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# A Study of the Implementation of the Discovery Learning Model on the Speaking Skills of Class VIII Students at Madrasah Tsanawiyah Darul Ulum Sasa, Ternate City

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**Abstract**

This research aims to find out the percentage of students' speaking skills completed before and after using the discovery learning model at the students of Madrasah Tsanawiyah Darul Ulum Sasa and to find out whether the discovery learning model is effective in improving students' speaking skills. The method used in this research is an experimental method of Quasi-Experimental Research with a research design of One Groups Pretest-Posttest Design. The result of the percentage of students' mastery speaking skills value is very high after the application of the discovery learning model, 97,96% compared to the percentage of students speaking skills mastery scores before the implementation of the discovery learning model. The average value of the students' speaking skills after the application of the discovery learning model is 84,41 was higher than the average value of the students' speaking skills before the application of the learning model is 53,47. There is a relationship between the students' speaking skills scores before (pretest) and after (posttest) the application of the discovery learning model is 55.2%. The percentage of the effectiveness of the application of the discovery learning model in increasing the value of students' speaking skills is 66.95%.

Keywords: *Speaking Skill, Discovery Learning Model*

## 1. Introduction

The discovery method is defined as a teaching procedure that emphasizes teaching, individuals, object manipulation, and experimentation, before arriving at generalizations. So

that the discovery method is a component of educational practice which includes teaching methods that promote active learning, process-oriented, self-directing, self-seeking, and reflection (Suryo, 2009:178), as well as discovering new knowledge or concepts for themselves.

The use of discovery learning methods is intended so that students are more active in the classroom during the English learning process. An educator must be able to recognize and help students who are less involved and investigate the causes, as well as what efforts can be made to increase student activity, educators must be able to adapt teaching to the needs and understanding of students. This is very important to increase the effort and desire of students to think actively in learning activities.

Teachers can use discovery learning methods in the process of learning speaking skills so that the use of the lecture method is reduced, students become active, and students can determine their teaching materials by searching and finding them. Based on the results and discussion of classroom action research, it can be concluded in general that the discovery learning method can improve speaking skills (Efendi, 2012).

Based on the description of the background above, the researcher wants to find out the percentage of students speaking skills completed before and after using the discovery learning model at the students of Madrasah Tsanawiyah Darul Ulum Sasa and to find out whether the discovery learning model is effective in improving students' speaking skills or not.

## 2. Theoretical Basis

### *Definition of speaking skills*

(Fulcher, 2003) states that speaking is the use of language verbally to communicate with other people. In addition, (Rizkiah, 2014) said that speaking is an act of conveying information and expressing feelings. (Mufaidah, 2014) Adds that "talking is an interactive process of constructing meaning that involves the production, reception, and processing of information". In addition, (Brown, 2001) states that speaking is one of the most important language skills to be mastered by students to become good communicators.

The ability to use language as a communication tool is often one of the indicators of speaking success. (Nunan, 2003) Argue that speaking is an important aspect of language learning either as a second language or a foreign language that can be measured from students' abilities in the learning process. To improve speaking skills, students must practice their speaking in learning because, without speaking skills, it is impossible to have good communication between people.

Based on the above definition, speaking is something that is used orally as an activity, Speaking is also used for many different purposes and each purpose involves different skills such as, expressing ideas, conveying ideas, clarifying information, express our intentions and goals.

In addition, speaking is one of the important skills in expressing ideas, opinions, or feelings to others. Speaking is also very important in life because all the activities we do use communication. With communication, people can create a relationship, inform, share, and find information. Therefore, people can do whatever they need through communication. In this case, speaking is a skill needed by students to convey their ideas, ideas, and opinions to communicate easily.

***Discovery Learning***

Discovery learning is one of the teaching methods suggested in this curriculum. This method requires students to find the target information or conceptual understanding independently through the material provided with minimal guidance such as manuals, simulations, feedback, and examples of problems (Alfieri, 2001). In line with that, (Gholamiah, 2013) states that in this method, the teacher does not directly teach the subject, but facilitates students to find and find themselves. Furthermore, (Ramdhani, 2017) argues that in principle in discovery learning, the teacher conveys material not in a final form to encourage students to find their knowledge. Then, they combine it with their existing knowledge to reach a final understanding. In conclusion that discovery learning expects students to find a fact or topic through activities and experiments because the teacher does not present it directly at the beginning.

