The Effects of DRTA Reading Technique on the Senior High School Students' Reading Comprehension Achievement and Reading Behaviors

Maria Agatha Dinda Paskarini

Abstract. This study was done to find out the effect of DR-TA to Senior High School students' reading comprehension and also their reading behavior during the reading activity. In order to answer the problems formulated, the experiment was held, two classes were used. One class was the control class and another was the experiment class. The subjects of the study were students from Grade XI social program of Senior High School. The 50 students were chosen randomly. The treatment was given seven times. Before the treatment, a pretest was given to each group, and then after all of the treatment was given, a posttest was held. The score of the two tests was then processed by ANCOVA.

The result of the data analysis showed that the two reading techniques gave different effects on students' reading comprehension and reading behaviors. Based on the statistical analysis, the students who were taught by DR-TA showed higher reading comprehension achievement progress than the control group who were taught using ARAD. The result of the questioner and video observation showed that most of good reader behaviors were done by the experimental group while less of the control group did them. However, some of good reader behaviors were not done by most of both groups.

Key words: DR-TA, ARAD, reading comprehension, and reading behavior.

Introduction

In this globalization era, mastering English becomes an important matter since most of information is stated in English. However, among the language skills i.e listening, speaking, reading and writing, reading skill is considered to be the most often used. Wood (1980:2) claims that a great number of students who learn English as a foreign language might never speak English; nevertheless, the majority of them still have to use their reading skill. It is understandable because almost all life's field information is written in English as the international language. It implies that reading skill is very important to be mastered.

Texas Education Agency (2002) claims that reading is the central of learning and it determines how successful the students will be in the future and this is in line with what Nababan (1984) and Mackey (1979: 107-108) claim. They say that 90% of textbooks and reference materials are imported. For that reason a number of non-English Faculties from several universities in Surabaya such as Widya Mandala University and

Surabaya University put English class in the first semester on their curriculum. Some of the faculties are The Faculty of Economics, The Faculty of Communication, and The Faculty of Engineering. They realize that most of the learning sources are written in English, and having a good reading skill will help them a lot in their studies.

Indonesia's Department of National Education gives their support by issueing "*Peraturan Menteri Pendidikan Nasional Republik Indonesia No. 26 Tahun 2005 tanggal 26 Desember 2005*" where Literacy Approach is used in teaching English. The purpose of this approach is developing students spoken and written communication ability. This can be seen by the classification of current English text books which is based on the genre texts. For example, students at grade X Senior High school. At this grade, the students deal with recount, narrative, descriptive and procedure text. When they move to the higher grades (grade XI and XII) they will learn more about narrative, report, review and argumentative texts. By learning and mastering those genres, they will be more ready to learn in universities.

Unfortunately, in Indonesia some educators seem to neglect the importance of reading skill by keeping using the conventional teaching reading technique (for example: Assign-Reading-Answer-Discuss or ARAD) which does not always work well according to Vacca (1981) even though it is common used. Actually there are a lot of reading techniques that can help the students fulfill the goal of reading activity which according to Sanjaya (2000) is reading comprehension. One of those techniques is Directed Reading-Thinking Activity or DR-TA. The reading technique developed by Russell Stauffer in 1969 is a technique that actively involves the students in the reading process by making, verifying and revising prediction and helps the students read intentionally. By doing so, finally they will be able to comprehend it.

Even though there are not any studies about the effect of this reading technique on Indonesian high school students' reading comprehension where English is learnt as a foreign language, the strategies used in the DR-TA are believed by some English language learning centers, and associations that it can improve the readers' reading comprehension. Learning Point Associates, Reading Rockets, Teacher Vision, and National Education Association agree that DR-TA reading technique can guide the readers to comprehend the text being read. This present study is purposed to discover whether the DR-TA reading technique can give significant effects on high school students' reading comprehension where English plays a role as a foreign language.

Related to the problems above, the objective of this study is to find out the effectiveness of DR-TA reading technique for teaching high schools students' reading comprehension. Exclusively, the objectives are to determine whether: (1) the DR-TA reading technique and ARAD reading technique give different positive effects on the students' reading

comprehension; and (2) the DR-TA reading technique and ARAD reading technique give different positive effect to the students' reading behavior.

Theoretical Framework

The theories used in this study are the theory of DR-TA reading technique, the schema theory, the reading process theory, questioning theory and the reading comprehension theory. Among those theories, the underlying theory the writer uses mainly in her study is the theory of the relationship between DR-TA reading technique and the reading comprehension as developed by Russell Stauffer (1969). This theory hypothesizes that reading process is a process of rebuilding meaning by predicting, sampling, confirming or correcting. Among them, predicting is the most important in order to fulfill the reading goal - to comprehend the text. Besides, the role of reading purpose in the process of getting reading comprehension is also important since the strategies used in DR-TA set the purpose of reading. Since both prediction and reading purpose are essential to comprehend a text, DR-TA reading technique which emphasizes on them could help the reader to get the comprehension of the text being read.

