

# Cognitive Strategy Training in Improving Students' Reading Comprehension

By

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## ABSTRACT

Penelitian ini menyelidiki apakah pelatihan strategi kognitif dapat meningkatkan pemahaman membaca siswa dan apa saja proses pelatihan strategi kognitif dalam meningkatkan pemahaman membaca siswa. Penelitian ini menggunakan desain kuasi eksperimental dengan pendekatan kuantitatif. Pengumpulan data menggunakan test dan perlakuan (training). Data dari tes dianalisis dengan SPSS menghasilkan signifikansi yang lebih rendah dari taraf signifikansi ( $0,00 < 0,05$ ) berarti bahwa ada perbedaan yang signifikan pada kemampuan membaca siswa di kelas eksperimen dan kelas kontrol. Hasil kedua dari proses pelatihan strategi kognitif pada sesi perlakuan (training) menunjukkan bahwa siswa dapat mengikuti proses pelatihan strategi kognitif. Mereka juga dapat menerapkan strategi kognitif selama proses pelatihan. Strategi kognitif sangat sesuai untuk digunakan dan meningkatkan pemahaman siswa.

**Kata Kunci :** *strategi kognitif, pemahaman membaca.*

*This research investigated whether cognitive strategy training can improve students' reading comprehension and what are the process of cognitive strategy training in improving students' reading comprehension. The research used quasi-experimental design using quantitative approach. To collect the data, test and treatment were employed. Data from the test were analyzed with SPSS resulting significance value that was lower than Sig level 0.00 0.05 meaning that there is a significant difference between the students in experemental class and control class toward their reading comprehension. The second result from the process of cognitive strategy training in the treatment session showed that the students could follow the process of cognitive strategy training. They could also apply cognitive strategies during the training process. Cognitive strategy is preferable to use and promote students' comprehension.*

**Keywords:** *cognitive strategies, reading comprehension*

## I. INTRODUCTION

The English instruction in Indonesia emphasizes that skills in reading texts written in English have been considered very important for the students both in high school and higher education. Therefore, the students in high school have to be able to comprehend the text well. Comprehension is in line to the reading skill. Reading skill is more emphasized to be taught to the students in Indonesia as the dominant of the questions of the national examination. In this case, the prominence of teaching reading in English in Indonesia is to improve comprehension skills.

However, there are many students who cannot comprehend the text well. It is because the students lack of comprehension. This lack of good comprehension is accelerated by the core role of reading in comprehension. One solution to the problem of poor reading comprehension is the learning of effective reading strategies.

Khezrlou (2012) stated that some of strategies may emerge in the classroom naturally, most need to be developed through effective instruction and training. The teacher should give the best instruction of strategies to make the students understand. According to Barnett (as cited in Shang, 2011) the term strategy means the mental operations involved when readers purposefully approach a text to make sense of what they read. In order to make sense or comprehend the reading text well, there is an appropriate strategy called cognitive strategy. Oxford (1990) stated that cognitive strategies are typically found to be the most popular strategies with language learners. The term cognitive strategies according to O'Malley and Chamot (as cited in Ratna, 2014), are more directly related to individual learning tasks and entail direct manipulation or transformation of the learning material. It means that the language learners interacted with the material to be learned by manipulating it mentally or physically.

Based on the theories above, cognitive strategy has a direct relationship with reading comprehension. Parvinnejad (2015) stated that reading comprehension may not be as easy task since a lot of cognitive process are involved in the process of reading. Oxford (1990) stated that once you know how students are currently reading, you can help them to learn more effectively. The effective way to help learners to comprehend the text well is by giving the best instruction or a training of cognitive strategies. The process of cognitive strategy training, the learners would go through some steps of cognitive strategies to make their understanding

of the information in reading text becomes better. Based on Oxford (1990) The processes of cognitive strategies training are practicing, receiving and sending messages, analyzing and reasoning, and creating structure for input and output.

Additionally, several previous research was conducted to know is there any significant difference between students who are given cognitive strategy training. The previous study by Bachore (2014) Ozek and Civelek (2006), Ratna (2014), Parvinnejad (2015), Mistar et al., (2016), and Khoshsima and Tiyyar (2014) showed that cognitive strategies training are having a positive effect on students' reading comprehension.

Based on some theories and previous studies above, the writer would discuss cognitive strategy training and reading comprehension because the writer wanted to know whether cognitive strategy training can help the students in improving their reading comprehension and would explain the processes of cognitive strategy training in improving their reading comprehension. So far, there were several studies have discussed about cognitive strategy training and reading comprehension (Bacore, 2014; Parvinnejad, 2015; Khezrlou, 2012), but the writer has not found the study that discussed these issues directly and explicitly. So, the writer would discuss these issues in this research.

Therefore, based on the explanation above, the researcher proposed two research questions as follows.

- 1) Does cognitive strategy training help students improving their reading comprehension?
- 2) What are the processes of cognitive strategy training in students' reading comprehension?

