The Comparison Between START and TAI Models in Improving SMP Students’ Reading Comprehension Ability

Triumph Sihombing, Caroline V. Katemba (Correspondence Author)
linakatemba@gmail.com, Universitas Advent Indonesia

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Abstract

This study was aimed to see whether there was a significant difference in students' improvements in reading comprehension ability after applying START (Students and teacher Actively Reading Text) and T-A-I (Team Assisted Individualization) models. (Methodology) This study used a quantitative research method and comparative design. The participants of the study were 63 students that were divided into two groups. Class VIIB students were taught through the START model and VIIC students were taught through the T-A-I model. The conclusion is: There was an improvement in the reading comprehension ability of students who were taught using START, categorized as moderate and T-A-I cooperative learning models, categorized as low. Moreover, there is a difference in the students reading comprehension improvement between those who acquired START and T-A-I teaching models.

Keywords: Reading comprehension ability, Narrative Text, Descriptive Text, START, T-A-I, Teaching Model.

Introduction

Reading comprehension is one of the key abilities for academic achievement, (Krieber, 2016). The main purpose of having good reading comprehension in the reading book is to gain all of the understanding that was exist in the written text. Unwittingly, everyone will need to improve their comprehension skill in order to find out information, knowledge, and the latest news from written text. People who love reading activity can improve his or her knowledge by reading any written text such as descriptive and narrative text that contains the main idea.

According to Anderson, Hiebert, and Wilkinson, (1985), cited in Alharbi (2015) that "the ability to read and comprehend efficiently is essential for meeting the needs of everyday life as well as for success in the academic arena". If the ability in comprehending reading is low, it means there are also difficulties in acquiring the knowledge while reading the books.
Rahmasari (2014) “Bandung as one of tourism object, particularly as culinary and shopping destination, is also strongly affected in the usage of English”. In this issue, strategies are needed to help students to easily comprehend English especially reading through activities in the classroom. “In the case of Indonesians, there is a high level of acceptability and tolerance of the use of English. The teaching of English in the school curriculum is given a higher priority over all other foreign languages in the school systems”. “Thus, the teaching of English as a Foreign Language (EFL) is, in fact, compulsory” (Katembaba, 2013). However, “as Indonesian students, they have already encountered problems with reading comprehension in Indonesian, the language that they’ve acquired and learned, they also find it way more difficult to read and comprehend reading in English, the foreign language that they do not acquire and learn it barely for a short time” (Siagian & Katembaba, 2016).

To solve the problem such as "there is a great level difference in terms of language skills of the students"(Burcu, 2015), that affect lack of the interest and low motivation in reading activities for the other students, the researcher is going to implement two models for reading activity groups in which these models need assistants as students' guide and helper in the group. START (Students and Teacher Actively Reading Text) model will be assisted by the researcher (Scarlash, 2008). While on the other class, students became the assistants in each group of study in the class that uses the T-A-I (Team Assisted Individualization) model (Slavin 2008).

Even though according to (Vadasy, Sanders, & Peyton, 2005) that "Opportunities for supplementary tutoring are difficult to create in school, and therefore tutoring activities must be carefully selected for ease and reliable use by tutors and evidence of treatment effectiveness".

START model includes making predictions and connections to ideas in text based on prior knowledge, constructing mental images that represent ideas in text, asking questions and seeking answers, and constructing summaries of what has been read (Pressley & Afflerbach, 1995). In this research, researchers taught and helped students to make predictions and connections to ideas, construct mental images, ask a question and seek the answer, and construct summaries of what will be read.

START model can be implemented to help students to be interesting and motivated in reading comprehension activity. Scarlash, (2009) said that the reason is that "The importance of self-selected text cannot be underestimated. By providing students choice of texts to read, students are more likely to be motivated to read, read more deeply, and may use metacognitive strategies more strategically than those who are assigned a text."(p,22). This way will make students be better in a learning activity.

T-A-I cooperative learning model was developed by Slavin (2008), in his cooperative learning, there are theory, research, and practice. Slavin explains that the basic thought of learning is the students will enter the class with knowledge, ability, and motivation diverse. When the teacher delivers the lesson to every group, it is likely there are some students who do not have the ability to learn the terms of the subjects. Other students know the material and can learn so quickly when the time is spent on learning.