***The procedure of Discovery Learning***

The stages according to (Culture, 2014) are the stages in learning that apply There are 6 Discovery Learning, namely:

*a) Stimulation*

First of all, students are faced with something that confuses, them and then proceeds not to give generalizations, so that there is a desire to investigate on their own. In addition, the teacher can start learning activities by asking questions, recommending reading books, and other learning activities that lead to the preparation of problem-solving. Stimulation at this stage serves to provide conditions for learning interactions that can develop and assist students in exploring the material.

*b) Problem statement*

At this stage, the teacher allows students to identify as many problem agendas as possible that are relevant to the subject matter, and then one of them is selected and formulated in the form of a hypothesis (temporary answers to problem questions).

*c) Data collection (Data Collection)*

When the exploration takes place, the teacher also provides opportunities for students to collect as much relevant information as possible to prove whether the hypothesis is true or not. At this stage, the function is to answer questions or prove whether the hypothesis is true or not. Thus, students are allowed to collect various relevant information, read literature, observe objects, interview resource persons, conduct their trials, and so on.

*d) Data Processing*

Data processing is an activity to process data and information that has been obtained by students either through interviews, observations, and so on, and then interpreted (Syah, 2004:244). All information from reading, interviews, observations, and so on, is all processed, randomized, classified, tabulated, even if necessary, calculated in a certain way, and interpreted at a certain level of confidence.

*e) Verification*

At this stage, students conduct a careful examination to prove whether or not the hypothesis that has been set is correct with alternative findings, linked to the results of data processing (Syah, 2004:244).

*f) Generalization*

The generalization stage/concluding is the process of drawing a conclusion that can be used as a general principle and applies to all events or the same problem, taking into account the results of the (Syah, 2004:244) verification. Based on the verification results, the principles underlying the generalization are formulated.

***Teacher Role in Discovery Learning***

In the discovery learning model, the teacher acts as a mentor by providing opportunities for students to learn actively, as the opinion of the teacher must be able to guide and direct student learning activities according to the objectives. Conditions like this certainly change teaching and learning activities that were originally teacher oriented to become student-oriented. Therefore, students should be allowed to become problem solvers, a scientist, historians, or mathematicians. (Budiningsih, 2005) says that the learning process will run well and creatively if the teacher provides opportunities for students to find a concept, theory, rule, or understanding through examples that he encounters in his life. According to Bruner, is to make students play the role of a problem solver, scientist, historian, or mathematician. With these activities, students will master them, apply them, and find things that are useful for them.

## 3. Methods

This research is descriptive and aims to describe the percentage of mastery values of speaking skills before and after the use of the discovery learning model.

The method used in this research is an experimental method of Quasi-Experimental Research with a research design of "One Groups Pretest-Posttest Design". According to (Sugiono, 2019) "One Group Pretest-Posttest Design" is a design that uses a pretest before being given treatment and a posttest after being treated, thus the treatment can be known more accurately because it can compare with the situation before being treated.

The population in this study were all in grade VII, VIII, and IX as much as 105 students, and the samples in this study were students in grade VIII A and VIII B Totaling 49 students.

The data collection technique in this study was by assessing the students' skills through a performance test in the form of a storytelling test and the data analysis techniques in this study using MS Excel 2010 and SPSS version 25 software tools.

## 4. Discussion

The data from this research are the results of the students' speaking skills assessment during the teaching and learning process in class. The pretest value is the value of the students' speaking skills at the first meeting where the teaching and learning process is carried out directly before the application of the discovery learning model. And the post-test value is the value of the students' speaking skills taken after the application of the discovery learning model. The data on the students' pretest and posttest speaking skills are presented in Table 41 as follows