Besides, open-ended question which guides the student during the reading activity using DR-TA is the cognitive stimulator. The question stimulates the reader to set the reading purpose and also actively participate to make prediction. Later the reading purpose will help the reader to choose the information needed which evaluates the reader's prediction whether it is precise or need revision. These activities will affect the reader's behavior during the process of comprehending the text.

Research Methodology

A pretest was given to the two groups (both experimental and control group) which were randomly chosen. The pretest was about the subjects' reading comprehension. Then, the different treatment was given to the experimental class. The treatment was conducted seven times for 35 minutes each and every treatment was done on different days with different materials. During the treatment, the students' activities were recorded to observe their reading behavior. After the treatment had been completed, a post test was held and the mean score of the two classes were compared and tested at $=.05$ and $.01$ level of significance to determine the effects of each treatment.

The sample of the study was high school students in grade 11 of Carolus Senior High School in Surabaya. The writer chose grade XI for some reasons. First, the writer could not choose grade XII since they had to focus on the National Examination preparation. Second, the English teacher of grade X has her own program as the class supervisor. Since this experiment might disturb her program, the writer decided for not using

this grade. Third, the language program class was not chosen because the class' schedule and the researcher's schedule did not match.

In this study, the treatment was given seven times to each class with 35-minute-duration for each. The control class worked with the ARAD reading technique and the experimental class worked with the DR-TA reading technique and both reading techniques were given by the writer. The two groups got the same reading materials and tests (pre test and post test). The essential differences between the two models are explained below.

This study used three instruments. The first instrument was the students' pre-test and post-test which was used to measure the reading achievement progress. Then, the next two instruments, the questionnaire and the video observation were used to find out the students reading behaviors.

As stated in the previous subchapter, in order to check the students' reading behavior, the class reading activities were recorded. By recording it, the observation of the students' reading behaviors was easier. Then, the questionnaire was administered to find out the students' reading behavior which could not be observed by the recording.

The pretest and posttest were conducted to find out the effect that DRTA and ARAD give to the students' reading achievement. The test consisted of 30 items of multiple-choice reading problems which had five options with 45 minutes given to finish it. The reading texts used were taken from published books and websites. The writer chose the texts' genres and topics based on the school curriculum. Since most of the texts that she found were not having reading problems with it, the writer built test to be constructed. One of the texts was taken from published text book entitle *Progress Grade XI*. The other two were taken and modified from *www.nationalgeography.com* and *www.Saviodsilva.com*.

Before the test was given to the control and experimental group, the test was tested to a class of 20 students which was from the same grade and school with the control group and experimental group. After that to measure the test reliability and difficulty the writer used Kuder-Richardson 21 or KR-21.

To test the significance of the difference between the main and the residual gain scores of the pre test and the post tests of reading comprehension, ANCOVA (Analysis of Covariance) suggested by Donald Ary, et at (1979:262-263) was used. ANCOVA was chosen because according to Ferguson (1981:358-359) ANCOVA can adjust the effects of uncontrolled variables (the pretest) and minimize the error variance. The writer used Microsoft Office Excel for counting the statistical calculation. The counting formula of ANCOVA used is from *Statistical Analysis in Psychology and Education Fifth Edition* book (1981) by Ferguson.

To find out the differences of reading behavior caused by DR-TA and ARAD the writer observed the record of the class situation. Since she

could not do it, the writer was helped by her friends and recording device (*triport*) to record the class situation. The observation guide which the writer used based on Muskingum College Learning Strategies' table of Reading Behavior of Good and Poor Readers. The observation guide is shown below. To analyze the record of class situation the writer counts the number of the students who do and do not do the reading behaviors. After that, she counts and makes percentage of it to find out which behaviors often occur in the groups and which group has the behavior of good readers.

The Results
The Result of Statistical Analysis

The ANCOVA with critical F-value for $\alpha = .05$ was employed to detect whether there is any significant different reading achievement gained by the two groups. The result of the counting process was summarized in table 1. As stated in the table, F-ratio was 7.285336655, while the critical F value for $\alpha = .05$ was 4.03. The finding showed that the F-ratio was greater than the required F-value for $\alpha = .05$. It means there is quite significant difference between the experimental group and the control group. Besides, the finding also found the mean score of the two groups. As described in table 4.2, the mean score of the experimental group's pretest and posttest were 18.04 and 20.04 while control group's pretest and posttest were 18.76 and 19.08 and by comparing the mean scores of the two groups, the experimental group which had higher score and progress in score could be considered as the group which got significant positive effect from DR-TA.