According to Sihotang (2015), T-A-I model is combining the advantages of cooperative learning and individual learning. This type is designed to address individual student in learning difficulties students. Therefore, learning activities more effective used to solve the problem in students' learning. Characteristic of the T-A-I model is individual student learning material that will be prepared by the teacher.

According to Sanden (2014), the students will have motivation by seeing their friends' ability in learning the language in the group. The individual lesson will be brought to the group then the
students learn and discuss it in the group, and all group members have parts to be done in the group discussion. The cleverer students will have more responsibility to help the other students to understand the reading material in the group so the discussion about the topic will be better.

The researcher will use the START and T-A-I model for improving students' abilities in comprehending reading materials. In the two English classes that will be going to practice, the researcher will find out the effectiveness of START and T-A-I models to be used in English reading class for helping students' to have good comprehension in reading activity.

Statement of the Problem
Because reading comprehension is seen as a problem in reading activity, so the researcher wants to find out the result of the comparison between START and T-A-I models to increase students' reading comprehension. So the research question is as follow:
- Is there any difference in the reading comprehension improvement between students who are taught through the START model and students who are taught through T-A-I model?

Hypothesis
The hypothesis that was used in this research are:
Null Hypothesis (H₀): There is no difference in the reading comprehension improvement between students who are taught through the START model and students who are taught through T-A-I model.
Alternative Hypothesis (H₁): There is a difference in the reading comprehension improvement between students who are taught through the START model and students who are taught through T-A-I model.

The alternative hypothesis is this study hypothesis.

Scope and Limitation of the Study
The researcher implemented the START model in one of the schools in Parongpong at two Junior High School classrooms which one of that class used the START model and the other class used T-A-I model. The book that was used by the researcher was English Book for Grade VII as their textbook in the classroom. The purpose of this study was only to see the effectiveness of START and T-A-I model in developing students’ comprehension in reading.

Review and related literature
Reading Comprehension
Reading is one of the activities and as a component of the language skills to get the meaning from the kinds of text. Students actually will have difficulty to have communication if the students do not like reading. From reading texts, students surely will get many of vocabulary as a tool in the communication (Haris et al., 2006).

Reuzzel, Smith, and Fawson, (2005) said that comprehension of reading is like the process to construct meaning as a result of blending content and message of the text with the readers existing knowledge and skills during reader-text interaction (Pardo 2004). Reading comprehension will be having inferred and configure spontaneously.
Reading is the ability of someone to draw the meaning from the reading material and interpret this information appropriately. Grabe and Stoller (2002) said that comprehension of reading is a dynamic process that requires the reader to use multiple strategies and as constructed meaning, said Henderson and Buskist (2011).

Horowitz (2014) stated that reading comprehension is a complex cognitive process that depends upon a number of ingredients all working together in a synchronous, even automatic way. According to Sadikin (2008), reading comprehension is a process of giving the ideas and information that the author wants to convey the information available with the reader. In addition, reading comprehension is a tool to solve problems that the readers find in a text in which they need prior knowledge, and personal experiences to develop their comprehension as an effort in communication with information, ideas, and point of view (Moreillon, 2007).

Cooperative Learning
Cooperative learning is a teaching model by which students learn in small groups to achieve their goals. In their group, students will be divided by various abilities, gender and different levels of their knowledge and in their group, they can help each other (Polat, 2011).

According to Cafferty (2006) cooperative learning is a model which represents the product of ongoing investigation based on research and practice as to how to minimize the benefit the students’ interaction. Further, Jolliffe, Wendy (2007) stated that cooperative learning requires students to work to improve their own learning.

By using cooperative learning activities students can communicate with their peers and also help them become responsible people, and besides that, the students are able to improve their self-confidence (Abidin, 2013). Using cooperative learning also improves students' reading comprehension and not only their reading but by using cooperative learning students are able to be better readers and acquire higher reading comprehension (Odwan, 2012).

