

# The Effect of Team Assisted Individualization (TAI) Strategy on Students' Reading Comprehension

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**Abstract**—This study deals with the effect of Team Assisted Individualization (TAI) strategy on students' reading comprehension. It was conducted by using experimental research design. The population of this study was Grade Eight (VIII) students of MTs Ali Imron Medan with three parallel classes. The samples of this study were two classes divided into two groups, experimental and control group. The experimental group was taught by using Team Assisted Individualization Strategy, while the control group was taught by using Conventional Strategy. The instrument for collecting the data was multiple choice test of descriptive text. The data of this study were taken from the students' score of reading test. Kuder Richardson (KR20) formula was applied to obtain the reliability of the test. Based on the calculation, it showed that the reliability of the test was 0.82 categorized as very high reliability. There were two data used in this research. They were pre-test and post-test. Then, after analyzing the data, it was found that the value of t-observed was 4.28 with the degree of freedom (df) equation 58 at the level of significance p (0.05) equation 2.00. It means that t-observed is greater than t-table (4.28 greater than 2.00). The result of this study shows that Team Assisted Individualization Strategy has a significant effect on the students' reading comprehension. It means that the hypothesis is accepted.

**Keywords:** *team assisted individualization strategy, students' reading comprehension experimental design*

## I. INTRODUCTION

Reading is the most important skill in learning language besides speaking, writing, and listening. Reading comprehension is the ability to draw meaning from the printed page and interpret the information appropriately [1]. Reading comprehension is acquiring information from context and combining different elements into a new whole. It is a process of using one's existing knowledge to interpret text in order to construct the meaning. Based on researcher's experience in teaching practice in Junior High School level at SMPN 1 KUALA, many students find some difficulties in learning reading comprehension. They think that comprehending the text is a difficult task to do because they have to open dictionary,

look for the pronunciation of words, choose the suitable meaning, and getting main idea of the text.

Beside all of problems, each students have to reach score 75 as the number of minimum mastery learning (KKM). Students who have difficulties in reading comprehension will not easy to get that score. In pre-eminent class (VIII A), almost all of students or ninety seven percent (97%) can reach the KKM. While in class VIII B fifty three percent (53%), VIII C seventy eight percent (78%), VIII D forty five percent (45%), and VIII E sixty four percent (64%). Beside it, many students find some difficulties in reading comprehension. They think that comprehending the text is a difficult task to do because they have to open dictionary, look for the pronunciation of words, choose the suitable meaning, and getting main idea of the text.

However, many researchers concluded that the Indonesian people's ability in reading comprehension is still low. Vincent Grenary reported that students' reading ability (51.7 percent) in Indonesia, the final sequence after Phillipines (52.6 percent), Thailand (65.1 percent), Singapore (74.0 percent), and Hongkong (75.5 percent) [2]. It means the interest of Indonesian's students worst than students in other countries. Lee, Grigg, and Donahue stated that only 29 percent of all eight graders were able to comprehend at or above a proficient level, while 43 percent read at a basic level, and 28 percent were only able to comprehend a text well is over 70 percent [3]. TAI strategy is a strategy that can make students work in teams and have responsibility [4]. The result of the studies in individual is brought to group for being discussed together and all members in group responsible on overall answers. Students help each other in facing the problem and support each other to progress.

The significant of the study is aimed to find out which has more significant effect on reading comprehension: teaching reading with TAI strategy or teaching reading with Conventional strategy. It helps students to improve their comprehension skill because they have friends that can help them in solving their problems when they doing their tasks and to describes about something that they cannot understand. For this purpose, the researcher proposes a strategy named TAI strategy to provide long term support for students' development

in reading comprehension. The researcher uses this strategy because the strategy can make students easier when learning reading comprehension because they have friend who can help them to teach them when they confused about the task. Sometimes students feel afraid to ask the teacher. Therefore, in this strategy students are grouped in different academic ability, so that if they find a problem, they can ask their teammates. In this strategy, students are also taught to be responsible because every student has a problem that must be done by them.