**Table 4:1 Data on Participants' Speaking Skills Assessment Score**

| No | Student | The score of Students' Speaking Skills | |
|---|---|---|---|
| | | Pretest | Posttest |
| 1 | AK | 52 | 88 |
| 2 | AL | 52 | 88 |
| 3 | AR | 56 | 88 |
| 4 | DS | 56 | 84 |
| 5 | DAI | 52 | 80 |
| 6 | DJ | 52 | 84 |
| 7 | AAW | 48 | 84 |
| 8 | FI | 52 | 84 |
| 9 | FB | 52 | 86 |
| 10 | IA | 56 | 86 |
| 11 | IL | 56 | 76 |
| 12 | MFT | 52 | 76 |
| 13 | MRR | 52 | 80 |
| 14 | MRR | 48 | 80 |
| 15 | MRA | 52 | 84 |
| 16 | MS | 60 | 84 |
| 17 | MRS | 56 | 86 |
| 18 | MR | 56 | 86 |
| 19 | NHU | 52 | 76 |
| 20 | RW | 52 | 76 |
| 21 | RA | 48 | 80 |
| 22 | SU | 52 | 80 |
| 23 | WH | 60 | 84 |
| 24 | MMM | 54 | 84 |
| 25 | MFM | 56 | 86 |

| No | Student | The score of Students' Speaking Skills | |
|---|---|---|---|
| | | Pretest | Posttest |
| 26 | MM | 48 | 86 |
| 27 | ASDM | 52 | 76 |
| 28 | ANM | 54 | 76 |
| 29 | AHE | 48 | 80 |
| 30 | AB | 48 | 88 |
| 31 | AY | 56 | 76 |
| 32 | AMMS | 52 | 84 |
| 33 | FA | 60 | 92 |
| 34 | FRRD | 44 | 92 |
| 35 | FRH | 60 | 92 |
| 36 | FBI | 44 | 88 |
| 37 | KS | 56 | 88 |
| 38 | MFM | 40 | 68 |
| 39 | MFTI | 48 | 84 |
| 40 | MIA | 64 | 92 |
| 41 | MRLB | 44 | 84 |
| 42 | MRI | 64 | 96 |
| 43 | SK | 68 | 92 |
| 44 | SS | 64 | 92 |
| 45 | ZRHK | 40 | 76 |
| 46 | DJ | 68 | 96 |
| 47 | NF | 64 | 88 |
| 48 | F | 60 | 96 |
| 49 | ZL | 40 | 84 |

In Table 4.1 it can be explained that the overall speaking skills score of students in the pretest has not reached the KKM value = 70 and in the post-test value, there is one student who gets a score below the KKM value. The highest score obtained by students in the pretest was 64 and the lowest was 40. Furthermore, in the post-test, the highest score obtained by students was 96 and the lowest was 68. From this data, it can be said that there was a significant increase in the acquisition of students' speaking skills after the application of the discovery learning model.

***Descriptive Analysis Results***

The research data in this study were analyzed using descriptive analysis to find out how the percentage of students speaking skills mastery scores before and after using the Discovery Learning Learning Model and the paired t-test statistic test and the N-Gain score test to determine whether the discovery learning model was effective in improving students' speaking skills. As a statistical calculation tool, MS Excel 2010 and SPSS version 25 software is used.

The results of the data analysis of the speaking skills of students before and after the application of the discovery learning model with a research sample of 49 samples can be seen in Figure 4.1.