Cooperative learning is a teaching model that encourages every student to find out their own knowledge through the process. Students learn in small groups heterogeneous capabilities. According to Barkley, Cross, and Major (2012), cooperative learning model can be categorized; by improving the skills of each student, although it is important to know that a lot of cooperative learning exercises that can be categorized including discussion.

Students and Teachers Actively Reading Text (START) Model
"In the START classrooms, the teacher will model and scaffold the use of metacognitive comprehension strategies during read-aloud prior to student independent reading of self-selected texts," Scharlach (2009).

Scharlach (2009) continued that, "START focuses on improving the reading comprehension." It means START is one of the learning models that is useful to increase students' ability to understand reading material. In this method, the students will select their own texts to read from some choice texts.

Guthrie et al., 2004 cited in Scarlach, (2009) said that the reason is that “The importance of self-selected text cannot be underestimated. By providing students choice of texts to read, students are more likely to be motivated to read, read more deeply, and may use metacognitive strategies more strategically than those who are assigned a text.”(p,22). This way will make students better in a learning activity.

Alharbi (2015) wrote in a journal that "Reading comprehension skills can be acquired easily through positive communication between the educator and the learner." In this way, the
researcher will make a good and positive communication by giving them responsibility by choosing their own reading material depends on what kind of text that researcher will ask them to choose.

The researcher will use the same material in the START group and in the T-A-I group, by giving new kinds of reading text for students every meeting. The researcher will apply the START (Student and Teacher Actively Reading Text) model. The procedures of the START model are adopted from Scharlach, (2008): (1). The teacher will prepare some reading material and the kinds of reading material are narrative, descriptive, recount and procedure text. (2). Students will be divided into groups and each group consists of 4-5 students. (3). Students freely will choose what kind of reading material they want to read from what the teacher will prepare. (4). During the read-aloud, the teacher will use sticky notes to jot down each prediction, connection, question, main idea, summary, prediction check, and judgment and place the sticky note in the book as they are reading. (5). Before the next read-aloud session the teacher removes the sticky notes from the previous reading and put it into the appropriate boxes on the recording sheets. The process will be repeated with each new reading. (6). Before reading, the teacher will ask the students to write their predictions in a little paper about what they are going to teach. (7). During reading, students will make connections and questioning. (8). After reading, students will do summarizing, checking prediction, and making a judgment. (9). Each student will answer who, what, where, when, why, and how (5 W + 1 H) questions that will be given by the teacher. (10). As this is the START model, the student can ask the teacher about the topic and will read together.

There are characteristic of START according to Paris and Paris (2007) in the classroom. Teachers will model and scaffold the use of some following six strategies. (1). Making Connection, learners make a personal connection from the text (text to text), something occurring in the world (next to the world); (2). Predicting, learners use information from graphics, text, and experiences to anticipate what will read/viewed/heard and to actively adjust comprehension while reading/viewing/listening; (3). Questioning, learners pose and answer questions that clarify meaning and promote a deeper understanding of the text. Questions can be generated by the learner, a peer or the teacher; (4). Monitoring, learners stop and think about the text and know what to do when the meaning is disrupted; (5). Visualizing, learners create a mental image from a text read/viewed/heard. Visualizing brings the text to life, engages the imagination, and uses all of the senses; (6). Summarizing, learners identify and accumulate the most important ideas and restate them in their own words.

According to Sanden (2014), there are “Three major conclusions about the essential components of independent reading in the classroom of the teacher participants:

- teacher participants supported students’ reading independence;
- they focused on students' reading growth, and they were committed to student-centered practices.”

**T-A-I Model**

T-A-I (Team Assisted Individualization) model is one type of cooperative learning. T-A-I model can be translated as “Individual Assistance in Group”. T-A-I model is often interpreted as Team Accelerated Instruction (Dimyati dan Mudjiono, 2004). T-A-I is that the implementation of cooperative learning, students will be divided into small group heterogeneous. One of the important points that must be considered to form a heterogeneous group here is the students’ academic ability. Each group will comprise of 4-5 students. Each member of the group has the responsibility of each (Anita, 2010).
The individual instruction in class will be difficult to finish the task that makes students not effective to understand the task. So, T-A-I model will make an alternative study at every learning unit (Duplas, 2012). Type T-A-I model combines cooperative learning with individual study.