Table 1

Groups	Mean	Degrees of Freedom			Critical F-value for		F-Ratio	Note
		Between	Within	Tot.	$\alpha = .05$	$\alpha = .01$		
Experiment	20.04	1	47	48	4.03	7.17	7.285	Significant
Control	19.08							

The writer found that the F-ratio was quite high and able to be tested to the critical value for $\alpha = .01$. It means the difference of the effect on the students' reading comprehension given by the two reading techniques were significantly high.

The Result of Questioner

As mentioned on the previous chapter, one of the instruments used to find out the different reading behaviors in the control and experiment group was the questioner. The entire students from both groups filled in the questioner right after the last meeting of the treatment was done. The

questioner consisted of three questions with some optional statements. The students could choose more than one statements which best described their behaviors during the reading activity.

The result of the questioner's counting process was stated in table 2. As stated there, the two groups had differences in the reading behaviors.

Table 2

	Behaviors	**Experiment Group**	**Control Group**
Before Reading	1. Make prediction of the content of the text	92%	8%
	2. Set purpose	84%	4%
	3. Choose strategies	16%	8%
	4. Start reading without preparation	8%	84%
	5. Other answers…	12%	0%
During Reading	1. Focus	88%	32%
	2. Keep making and correcting prediction	92%	0%
	3. Use the text genre and structure to comprehend	24%	20%
	4. Read based on context	68%	28%
	5. Give take notes, mark and underline important information	76%	36%
	6. Organize and integrate new information.	60%	8%
	7. Read to get done	8%	76%
	8. Recognize important vocabulary	60%	28%
After Reading	1. Making reflection on what was read to their real lives	52%	12%
	2. Summarizing the important ideas of the text	76%	20%
	3. Seek additional information from outside sources	0%	4%
	4. Stop reading and thinking	8%	64%
	5. Other answers	0%	0%

The result of the questioner shows that 92% students of experimental group and 12% of control group had done the behavior of good readers by making prediction before they read and 84% students of experimental group and 4% of control group did another good reader behavior before reading by setting their purpose. The others16% of experimental group students and 8% of control group students who chose

reading strategies before reading, also had the behavior of good readers. There were 12% of experimental group students who gave other answers. They said that before reading they answered some questions given. This activity then recognized the same as making prediction before reading. Since they also chose option number one, making prediction of the content of the text, their option on the behavior to answer some questions given before reading will not be counted for the accuracy of the study.

Some behaviors of good readers were done by some students in both groups with a significant gap. The 88% of experimental group students and 32% of control group students focused on the text they read. The 92% of experimental group students kept making and correcting their prediction while none of control group students did it. The others 24% students of experimental group and 20% students of control group used the text genre to help them understand the text. While the behavior to use the text context in understanding the text was chosen by 68% of experimental group students and 28% of control group students. The 76% students in experimental group and 36% students in control group gave mark, underlined and took notes during reading. For the next good readers' behavior, organizing and integrating new information, only 8% of control group students and 60% of experimental group students did it. The last good readers' behavior, recognizing important vocabulary, was done by 60% of the experimental group and 28% of the control group students. However the questioner also found that 8% of the experimental group students and 76% of control group students did poor reader behavior to read the text to get done.

The behaviors which were done by good readers after reading a text were making reflection on what was read and summarizing the text's important ideas. For making reflection, 52% students of experimental group and 12% students of control group did it. Then, for summarizing the text's important ideas, 76% of experimental group students and 20% control group students did it. The last good readers behavior discussed in this study was seeking additional information from outside sources. Unfortunately, the two groups showed quite low percentage, 4% for the control group and 0% for the experimental group. This study also found that the experimental group showed lower percentage in doing poor reader behavior to stop reading and thinking. Only 8% of them did it while 64% of control group did it.

The result refers to a conclusion that the experimental group had better reading behaviors than the control group. This result also showed that DR-TA which was applied to the experimental group gave good effect not only on the students reading achievement but also reading behaviors.

The Result of Video Observation

The second instrument used in finding out the different reading behaviors in the experimental and control group is the video observation. The video recorded the two groups' reading activities which were taken

from the second treatment until the last treatment. However, only the fourth and the sixth treatment of each group were observed and it was considered enough by the writer. From the video, the writer could observe the students' concentration during the reading activity and their marking, underlining and taking notes activities. As seen from table 3, the experimental group which was taught using DRTA had better concentration and did marking, underlining and taking notes activities more than the control group.