Previous researcher by Awofala in conducted a research on “Effect of framing and team assisted individualized instructional strategies on student’ achievement in mathematics”. The research findings is using of team assisted individualization can improve students’ mathematics scores than other strategies were included in the research. The group TAI had the highest adjusted mean score of 11.139 followed by the framing strategy group (FRS) with 10.639, then the control group (CGS) with 8.889. Therefore, the team assisted individualized strategy is the most efficient of the treatment conditions and the direction of decreasing effect of instructional strategy on mathematics achievement is CGS<FRS<TAI. Awofala’s research is different with the writer. The writer focuses on conducted research in linguistic context, while Awofala focuses on mathematics. Thus, both researches give a positive effect to the students [5].

Another research was conducted by Husnun in her entitled “the effectiveness of using team assisted individualization to improve reading comprehension ability in narrative text for eighth grade students of SMPN 25 Purworejo”. The data analysis showed that the students’ scores after reading narrative text through team assisted individualization were higher than the students’ scores who read the text without team assisted individualization strategy. The data analysis showed that  $t_{\text{observed}} > t_{\text{table}}$  ( $4.98 > 2.00$ ). Research above which was conducted by Husnun is different with the writer research even both conducted a research on reading comprehension. The writer focuses on conducted research in descriptive text, while Husnun focuses on narrative text. However, based on the explanation above, the researcher concludes that the previous research supports this research. The researcher found that the implementation of Team Assisted Individualization Strategy has significant effect on students’ reading comprehension [6].

In TAI strategy, the teacher gives LKS (student worksheet) to the groups. Then they will be asked to discuss to understand the text and given problems (questions). Each member of the group work in one problem (question) as a form of shared responsibility. After do their group task, the will be asked to do the quiz by themselves about reading comprehension. TAI strategy more emphasis on group awards, individual responsibility and have equal opportunities to share the results for each group member. There are 8 steps in doing TAI

strategy: placement test, teams, teaching group, students group, team study and fact test [7].

In other words, reading comprehension is an achievement to use many abilities well to comprehend and to understand text easily. In addition, reading comprehension is a process of constructing meaning by coordinating a number of complex processes that include word reading, word and world knowledge, and fluency [8].

Reading comprehension is a complex task, which requires the orchestration of many different cognitive skills and abilities [9]. According the statements above, the writers conclude that reading comprehension is the ability to understand the text reading to obtain information from the text to add to the reader’s knowledge. Reading comprehension can also be interpreted as a process in which readers to construct meaning from written text. In these research the researcher used descriptive text, Knapp & Watskin state that description paragraph was a type of written text paragraph, in which has specific function to describe about an object and it has the aim that was giving description of the object to the reader clearly [10].

## II. METHODOLOGY

This study was conducted by using an experimental research design with pre-test and post-test. The design was applied in order to investigate the effect of applying TAI strategy on students’ reading comprehension. This study was conducted in experimental research design that is why the data on this study were quantitative data. Two classes consist of 60 students were taken as sample. They were experimental group and control group. Both of them were treated different. The students in experimental group were taught by using Team Assisted Individualization Strategy and in the control group were taught without Team Assisted Individualization Strategy. The population of this study was the students in eight grade of MTSS Ali Imron. They were VIII MTS 1 as experimental group and VIII MTS 2 as control group.

Ary stated that in its simplest form, an experiment has three characteristic: (1) an independent variable is manipulated; (2) another variables except the independent variable are held constant; (3) the effect of the independent variable on dependent variable is observed [11].