T-A-I is a cooperative learning model that was developed by Slavin (2008). In his cooperative learning, there are theories, research, and practice. He explained that the basic thought of learning is the students will enter the class with knowledge, ability, and motivation diverse. When the teacher delivers the lesson to every group, it is likely there are some students who do not have the ability to learn the terms of the subjects. Other students will know the material or can learn so quickly that the time will be spent on learning.

Generally, the groups will work on different units. Group work will check each work again of the answer sheets, and help one another with any problems. On the final, unit tests will take without groups helping and will score by student monitor. Each week, the teacher will total the number of units by all team members.

Suyitno (2007) stated learning T-A-I model has several steps for instance: (1). The teacher gives the task to the students individually. (2). The teacher provides individually quiz. (3). The teacher forms several groups and each group consists of four or five students which each group has the cleverer student of whole students in the classroom. (4). The individual student learning result will be discussed in the group. (4). The teacher will be the guide of the students to make a summary of the study, (6). Teacher gives the quiz to the students individually.

There are several steps in the procedures of T-A-I model: (1). The teacher introduces the lesson plan and the use of T-A-I model to the students, and ask their responses by giving the time for answering and questioning. (2). In the first treatment, the teacher will give the placement test about reading comprehension, where the material is taken from students' textbooks. (3). By the result of the placement test, the teacher will form the groups that consist of 4-5 students in each group. (4). Every meeting the teacher will administer and explain the material to each group, then the students learn individually, and when some of them are done, they can help each other. (5). After studying the group, then each group has to do the comprehension exercises based on the reading material, and the teacher takes the score based on the group of the students. (6). When one material is finished, the teacher will guide the students to make a summary of the material as a whole associated with problem-solving strategies. (7). And at the end of the study, the teacher will give the quiz to the students individually.

According to Slavin (2008), there are some advantages of using T-A-I model for instance: (1). To improve motivation in learning. (2). Reducing disruptive behavior and interpersonal conflicts. (3). Can help the slower students. (4). Students get an award in their efforts. (5). The teacher guides the students to work in a group effectively. (6). The faster students having increased by their ability in creativity.

Research methodology

This research used a quantitative method with experimental research. This experimental design compared two models for the students reading comprehension improvement between the START model and T-A-I model.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Pre-test</th>
<th>Treatment</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>START Model</td>
<td>Y</td>
<td>X₁</td>
<td>Y</td>
</tr>
<tr>
<td>T-A-I Model</td>
<td>Y</td>
<td>X₂</td>
<td></td>
</tr>
</tbody>
</table>
Explanations:
Y: Student's reading comprehension scores in pre-test and post-test
X1: START cooperative learning model
X2: T-A-I cooperative learning model

Participants
In this research, the participants were the seventh-grade students of SMPN 3 PARONGPONG, Bandung Barat. The students of grade VIIB were the experimental group who have been taught with the START model and the students of grade VIIC were the experimental group who have been taught with the T-A-I model. There were 32 students in the START group and it was assisted by the teacher in each group activity. In T-A-I group, there were 33 students and they were assisted by students in each group activity. The total of the two groups were 65 students. They were around 12 to 14 years old.

Research Instrument
The instrument of this research was the reading comprehension test for pre-test and post-test. Pre-test and post-test were multiple-choice questions that were taken from valid questions after calculating the pilot test result that was conducted to grade VIIID SMP students. The total of valid multiple-choice questions were fifty of sixty questions. The pre-test has been designed to measure the ability of the students in reading before START and T-A-I models have been applied. The post-test was designed to see the result of the study after applying START and T-A-I model. The researcher used English Book for Grade VII SMP that they used in their classroom.

Procedures
The START group and the T-A-I group were given different treatments. The START group has been treated by using the START model, and the T-A-I group has been treated by using T-A-I model.

There were ten meetings that have been conducted for both groups included pre-test and post-test. The duration for each meeting was 70 minutes; each meeting consists of pre-activity, main activity, and post-activity.