Table 3

Treatment	Reading Behaviors	Number of students	Percentage
4th treatment of experimental group	Concentrating/focusing on the text being read	20	80%
	Taking notes, giving mark, and underlining	22	88%
6th treatment of experimental group	Concentrating/focusing on the text being read	18	72%
	Taking notes, giving mark, and underlining	22	88%
4th treatment of control group	Concentrating/focusing on the text being read	7	28%
	Taking notes, giving mark, and underlining	9	36%
6th treatment of control group	Concentrating/focusing on the text being read	5	20%
	Taking notes, giving mark, and underlining	9	36%

Hypothesizes Testing

As mentioned in the first chapter, this study has a major hypothesis. It is related to reading achievement. In this part, the hypothesis was tested based on the data analysis results.

In the first chapter it was stated that the first problem which this study was purposed to find out was, "Do the students taught using DR-TA perform better in reading comprehension achievement than those taught using ARAD?" Since the result of statistical analysis which was stated on table 1 proved that the students taught using DR-TA perform better in reading comprehension achievement than those taught using ARAD. It means that the writer rejected the null hypothesis and accepted the alternative hypothesis which said that there were significant different positive effects given by DRTA reading strategy and Conventional reading strategy on the students' reading comprehension. In order to find out which group got higher positive effects, the mean score of the pretest and posttest which were done by the two groups were compared and it resulted that the experimental group which worked with DRTA had

significant positive effect on their reading achievement than the control group which was taught using the conventional reading technique (ARAD).

Discussion

Two major problems have been stated in chapter one. The first problem was concerned about the effects of Directed Reading Thinking Activity on the students' reading achievement. The second problem was concerned with the effects of Directed Reading Thinking Activity on the students' reading behaviors.

The previous parts of this chapter have shown the findings and in this part, those findings and their implications are discussed. The order of this discussion is based on the sequence of the problems.

The Reading Comprehension

The first problem of this study is "Do the students taught using DR-TA perform better in reading comprehension achievement than those taught using ARAD?" To find out the answer, a pretest and posttest have been held in the experimental and control groups. Then the data was processed using ANCOVA statistical analysis. The result of the data analysis indicated that there were significant differences on both groups' reading achievement. Then from the mean score of the two groups, it was found that the experimental group which was taught using DRTA got higher score than the control group which was taught using conventional reading technique (ARAD). So, the first major hypothesis was accepted and the suggested model was better than the conventional reading technique in teaching reading comprehension.

The result of the data analysis proves that DRTA including its strategies help students comprehend the text being read. DRTA makes reader actively use his cognition during the reading process. This reader's cognitive active participation is claimed by some of psycholinguists such as Smith (1980) and Goodman and Goodman (1982) as an important thing that cannot be separated from reading process. Then, the result of the statistical analysis proved that DRTA successfully supported reader's cognitive active participation by giving questions before and after reading, making, confirming and revising prediction.

The Reading Behaviors

The second major question was "Do the students taught using DR-TA perform differently in their reading behavior from those taught using ARAD?" In order to find the answers, two instruments were used in this study; they were video observation and questioner. The results indicated that the reading behaviors used by the students working with DRTA reading strategy significantly different from those used by the students working with conventional reading strategy which represented by ARAD.

So, the two different reading strategies influenced the students in different ways. However, in some reading behaviors, the two groups did not show significant differences. In the following all reading behaviors tested in this study will be discussed and compared to the table of the reading behavior of good and poor readers by Muskingum College learning strategies.

The reading behavior of activating prior knowledge was differently employed by the two groups of students. The finding found that the experimental group had greater number of students activating their prior knowledge before reading than the control group. They might make use of the questions given before reading to activate their prior knowledge and the activating process was done by making prediction. Furthermore, the result of the questioner also found that this is corresponded to Vacca's point of view of questioning in teaching reading (1981) which believed that questioning is important tool to stimulate students for thinking and becoming more productive in learning. Besides, the behavior of making prediction which makes the reading process more meaningful was proved effective on improving students' reading comprehension. It was reflected on the high mean score which the experimental group earned.

The percentage of the awareness of reading purposes of the students working with the DRTA reading strategy was higher than the students who worked with the conventional reading strategy. Therefore, the before reading questions which were given to the students working with DRTA might give better effect on setting the students' reading purposes than the conventional reading strategy which gives the reading question after reading. The students might feel that finding the answers of the questions which were given before reading was their reading purpose. It was really important for students to have reading purpose, since it would help them in the process to comprehend the text. The previous study about reading purpose was held by Ngadiman (1990) and found that students which were taught by purpose-based model got higher achievement. Then, this study found that DRTA successfully promoted this important behavior and improved the students' reading achievement. It indicated that the awareness of reading purpose gave positive effect to their reading achievement and DRTA was able to maintain them.

The contradiction was shown on the degrees of the students working with DRTA who adapted reading strategies due to reading purposes. The percentage of the students working with DRTA who adapted reading strategies due to reading purposes was significantly lower than their percentage of the awareness of reading purposes. While in the students working with conventional reading strategy the percentages of the two reading behaviors were the same. The insignificant difference of the two behaviors of the students working with DRTA indicates that even DRTA reading strategy successfully helped students to set their reading purpose, it did not give any significant effect on their behavior in adapting reading strategies due to reading purposes. Thus, the students in the two

groups might lack of skill to choose any proper reading strategies to help them fulfill their reading purposes.