Table 3.1 Research Design

	Group	Pre-test	Independent Variable	Post-test
(R)	E	$Y_1$	X	$Y_2$
(R)	C	$Y_1$	-	$Y_2$

Where:

R : Random Assignment  
E : The Experimental Group

- C : The Control Group  
 X :The independent variable, which is manipulated by the experimenter  
 Y<sub>1</sub> :The dependent variable before manipulation of the independent variable  
 Y<sub>2</sub> :The dependent variable after manipulation of the independent variable

The experimental group was given the treatment. In experimental group, the students were taught by using TAI strategy. The treatment was expected to give good effect for reading comprehension skill. Meanwhile, in control group, the students were taught by conventional strategy. Before the treatment conducted, pre-test was administered into two groups to ensure the homogeneity. After the treatment, a post-test was administered. The data of this study was collected by applying multiple – choice test.

In scoring the test, the researcher determined the cumulative score ranging from 0-100 by counting the correct answer and applying this formula:

$$S = \frac{R}{N} \times 100\%$$

Where:

- S = Score of the test  
 R = Number of correct answer  
 N = Number of questions

In making good test as the instrument for measurement, the validity of the test should be considered. A test is really able to measure what it is intended to measure. To achieve the reliability, the researcher did the testing reliability in grade VIII MTS 3. Kuder Richardson formula (KR 20) was applied to the consistency of the measurement.

$$R = \frac{K}{K-1} \left( \frac{S_x^2 - \sum pq}{s_x^2} \right)$$

Where:

- R = reliability of the whole text  
 K = number of items on the text  
 $S_x^2$  = variance of scores on the total text (squared standard deviation)  
 p = proportion of correct responses on a single item  
 q = proportion of incorrect responses on the same item

In order to obtain the reliability of the test, the writer used Kuder Richardson (KR20) was applied as follows:

$$R = \frac{K}{K-1} \left[ \frac{S^2 - \sum pq}{S^2} \right]$$

- K = 25  
 S<sup>2</sup> = 21.6

$$\sum pq = 4.4$$

Where:

- K = number of items on the test  
 $\sum pq$  = the sum of the variance of all items, and  
 S<sup>2</sup> = the square of standard deviation of the score

$$R = \frac{K}{K-1} \left[ \frac{S^2 - \sum pq}{S^2} \right]$$

$$R = \frac{25}{25-1} \left[ \frac{21.96 - 4.4}{21.96} \right]$$

$$R = \frac{25}{24} \left[ \frac{17.56}{21.96} \right]$$

$$R = 1.04 [0.79]$$

$$R = 0.82$$

By having the calculation, it was found that the reliability of the test is 0.82. Based on the level of reliability, the reliability test is very high.

The normality was used in order to prove the pre-test of each group was normally distributed. To test whether the sample normal distributing or not, used normality test Liliefors. The steps are as follows:

- a. Find a raw number

$$Z_i = \frac{X_i - \bar{X}}{S}$$

In which:

- $\bar{X}$  : Mean of Sample  
 S : Standard Deviation

Table 4.3  
The Calculation of Testing Normality

No.	Data	L <sub>observe</sub>	L <sub>table</sub> (α=0.05; n=30)	Status
1	Pre Test of	0.0041	0.1580	Normal
2	Experimental Group	0.0322	0.1580	Normal
3	Post Test of	0.0667	0.1580	Normal
4	Experimental Group	0.0246	0.1580	Normal
	Pre Test of Control Group			
	Post Test of Control Group			

From the data above the researcher found that L<sub>observed</sub> < L<sub>table</sub> so the data were considered to be normally distributed.

Homogeneity is a condition in which all the variables in a sequence have the same finite or limited, and have a variance [12].