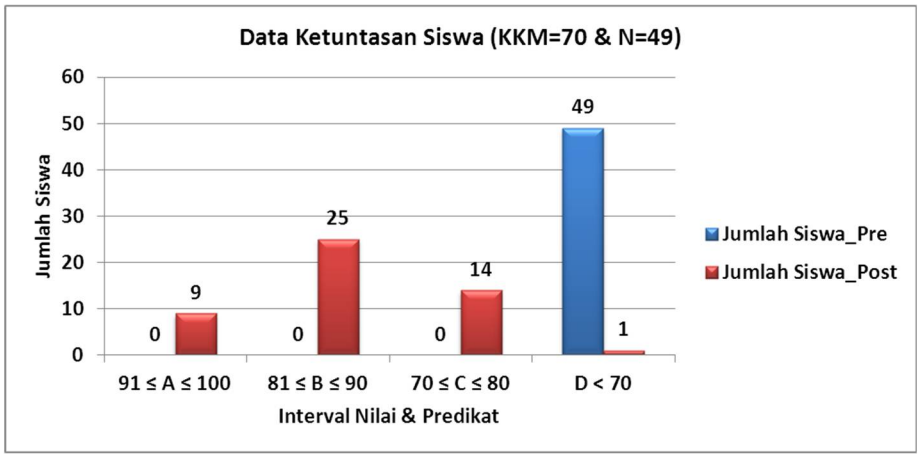


**Figure 4.1 Completeness data of students with KKM=70**

Based on Figure 4.1 above, describes the results of the students' speaking skills scores before (pretest) and after (posttest) the application of the discovery learning model. Students who have a score of less than 70 (predicates D) are declared incomplete because they have a value that is less than the Minimum Completeness Criteria (KKM) which is 70. The acquisition of student scores before the application of the discovery learning model (pretest) students who are declared not completed as many as 49 students or completely incomplete, and after the application of the discovery learning (posttest) learning model there was only 1 student who was declared incomplete from 49 students. Successively, the scores of students who were declared complete in the post-test were in the range of 70-80 with a predicate of C for as many as 14 students, in the range of values from 81-90 with a predicate of B for as many as 25 students, and in the range of values from 91-100 with a predicate of A as many as 9 students.

The data on the percentage of students' mastery before and after the application of the discovery learning model can be seen in Figure 4.2 below.

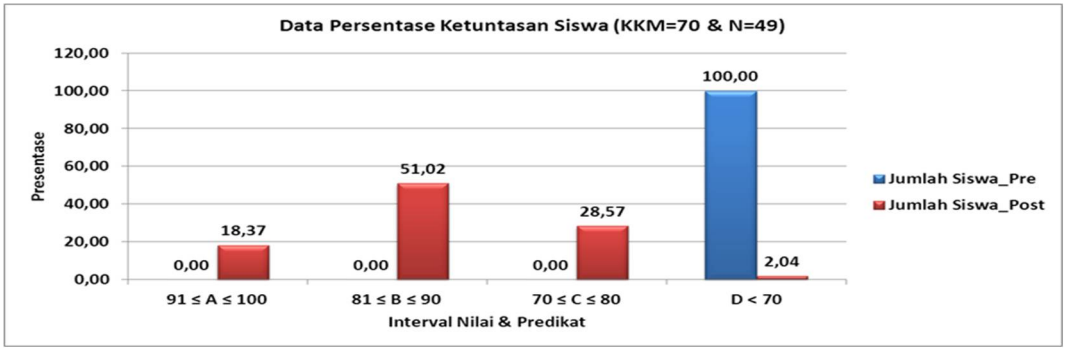


**Figure 4.2 Completeness data of students with KKM=70**

In Figure 4.2, it can be illustrated that the percentage of students' completeness before the application of the discovery learning model is 100% incomplete, and only 2.04% of students are incomplete after the application of the discovery learning model.

The highest percentage of students' scores after the application of the discovery learning model is as follows; in the interval value 81-90 with a B predicate of 51.02%, an interval value of 70-80 with a C predicate of 28.57%, and the interval value of 91-100 with an A predicate of 18.37 percent.

From the descriptive analysis, it can be illustrated that the percentage of student's mastery of speaking skills value is very high after the application of the discovery learning model compared to the percentage of students speaking skills mastery scores before the application of the discovery learning model.

***Analysis Result of Paired t-test and N-Gain score***

Statistical test paired t-test and test N-Gain score to determine whether the learning model of discovery learning is effective in improving students' speaking skills or not. At this stage, the statistical test begins with testing the normality of the research data using the normality test (Shapiro-Wilk). Normality test data can be seen in Table 4.2.

**Table 4.2 Normality Test Results of Pretest-posttest Research Data**

| Tests of Normality | | | | | | | |
|---|---|---|---|---|---|---|---|
| | pretest-posttest | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| Value result | pretest | .149 | 49 | .009 | .959 | 49 | .083 |
| | | | | | | | |
| | posttest | .167 | 49 | .001 | .955 | 49 | .057 |
| a. Lilliefors Significance Correction | | | | | | | |

In Table 4.2 above, the significance value of Shapiro-Wilk in the pretest is 0.083 and the posttest is 0.057. If you compare the criteria and hypotheses in the normality test, both pretest and post-test data are declared normally distributed because the Shapro-Wilk significance value of both data is > 0.05 or H0 is accepted. The continuation of the normality statistical test is the paired t-test, this statistical test is used if the data from the normality test is said to be normally distributed. The results of the paired t-test can be seen in Table 4.3.