As explained in the previous, the reading behaviors before reading above, especially the behaviors of activating prior knowledge and setting reading purposes were done by most of the experimental group students and less done by the control group students. Since most of the control group students did not do those activities before reading, it can be concluded that they did not do any preparation before reading. This statement was strengthened by the result of the questioner which found that 84% of control group students did not prepare anything before reading. It might indicate that the conventional reading strategy which represented by ARAD in this study, did not facilitate the students' reading behaviors to make preparation before reading.

The students from both groups also showed different behaviors during reading. One of the behavior is the reading behavior in concentrating on the text being read by the students working with DRTA reading strategy and the students working with conventional reading strategy was different. Based on the questioner result and video observation, the students of experimental group showed higher concentrating on the text being read than the control group students. This is related to the previous discussion of reading purposes. The high percentages of the experimental group students set the reading purposes and concentrating on the text being read and the low percentage of the control group students setting reading purposes and concentrating on the text being read indicate that reading purposes affect concentration during reading. The reading strategy used also effect the students reading concentration. During working with DRTA the students did not directly read the whole text in one time. There were some stopping parts where some questions were given in the previous will be discussed and some questions about the next part that they are going to read are given. The fewer words to be read in one time and the questions to stimulate to make prediction might help to maintain students' concentration.

The next is the reading behavior to keep making and correcting prediction. The questioner result found that almost all experimental group students keep making and correcting prediction during reading a text while in the control group none of the students did it. The experimental group students might do it because before they started reading, they had already been asked to predict the content of the text by answering some questions given. The prediction they made before reading might stimulate them to find any statements in the text which prove or break their prediction. Having this reading behavior is really important since students' active contribution in reading process is one of the keys to be a good reader.

The result of the behavior to use the text genre and structure to comprehend the text showed that neither the experimental group nor the control group had high percentage of doing that behavior. The result of

the questioner counting showed that 24% of the experimental group students used the text genre and structure to comprehend the text. This result was not too far from the control group students which got 20%. This might be because the students did not have enough knowledge about text genre and structure. This made them unable to use them to comprehend the text being read. However, this might also happen because they did not realize that paying attention to the text genre and structure could help them to comprehend the text being read. The result leads to conclusion that there was no significant difference given by the two techniques in the behavior using text genre and structure to comprehend the text.

The next finding is the number of students reading the text based on context. In the experimental group, 68% of the students read the text based on the context while in the control group the percentage is 28%. The number of experimental group students reading the text based on context was higher than the control group. It indicates that the DRTA gives positive effect on students' behavior to read based on context. This might happen because DRTA effectively activate students' schemata about the text being read by giving some pre reading questions and making prediction. When their schemata about the text were on their mind, unconsciously they built the context of the text and used it to help them comprehend the whole text.

Beside those reading behaviors during reading, the other reading behavior is the behavior to take notes and give mark and underline important information in the text being read. The result of the questioner found that 76% of the experimental group students did it while reading. However, a contrast result shown by the percentage of the control group students who did this behavior. Only 36% of the control group students had the behavior to take notes and give mark and underline important information in the text being read. The behavior to take notes and give mark and underline important information in the text being read might occur more in the experimental group as a result of the questions given before reading. Those questions guided the students during reading and help them to detect which information was important in the text.

The next reading behavior is organizing and integrating new information during reading. This reading behavior is considered important since reading requires the reader's cognitive active participation. Unfortunately, not all of the students in the experimental and control group did it. Only 60% of experimental group students and 8% of control group students organized and integrated new information they found in the text. However, from the gap of the percentages it can be concluded that the experimental group students who worked with DRTA showed higher percentage in organizing and integrating new information than the control group students who worked with ARAD. This might happen as the result of the questions given and prediction made before reading. The two activities stimulate the students to find any information in the text

32

being read which can prove or reject their prediction. Unconsciously, they might organize any new information they got and integrated them with the information which already existed in their mind.

The behavior of reading to get done is not a good behavior, but it might be often done by a number of students. The questioner result showed that 76% of control group students read to get done while in the experimental group only 8% of the students did it. The students who read to get done might do it because they did not have reading purpose. The students reading with purpose will not read the text to get done since they have a goal to be accomplished and information to be found. On the other hand, the students reading without purpose might find the reading activity meaningless and just read the text to finish the reading activity. As discussed in the previous, the experimental group students showed higher percentage compared to the control group in the behavior to set reading purpose. The finding was similar to the finding of the reading behavior to read to get done. It indicated that the two behaviors were related.