<table>
<thead>
<tr>
<th>START</th>
<th>T-A-I</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Before Reading</td>
<td>1. Before Reading</td>
</tr>
<tr>
<td>a. The teacher introduces</td>
<td>a. The teacher introduces</td>
</tr>
<tr>
<td>the lesson plan and the use</td>
<td>the lesson plan and the use</td>
</tr>
<tr>
<td>of the START model.</td>
<td>of T-A-I model.</td>
</tr>
<tr>
<td>b. Students freely choose</td>
<td>b. The teacher is who decides</td>
</tr>
<tr>
<td>the reading material that</td>
<td>what reading material that</td>
</tr>
<tr>
<td>they are going to read from</td>
<td>students are going to read.</td>
</tr>
<tr>
<td>a choice of given texts.</td>
<td>c. Teacher divides students</td>
</tr>
<tr>
<td>c. Teacher divides students</td>
<td>in the group.</td>
</tr>
<tr>
<td>into groups.</td>
<td>2. During Reading</td>
</tr>
<tr>
<td>2. During Reading</td>
<td>2. During Reading</td>
</tr>
</tbody>
</table>
a. One by one, the students in the group read aloud their chosen texts.
b. The teacher will use sticky notes to jot down prediction, visualization, connection, question, main idea, summary, prediction check, and judgment.
c. Students place the sticky note in the book as they are reading.
d. Students can ask the teacher about the topic.

3. After Reading
a. Each student will answer 5W + 1H questions that will be given by the teacher.

b. When some of them have done the reading, they can help the other to comprehend the reading material.
b. The teacher takes the score based on the group.
c. The teacher will guide the students to make a summary.
d. The end of the study, the teacher will give the quiz to the students individually.

Result and discussion

Pre-test, Post-test, and Normalized Gain

<table>
<thead>
<tr>
<th></th>
<th>The group with START Model</th>
<th>The group with T-A-I Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>St. Deviation</td>
</tr>
<tr>
<td>Pre-test</td>
<td>52.1875</td>
<td>13.28871</td>
</tr>
<tr>
<td>Post-Test</td>
<td>67.3125</td>
<td>13.92488</td>
</tr>
<tr>
<td>Normalized Gain</td>
<td>0.327035</td>
<td>0.17664</td>
</tr>
</tbody>
</table>

It can be seen that both of the groups of students improved their reading comprehension ability. It can be seen that both of the groups of students improved their reading comprehension ability. The group of students who acquired the START learning model showed moderated improvement it is because the Normalized Gain value = 0.327035. The value was between 0.31-0.70 of a moderate level of Normalized Gain. The group of students who acquired the T-A-I learning model showed low improvement and it was because the Normalized Gain value = 0.234225. The value was between 0.00 - 0.30 of the low level of Normalized Gain.

Normality Test
1. The reading comprehension improvement data of students of the START group was normally distributed because ρ value (sig) = 0.318 was bigger than α = .050.
2. The reading comprehension improvement data of students of T-A-I group was normally distributed because ρ value (sig) = 0.842 was bigger than α = .050.
Tests of Normality

<table>
<thead>
<tr>
<th>GROUP</th>
<th>Shapiro-Wilk Statistic</th>
<th>Df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALUE</td>
<td>.962</td>
<td>32</td>
<td>.318</td>
</tr>
<tr>
<td>T-A-I</td>
<td>.982</td>
<td>33</td>
<td>.842</td>
</tr>
</tbody>
</table>

* This is a lower bound of the true significance.
a Lilliefors Significance Correction

From the table above, it can be seen that since the sig. value Normality Tests were larger than 0.05, it can be concluded that the reading comprehension improvement data of students of START and T-A-I groups were normally distributed.

Test Homogeneity of Variance

Test of Homogeneity of Variances

<table>
<thead>
<tr>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>.410</td>
<td>1</td>
<td>63</td>
<td>.525</td>
</tr>
</tbody>
</table>

Since the sig. value is 0.525, is larger than 0.05, it can be concluded that the population's normality gain has homogenous variances.

Comparing Means Analysis
Since both of the normalized gains of the reading comprehension were normally distributed, a t-test was used to compare the means.