## II. Literature Review

### Reading

There are so many definition related to reading. Firmansyah (1990) states that reading is a complex cognitive process of decoding symbols for the purpose of deriving meaning and constructing meaning.

According to Harmer (2004) most reading sequences involve more than one reading skill. Cameron (2001) adds that when story was accompanied by teacher explanations of new words, through pictures, acting out meaning or verbal explanation, the vocabulary gain doubled, and the gain was still evident three months later.

Here, the researcher provide several definition of reading (Wallace, 1992; Nation, 2008; Harmer, 1998)

Reading comprehension according to Hong (as cited in Gorjian et al., 2014) cognitively, defined as construction of meaning from a printed or a written message is a two-way process between the reader and the author. Reading is also a cognitive activity in which the reader takes part in a conversation with the author through the text. On the other hand, Zare et al., (as cited in Zare and Othman, 2013) stated that reading strategies are considered as one of the features of cognitive psychology which are essential for a successful comprehension.

### **Cognitive strategy**

Dole et al., (2009) stated that strategy is a routine or procedure for accomplishing a goal. Cognitive strategy is a mental routine or procedure for accomplishing a cognitive goal. Dijk and Kintsch (1983) provided an excellent description of cognitive strategies. Thinking and problem solving are well-known examples.

### **Cognitive Strategy Training**

Oxford (1990) states that cognitive strategies are varied a lot, ranging from repeating to analyzing expressions to summarizing. With all their variety, cognitive strategies are unified by a common function: manipulation or transformation of the target language by the learners. There are four sets of cognitive strategy. They are practicing, receiving and sending messages, analyzing and reasoning, and creating structure for input and output.

## **III. RESEARCH METHOD**

The research was conducted at SMA Negeri 1 Rebang Tangkas, Way kanan. The researcher used two classes as control and experimental group in the eleventh grade of the second semester in 2017/2018 academic year. The research used quasi-experimental design using quantitative approach to know the effect of using cognitive strategy training to improve students' reading comprehension based on Setiyadi, (2006). The data were collected through pretest, treatment and posttest: they were analysed quantitatively.

In this research, the scoring criteria of the composition were based on the five aspects of effective reading based on King and Stanley (as cited in Riani et al., 2014). They are identifying main idea, determining specific information, identifying inference, making reference and understanding vocabulary.

In collecting the data, there were three steps in this research. The first was the pre-test. It was to measure the students' ability in reading comprehension before using the cognitive strategy training. There was 45 items of reading test.

The second was treatment. The researcher used cognitive strategy training in treatment session. The writer applied and trained the students by using cognitive strategy training. The cognitive strategy used in this research was from Oxford (1990). They were practicing, receiving and sending messages, analysing and reasoning, and creating structure for input and output.

The last was post-test. It was to know the students' reading comprehension result after they are taught by using cognitive strategy training. The system and degree of difficulty of post-test was the same as pre-test, because both of them were used to measure the students' reading comprehension in order to know the development of the students' reading comprehension after cognitive strategy training was applied.

In this research, the researcher makes sure that the instrument can be used. We need to know the validity and reliability of the instruments. The researcher uses content validity and constructs validity for the test instrument. Content validity emphasises the equivalent between the materials that given and the items that will be tested. In arranging material, the researcher used narrative text in reading test and training of cognitive strategy.

In measuring the reliability of the test, the writer used ITEMAN 3.00. The reliability coefficient of the test should be at least 0.70 and preferably higher (Setiyadi, 2006). If the reliability value of the test was higher than 0.70, it meant that the test can be used by the researcher to obtain the data.

## **IV. RESULTS AND DISCUSSION**

The following explanations are results and discussion of the two research questions in this research.

### **1. The Results of Students' Reading comprehension**

The results of the students' reading comprehension were obtained from reading test. Reading test contained of four cognitive strategies. In addition, exercise sheet was employed to see the process of teaching and learning during the treatment of

cognitive strategies. Those results will be presented in the following section.

This subsection answered the first research question that is “*Does cognitive strategy training help the students to improve their reading comprehension?*”. In order to answer the research question, the writer conducted the following activities:

#### A. The Result of Pre and Post Test Reading Comprehension in Experimental Class

The scores of students’ reading comprehension tested in Pre and Post Test were presented in the following table:

	Mean	N	Std. Deviation	Std. error Mean
Pretest-IPA 1	59.00	30	11.730	2.142
Posttest-IPA 1	76.73	30	8.428	1.539

Based on the table above, we can see the average scores of students’ reading comprehension in experimental class before and after the treatments. The total mean of the Pre and Post Test score were 59.00 and 76.73.

#### B. The Result of Pre and Post Test Reading Comprehension in control Class

	Mean	N	Std. Deviation	Std. error Mean
Pretest-IPA 2	59.93	30	11.396	2.081
Posttest-IPA 2	60.13	30	12.261	2.238

Based on the table above, we can see the average scores of students’ reading comprehension in control class without given the treatments. The total mean of the Pre and Post Test score were 59.93 and 60.13.