The last behavior during reading is the behavior to recognize important vocabulary. This study found that 60% of experimental group students and 28% of control group students recognized any important vocabulary stated in the text. This finding related to the finding of the behavior to take note and give mark and underline important things on the text. Giving questions before reading make the students able to detect important information on text by taking note and giving mark and underlining it. When the students were able to detect which information was important in text, they might be able to recognize which vocabulary was important to help them comprehend the text.

Beside the behaviors before reading and during reading, the behaviors after reading are also important in the process of reading. The first after reading behavior is making reflection on what was read to their real lives. The result found that 52% experiment group students and 12% of control group students did this behavior. It showed that the experimental group gained higher percentage in this behavior than the control group. It might happen as the result of the before reading question's effectiveness in activating the students' schemata. It made them able to find that the text was meaningful for them and later it might make them reflect on what was read o their real lives or experiences.

The next is summarizing important ideas of the text behavior. The two groups showed different result. The experimental group students who summarized important ideas of the text were 76% while in the control group only 20% of the students did it. As having been discussed in the previous, the questions delivered before reading might give the students the purpose before reading and help them to detect important information in the text during reading. Then those behaviors might lead them to the after reading behavior to summarize the important ideas which they have detected during reading. This behavior might be very important in strengthening the students' comprehension.

The third reading behavior is seeking additional information from other sources. The result of the questioner counting proved that none of the experimental group students did it while in the control group only 4% of the students sought additional information from other sources. They might not realize that this behavior was important and very useful to make their understanding about the text deeper. The finding also indicated that two reading techniques might not give any good influence in this behavior.

The last after reading behavior is stop reading and thinking. The result showed that only 8% of the experimental group students did it. The contrast result presented by the control group. The 64% of the control group students stopped reading and thinking. This bad behavior that was less done by the experimental group students might happen because after reading they still had some questions to be discussed and the note-taking and marking and underlining help them in the comprehending process.

To complete the reading comprehension and behaviors discussed above, some interesting findings were found. The reading behavior analysis result presented in the previous shown that the experimental group had better reading behaviors than the control group. However, among the experimental group students there were two students who did not show good reading behaviors as the other students working with DRTA did. The same thing appeared to their reading comprehension. The two students' pretest and posttest showed the lowest score and progress in their reading comprehension. Those students might not follow the reading activity with DRTA. As the result, the positive effects on reading comprehension and reading behaviors which the other experimental group students got did not come to them.

Psycholinguists had proposed that reader's cognitive active participation plays important role in reading process. According to them the suggested model which actively involves the reader's cognitive active contribution is better than the conventional model. The overall result of the study showed that there were significant different effects on students' reading comprehension and behaviors.

The result of this study is only a small step to find out the effect of DRTA on readers' reading comprehension and behaviors, since this study had limitations in many aspects. The first is limited numbers of subject - 25 subjects for each group. The second is the limited frequency to give treatments - only seven times for each group was the weakness of this behavior. Besides, there are some unavoidable possible errors such as the subjects' uncontrolled behaviors, the time in doing the tests, and the research methodology errors during the treatment and data collection. Further studies are expected to have more subjects and minimize any possible errors to gain better results.

Conclusion and Suggestion

Summary and Conclusion

This study aimed to find the effectiveness of Directed Reading Thinking Activity (DRTA) on the students' reading achievement and behaviors, compared to the conventional reading strategy which is represented by Assign-Read-Answer-Discuss (ARAD). This study used two groups of eleven grades students of Senior High School. Both groups got the same pretest and posttest. The only difference was on the steps of reading teaching way (treatment). The students' pretest and posttest had become important instruments in this study to detect the different positive effects given by the two reading strategies on the students' reading comprehension. Since this study was also aimed to find out the different positive effects given by the two reading strategies on the students' reading behaviors, a questioner and video observation were used.

Those data then analyzed and from the results of the analysis the questions in this study were answered. The analysis of the pretest and posttest showed that the experimental group had higher progress in reading comprehension than the control group. It means that using DRTA to teach reading gives better positive effects on the students' reading comprehension compared to the conventional reading strategy which was represented by ARAD. The same thing also happened on the result of the reading behavior's questioner and video observation. The two groups showed different reading behaviors. The majority of experimental group students had good reader's behaviors while only few of the control group students had it. The behaviors are divided into three i.e the before reading behavior, during reading behavior and after reading behavior.

The before reading behaviors discussed in this study are making prediction on the content of the text, setting purpose before reading, adapting reading strategies due to reading purposes, and start reading without preparation. There were 92% of experimental group students make prediction while only 8% of control group students did it. For the behavior of setting purpose before reading the text, 84% of experimental group students did it and only 4% of control group students did it. On the other hand, the control group showed higher percentage in the behavior to start reading without preparation by gaining 84% while the experimental group only got 8%. However, the behavior of adapting reading strategies due to reading purposes did not show significant difference - 8% of the control group students and 16% of the experimental group did it.