Independent t-test

<table>
<thead>
<tr>
<th>VALUE</th>
<th>Equal variances assumed</th>
<th>Levene's Test for Equality of Variances</th>
<th>F</th>
<th>Sig.</th>
<th>T</th>
<th>Df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALUE</td>
<td>Equal variances assumed</td>
<td>.410</td>
<td>.525</td>
<td>2.167</td>
<td>63</td>
<td>.034</td>
<td></td>
</tr>
</tbody>
</table>

The row of equal variances assumed used because the population variances were homogenous. It can be seen from Table 4.4 above that the sig. value = 0.034 is lesser than }
0.05. So, there was a significant difference in the students reading comprehension improvement between those who were taught through using the START cooperative learning model and those who were taught through using T-A-I cooperative learning model.

Discussion of Findings Result

From both START and T-A-I model, the START model could improve students' reading comprehension ability more than T-A-I model. It can be seen from the difference of normalized gain in Table 4.1. It is supported by the study of Guthrie et al., 2004 cited in Scarlach, (2009) said that the reason is that “The importance of self-selected text cannot be underestimated. By providing students choice of texts to read, students are more likely to be motivated to read, read more deeply, and may use metacognitive strategies more strategically than those who are assigned a text.”(p,22). This way will make students be better in a learning activity.

Sanden (2014) said the students will have motivation by seeing their friends' ability in learning the language in the group. In this research, there was an improvement in the reading comprehension ability of T-A-I model that is shown in T-A-I model column in Table 4.1. There were the differences between pre-test and post-test gain in T-A-I model.

After calculating the data, there was an improvement in students' reading comprehension ability both of the group by seeing Table 4.1. A researcher could see the difference between START and T-A-I models in improving reading comprehension ability.

In finding the result, it seems clear that there is an improvement in START and T-A-I models in SMPN 3 Parongpong. It is proven Table 4.1, the value of pre-test, post-test, and gain of both START and T-A-I models.

Conclusion

Summary

This research is entitled "THE COMPARISON BETWEEN START (STUDENTS AND TEACHER ACTIVELY READING TEXT) AND TAI (TEAM ASSISTED INDIVIDUALIZATION) MODELS IN IMPROVING READING COMPREHENSION ABILITY". The research question "Is there any significant difference between students who are taught through START and T-A-I model in improving reading comprehension ability?" A researcher could give the answer through the data collection.

The researcher did this study to the first year of Junior High School at SMPN 3 Parongpong, Bandung Barat. Where the participants of the two classes consisted of 31 students in the START group and 32 students in the T-A-I group. The pre-test was conducted on 20th February 2017 to the START group and the T-A-I group, the treatments started on 21st February 2017 for both groups. The post-test was done on 21st March 2017. The implementations of the treatment were 16 hours of learning in each group. After getting and analyzing the data, the researcher had the following findings:

For the START group, the mean of pre-test was 52.1875 and the mean of the post-test was 67.3125 while the gain means was 0.327035. It means there is an improvement in using the START model to improve students' reading comprehension ability and it was categorized as moderate because the value was between 0.31 - 0.70 of a moderate level of Normalized Gain.

For the T-A-I group, the mean of the pre-test was 53.8788 and the mean of the post-test was 64.7273 while the gain means was 0.234225. It means there is an improvement in using T-A-
I model to improve students' reading comprehension ability and it was categorized as low because the value was between 0.00 - 0.30 of the low level of Normalized Gain. Both of the groups of students showed improvement in their reading comprehension ability. Furthermore, there were differences in the reading comprehension improvements between those who were taught using START and T-A-I cooperative learning models.

**Recommendation**

Based on this study, the researcher would like to give a recommendation for reading learnings model as the followings:

**Educator**
The educators can add the START model as one of the learning models in English subject curriculum to help students in improving their reading comprehension ability. Even though this model needs the liveliness of the teacher, but this model can make students easy to understand and comprehend the lesson topic of what they want to learn from given reading materials that they can choose.

**English Teacher**
The teachers can apply the START model in English lesson class because freedom of the students to learn something can help them easier to understand the lesson in reading activity. So, by choosing reading text from given materials freely, students can enjoy their reading activity.

**References**

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**Journals**


Web


Articles