To find out the homogeneity of data, the homogeneity formula was used as follows:

$$F = \frac{\text{highest variance}}{\text{lowest variance}}$$

Testing criteria :

1. If  $F_{\text{observed}} > F_{\text{table}}$ , means that the both sample are not homogenous
2. If  $F_{\text{observed}} < F_{\text{table}}$ , means that the both sample are homogenous

$$F = \frac{214.88}{152.64}$$

$$F = 1.408$$

The result was conducted with the value of F table of  $F_{\alpha} = 0.05$  was  $F_{\text{table}} = 4.183$ , so  $F_{\text{observed}} < F_{\text{table}}$  ( $1.408 < 4.183$ ). The result of homogeneity test showed that there was homogenous. It was concluded based on the students' reading ability between the experimental group and control group on the pre-test where the F observe was lower than the F table that was 1.048 was lower than 4.183. By knowing the result of homogeneity test, the researcher concluded that the two groups were homogeneous so that the result could be continued on those two groups as the object of the study.

To find out the difference means of scores of the test between the experimental and control group, the researcher will use t-test formula [11]. The t-test formula is:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\left[ \frac{\sum X_1^2 + \sum X_2^2}{n_1 + n_2 - 2} \right] \left[ \frac{1}{n_1} + \frac{1}{n_2} \right]}}$$

Where:

- t :Total score  
Mx :The mean of experimental group  
My :The mean of control group  
 $dx^2$  :Standard deviation of experimental group  
 $dy^2$  :Standard deviation of control group  
nx :The total sample of experimental group  
ny :The total sample of control group

The statistical hypothesis to be tested in this study as follows:

- Ho:  $\mu_a = \mu_b$   
Ha:  $\mu_a > \mu_b$

Where:

- Ho = null hypothesis  
Ha = alternative hypothesis  
 $\mu_a$  = the means of the students' taught by applying TAI strategy  
 $\mu_b$  = the means of the students' taught by applying Conventional strategy

### III. RESULTS AND DISCUSSION

From the data which had been collected from experimental group, the highest score from experimental group was 80 and the lowest was 36 with the mean score was 55.4. While the highest in pre-test from control group was 80 and the lowest were 32 with mean 54. After conducting the treatment to the experimental group, there were the significant effect in the post test scores: the lowest was 52 and the highest was 88 with mean 66.53. While in the control group the lowest score was 40 and the highest was 80 with mean 58.4. It means that the students who had using Team Assisted Individualization Strategy got better results in reading comprehension than those who had without applying Team assisted Individualization Strategy. By having the calculation, it was found that the reliability of the test is 0.82. Based on the level of reliability, the reliability test is very high.

In this research, the score of t-table for the degree of freedom (*df*) 58 (obtain from,  $N_1 + N_2 - 2 = 58$ ) at level of significance ( $\alpha$ ) 0.05 is 2.00. The result of computing t-test shoes that the score of t-test (4.28) is higher than the score of t-table (2.00). Based on the data above, it can be concluded that the students' achievement in reading argument text by using Team Assisted Individualization Strategy is higher than those who thought by using conventional strategy.

Table 4.4

The result of the t-test calculation

$t\text{-obs} > t\text{-table}$	$(\alpha = 0.05)$ with $df$ 58
$4.28 > 2.00$	$(\alpha = 0.05)$ with $df$ 58

The result of this research shows that there is a difference of output between both of the two groups. The statistical calculation showed that the t-observed (4.28) is higher than t-table (2.00) for degree of freedom (58) at the level of significance (0.05). This difference took place because of the treatment in both groups. The experimental group was taught by using conventional strategy. This findings shows that hypothesis of the study is true. Therefore, it concluded that team assisted individualization strategy significantly affect the students' achievement in reading comprehension.

The research finding of this study is that team assisted individualization strategy significantly affects reading

comprehension. The data analysis showed that  $t_{\text{observed}} > t_{\text{table}}$  (4.28 > 2.00).

#### IV. CONCLUSION

Based on the research finding, the researcher concludes that:

1. The students' that was taught by using TAI is higher than the students' that was taught by Conventional Strategy.
2. It is indicated from the data statistically that the result of calculation of t-test that t-observed is 4.28 is higher than t-table 2.00 (4.28 > 2.00) at the significant effect of 0.05, which implies that the alternative Hypothesis (Ha) is accepted.

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