There are eight during-reading behaviors discussed in this study. First, the experimental group showed higher percentage on reading behavior to focus, 88% of them did it while only 32% of control group students did it. Then for keeping making and correcting prediction, there were 92% students from experimental group did it and none of the control group students did it. The next behavior is reading based on the context. 68% of the experimental group students did it and 28% of control group students did it. The fourth is taking notes, giving mark and underlining

important information. This behavior was done by 76% of experimental group students and 36% of control group students. The fifth behavior is organizing and integrating new information. 60% of the experimental group students and 8% of the control group students did it. The sixth was the behavior to recognize important vocabulary. There were 60% of the experimental group students and 28% of the control group students did it. The seventh behavior was reading to get done behavior. Only for this reading behavior 76% of control group students showed higher percentage than the experimental group which got 8%. The last behavior done during reading was the behavior to use the text genre and structure to comprehend. In this reading behavior, both techniques did not give significant positive effect since only 24% students of the experimental group and 20% students of the control group did it.

Next on the after reading behaviors, the two groups still showed different behaviors. The behavior of making reflection on what was read and summarizing the important ideas of the text were done more by the experimental group. For the behavior to make reflection on what was read there were 52% of the experimental group students did it and only 12% of the control group students did it. The two groups also showed far gap on the behavior to summarize the important ideas of the text. 76% of experimental group students did it while only 20% of the control group students did. Then for the behavior to stop reading and thinking, 8% of the experimental group students did it and 64% of the control group students did. Only for the behavior to seek additional information from outside sources the two groups gained similar result. None of the experimental group did it and only 4% of the control group did it.

The result of the data analysis which was explained in the previous answered the two major problems of this study. They are "Do DRTA and Conventional reading techniques give different positive effects on the students' reading achievement?" and "Do DRTA and Conventional reading techniques give different positive effects on students' reading behaviors?" In order to answer those questions, the data from the students' pre test and post test scores, the questioner and video observation were analyzed. The results as have been discussed in chapter four indicate that there are different positive effects given by the two reading techniques on the students' reading achievement. However, the better effect on the reading achievement was given by DRTA. Besides, the different positive effects were also given to the students' reading behavior. DRTA gave better effects on the students reading behaviors than ARAD did. Most of good reader behaviors were applied by the experimental group.

To conclude, the two reading techniques, DRTA and ARAD gives different effects on students' reading achievement and behaviors. Nevertheless, the better effects on reading achievement and behaviors were given by DRTA.

Suggestions

For Teachers

This study proved that DRTA is effective in promoting students reading achievement and behavior. This technique can be a good alternative to improve the students reading achievement and behavior. Therefore, the writer suggested this reading model be used by senior high school teacher of the English subject. In order to be able to apply and gain the optimal result of this model, several suggestions are presented.

First, teachers should find reading materials which are suitable with the students' level. The material should not be too easy or too difficult. When the text is too easy, they will not gain anything. On the other hand, if the reading material has higher level of difficulty than the students' ability, they will not be able to learn anything from it.

Second, teachers should make sure that the reading material is unknown by the students. It is really important since the core of this model is making prediction. In order to find it, teachers can browse from the internet or find it in foreign language magazines and newspapers.

Third, since in DRTA question has the role as a tool to guide the students during reading and help them to comprehend, teachers need to prepare the questions which are able to cover all the important information in the text and to stimulate the students to think. For that reason, open-ended question model is suggested in working with this technique.

Fourth, teachers have to make sure that all questions given are discussed. This is really important because some students might have wrong concepts even though they have finished reading. And by discussing it, all misconception can be cleared and teachers can also check the students' progress in comprehending text.

Fifth, it is really important for teachers to record the student's prediction. The reason is to check the student's comprehension progress. Teachers can record the student's predictions on the board or notes. However, for big classes teachers can provide worksheet of before-reading prediction and after-reading prediction. Later on in the class discussion, the recording of their prediction can be very useful and interesting.

Last, as discussed in the previous, this technique needs students' active participation and yet gives the students plenty of opportunities to express their opinions by making prediction. However, not all of their prediction is right; in this case it is advisable for not judging their prediction. It will humiliate students and make them afraid to express their ideas. Teachers should give the students opportunity to correct and confirm their prediction by themselves. Besides, in the discussion section students will share their understanding and teachers can make clear any misunderstanding.

For Future Study

The writer found limitations in this study. There are plenty aspects which should have been included. However they could not be covered in this study. For that reason, the following points are valuable considering for the future research in this area.