**Table 4.3 Average Value and Standard Deviation of Paired t-test**

| Paired Samples Statistics | | | | | |
|---|---|---|---|---|---|
| | | Mean | N | Std. Deviation | Std. Error Mean |
| Pair 1 | Pretest score | 53.47 | 49 | 6.75 | .965 |
| | Posttest score | 84.41 | 49 | 6.14 | .877 |

In Table 4.3, it can be seen that the average value of the pretest is 53.47 and the posttest is 84.41 and the standard deviation is 6.75 and 6.14.

Respectively From these two average values, it can be concluded that the average value of students' speaking skills after the application of the discovery learning model is higher than the average value of students before the implementation of the learning model.

**Table 4.4 Value of the correlation coefficient of Paired t-test**

| Paired Samples Correlations | | | | |
|---|---|---|---|---|
| | | N | Correlation | Sig. |
| Pair 1 | Pretest Score & Posttest Score | 49 | .552 | .000 |

**Table 4.5 Paired t-test results from Pretest-posttest scores**

| Paired Samples Test | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Paired Differences | | | | | t | df | Sig. (2-tailed) |
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | | Lower | Upper | | | |
| Pair 1 | Pretest Score & Posttest Score | -30.93 | 6.12 | .875 | -32.69 | -29.17 | -35.358 | 48 | .000 |

In Table 4.5, from a sample of 49 students, the value of the correlation coefficient between the pretest and posttest scores is 0.552. This means that there is a relationship between the students' speaking skills scores before (pretest) and after (posttest) the application of the discovery learning model of 55.2%. The results of the analysis on the Paired t-test in Table 4.4 are obtained, at the degrees of freedom (df) = 48 the significance value (2-tailed) is 0.000. If this value is included in the criteria and hypotheses in the Paired t-test, it is obtained; significance value (2-tailed) < 0.05, then H0 is rejected (meaning there is a

significant difference, this means that there is an effect of applying the discovery learning model to increasing students' speaking skills value).

Next, test the N-Gain score to find out whether the discovery learning model is effective in improving the speaking skills of students or not. The results of the N-Gain score statistical test can be seen in Table 4.6.

**Table 4.6 Test Results N-Gain score**

| Descriptives | | | | |
|---|---|---|---|---|
| | | | Statistic | Std. Error |
| NGain_persen_ Pretest_Posttest | Mean | | 66.9525 | 1.63768 |
| | 95% Confidence Interval for Mean | Lower Bound | 63.6597 | |
| | | Upper Bound | 70.2453 | |
| | 5% Trimmed Mean | | 66.9048 | |
| | Median | | 68.1818 | |
| | Variance | | 131.417 | |
| | Std. Deviation | | 11.46373 | |
| | Minimum | | 45.45 | |
| | Maximum | | 90.00 | |
| | Range | | 44.55 | |
| | Interquartile Range | | 15.00 | |
| | Skewness | | -.114 | .340 |
| | Kurtosis | | -.415 | .668 |

**Table. 4.7 N-Gain Value and Interpretation Category**

**Gain Score Sharing**

| N-Gain score | category |
|---|---|
| g > 0,7 | Tall |
| 0,3 ≤ g ≤ 0,7 | Currently |
| g <0,3 | Low |

**Category Interpretation of N-Gain Effectiveness**

| Percentage (%) | Interpretation |
|---|---|
| < 40 | Ineffective |
| 40 - 55 | Less effective |
| 56 - 75 | Effective enough |
| > 76 | Effective |

In Tables 4.6 and 4.7, it can be seen that the percentage of the average N-Gain Score for the pretest and posttest values is 66.95%, or 0.67. This value is included in the interpretation of the Fairly Effective category or the moderate category.

From the data on the N-Gain t-test value of 66.95% or 0.67 above, it can be concluded that the percentage of the effectiveness of the discovery learning model in increasing the speaking skills of students is 66.95% or the Quite Effective category.

## 5. Conclusion

Based on the discussion above, it can be concluded that the percentage of student's mastery of speaking skills value is very high after the application of the discovery learning model is 97,96% compared to the percentage of students speaking skills mastery scores before the implementation of the discovery learning model is 100% incomplete. The average value of the students' speaking skills after the application of the discovery learning model is 84,41 was higher than the average value of the students' speaking skills before the application of the learning model is 53,47. There is a relationship between the students' speaking skills scores before (pretest) and after (posttest) the application of the discovery learning model is 55.2%. The percentage of the effectiveness of the application of the discovery learning model in increasing the value of students' speaking skills is 66.95% or the Quite Effective category.

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