701	Rejected

Based on the results of the t-test, one of the right parties using *Microsoft Exel* shows that the values = 4.3418 and = 1.9990. Because t_{hitung} >t_{tabel}, Ho was rejected, meaning that the average self-efficacy of students taught using *the Think Pair Share (TPS) type cooperative learning model model was better than that of students taught using the expository learning model.*

CONCLUSIONS

The results of data analysis conducted at SMP Negeri 7 Tegal on grade VIII students in the even semester of the 2023/2024 school year, with an independent curriculum on statistical materials show that the TPS learning model shows positive results in the level of student self-efficacy. This is because students are more motivated to learn mathematics, more confident, more willing to be active and think critically, and are used to expressing their opinions. As a result, students can moderate their doubts in themselves, this can be proven by the results of the research that has been carried out.

The results of the first hypothesis using the Likert Summarted Rating (LSR) method showed a score of 80% and an assessment of the level of self-efficacy exceeding 50%. The right-sided single-sided t-test showed that students' mathematical reasoning ability and self-efficacy level were better in the TPS

learning model than in the expository model. This is evidenced by the average self-efficacy questionnaire score of 77.11 for students in the experimental class and 70.2 for students in the control class. The analysis shows the hypothesis that the TPS learning model has a positive impact on student efficiency.

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