First, the study only measured the students reading comprehension reflected in their reading achievement and has not covered the component skills in reading comprehension such as the ability in recognizing the topic, identifying the general/main idea, identifying the specific facts or details, identifying the writer's goal, and drawing conclusion from the text being read. It would be worthy for the future study to do research in that area. So that, the effects of DRTA reading strategy on the students' reading comprehension will be clearly found.

Second, the students speed reading affected by DRTA is also worth to be discovered. This can be very interesting to be studied since DRTA is a guided reading activity and the conventional reading strategy gives students freedom to read all parts of the text without any stopping parts.

Third, it will be better in the future to have this experimenting study in a longer time, say one semester or more with larger sample which can cover high school students in any grades. From this experiment the more accurate effects of DRTA on high school students can be reached and it also gives good insight for which grade of High School students, DRTA is suitable.

Fourth, the instrument used in examining the effects of DRTA and Conventional reading strategy on the students' reading behavior can be added with random interview. From the interview a deeper study of the effects given by the two different reading strategies on the students' reading behaviors can be obtained.

Fifth, this study has not covered all genres of texts. It only covered three types of text namely narrative, report and argumentative. For that reason, this study does not purpose to find out the different effects given by DR-TA to different genres. The future study should cover more or even all text genres and give information for which genres of text, DR-TA is suitable. The study can also go further by comparing the students' comprehension in reading various genres of text. It is because DR-TA may give different effects on the students' comprehension in reading the various types of text given.

Sixth, since teacher's role is crucial in teaching, it would be valuable to observe some of the teachers' characteristics and class interaction model used by the teacher who applies DRTA and the teacher who works with conventional reading strategy.

Bibliography

Arikunto, Suharsimi. 1990. *Dasar-Dasar Evaluasi Pendidikan*. Jakarta: Bumi Aksara

Barnett, Marva A. 1989. *More Than Meets the Eyes: Foreign LanguageReading*. Theory and practice. New Jersey: Practice-hall regents.

Cook, Guy. 1989. *Discourse*. Oxford: Oxford University Press.

Ferguson, George. A. 1981. *Statistical Analysis in Psychology and Educatio: Fifth Edition*. Singapore:Mc. Graw International Book Company.

Goodman, K.S. (Ed.) 1968. *The psycholinguistic nature of the reading process*. Detroit Wayne state university press.

Heilman, Blair, and Rupley. 1981. *Principles and Practices of Teaching Reading*. Ohio: Charles E. Merrill Publishing Co.

Lamb, Annete and Johnson, Larry. 2001. *Skimming and Scanning*.

Maria, Veni. 2009. *The Effect of Semantic Mapping Technique and Vocabulary Explanation Technique on the Reading Comprehension Achievement of the Fifth Grade Students of SDK Yohanes Gabriel Surabaya*. Widya Mandala Catholic University.

Ngadiman, Agustinus. 1990. *The effectiveness of purpose-based model for teaching reading comprehension at the English Department*. Institut Keguruan dan Ilmu Pendidikan Malang, Fakultas Pascasarjana.

Reading Behaviors of Good and Poor Readers. Muskingum College Learning Strategies.

Sanjaya, Chatarina. 2000. *The Relationship between the Ability to Guess the Meaning of Unknown Word from context and the Ability to Comprehend a Text*. Widya Mandala Catholic University.

Smith, Frank. 1985. *Reading*. Cambridge University press.

Snowball, Diane. 2005. *Teaching Comprehension: An interactive professional development course (CD-ROM level K-2)*. New York: AUSSIE Interactive.

Spiro, R. J., Detram C. Bruce, and William F. Brewer (Eds.). 1980. *Theoritical issues in reading comprehension*. New Jersey: Lawrence Erlbaum Associates, Publisher.

Texas Education Agency. 2002. *Research-Based Content Area Reading Instruction*. Texas: Texas Reading Initiative.

Wagiman Damatius.1992. *The Effect of a Speed Reading technique and a Reading Aloud Technique on Student's Reading Comprehension Achievement in English*. Institut Keguruan dan Ilmu Pendidikan.

Wijaya, Shienny Veronica. 2006. *The Effects of Vocabulary before Reading and Questions Before Reading on the Students' Reading Comprehension Achievement*. Widya Mandala Catholic University.

Williamson, Julia. 1988. *Improving Reading Comprehension: Some Current Strategies*. English Teaching Forum, January, Vol. XXVI, No. 1.

Pirozzolo, Francis J. and Merlin C. Wittrock (eds.) 1981. *Neuropsychological and cognitive process in reading. New York: Academic Press, Inc.*

Vacca, Richard. 1981. *Content Area Reading*. Boston Toronto: Little, Brown and Company.

Varian, Nancy Virginia. 2007. *Seven Habits of a Good Reader*. Retrieved 9 November, 2007, from http://www.ehow.com/list_5997774_seven-habits-good-reader.html