Based on the tables above, it can be said that the result answered the first research question that is “*does cognitive strategy training help the students in improving their reading comprehension?*”. It can be seen that there was any statistically significant improvement between Pre Test and Post Test score of students’ reading comprehension in experimental and control class.

#### C. Descriptive Statistical Values Concerning Pre Test and Post Test Scores of Students’ Reading Comprehension in Experimental and Control Class

Pair	Paired differences					T	Df.	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Posttest IPA1-Pretest IPA1	17.733	9.450	1.725	14.205	21.262	10.278	29	.000
Posttest IPA2-Pretest IPA 2	9.200	6.509	1.188	6.769	11.631	7.741	29	.000

As seen in Table 3 above, the students’ Pre Test and Post Test score in experimental class had significant difference in their reading comprehension. The result of Paired Sample T-Test indicated the effect of the training on the students’ scores was significant, since the value of variable sig. (2-tailed) was .000. Mean of reading comprehension of the students in experimental class was 17.733. The analysis of the collected data showed statistically significant positive relationship between cognitive strategy training in improving students’ reading comprehension.

The mean score for students in control class was 9.200 and the significant level was 0.00. So, this table indicates that there was the improvement of students’ reading comprehension, but it was not too significant because the students in control group were not given the training of cognitive strategies.

The significance value (2-tailed) was 0.00. As known, it is considered significant if  $p < 0.005$ . In short, the first hypothesis is accepted because the students’ reading comprehension significantly improved.

The finding of this present study, which is related to the training of cognitive strategies in language classroom, shows that there was a statistically significant improvement on the students’ reading comprehension. This finding reveals that the students’ reading comprehension significantly increased. Based on the result above, it means that cognitive strategy training helps students to improve their reading comprehension. The writer provides several studies related to cognitive strategy training and reading comprehension (Yang, 2016; Bachore, 2014; Khoshsima and Tiyyar, 2014).

The results of the studies above support the first finding of this study in terms of the improvement of reading comprehension, after being trained by using cognitive strategy. As known, the students’ reading comprehension improved after the treatment.

## 2. The Result of Cognitive Strategy Training

This subsection answered the second research question that is “*What are the processes of cognitive strategy training?*” In order to answer the research question, the researcher conducted the following activities in the process of cognitive strategy training:

The first treatment for the student was practicing strategy. The writer gave the text to the students and train some sub strategies included in practicing. They are repeating, formally practicing with sounds and writing systems, recognizing and using formulas and patterns, recombining, and practicing naturalistically.

The second treatment was strategy for receiving and sending messages. There were two sub strategies for receiving and sending messages, they were find the main idea through skimming and scanning to find specific information, using resources. In training how to find the main idea through skimming and scanning to find specific information, the writer gave the text to the students, asked the students to find main idea in their own way.

The third treatment was strategy for analyzing and reasoning strategy. There were some sub strategies for analyzing and reasoning strategy. They were reasoning deductively, analyzing expressions, analyzing contrastively, translating, and transferring.

The last day of treatment, the writer trained strategy for creating structure for input and output to the students. There were some sub strategies for creating structure for input and output. They were taking note, summarizing, and highlighting.

The result of showed that the students could follow the process of cognitive strategy training. They could also answer the questions during the training and after training.

The finding in relation to the training process of cognitive strategies in language classroom agrees with the study conducted by Yang (2016), Song (as cited in Bachore, 2014) and Ratna (2014).

Song (as cited in Bachore, 2014) stated that reading strategy instruction enhances the learners’ reading ability. But, again, bear in mind that the instruction should be thoroughly attended to, following the procedures proposed by scholars. This statement supports this second finding, that the process of

cognitive strategy training improves students’ reading comprehension.

## V. CONCLUSION AND SUGGESTION

This research has built on existing knowledge in the fields of cognitive strategy training to improve students’ reading comprehension. The first result of the study showed that cognitive strategy improves the students’ reading comprehension. This study also has shown that the beneficial impacts on reading comprehension on students, especially in using cognitive strategy in their reading activity.

The second results of this study showed that there are four kind of cognitive strategy training in improving students’ reading comprehension. They are practicing, receiving and sending message, analyzing and reasoning, and creating structure for input and output. This result of the study also leads to the realization that the rarely of using strategies in reading activities and the students lack of comprehension the reading text. The evidence of the study showed that the students only used some strategies in their reading activity before the treatment. The score of students’ posttest increased after the treatment. It is because of the effect of cognitive strategy training. Although the score did not improve significantly, but the result of training gave the impact to the students in comprehending the text and they could know the strategies and applied the strategies in reading activity.

In connection with the result above, the writer would like to put forward several suggestions to the components of English, especially English Language Teaching (ELT). Firstly, the teacher should pay attention the students’ need. Because teaching and learning process can run well if we know the students’ need. We can create interesting materials that can make students be active in the class in order to make the teaching and learning process run well.

Secondly, there should be more activity in reading. Reading is not merely read the whole text and answer the questions. There are so many activities can be applied using cognitive strategies. Cognitive strategies came in many kinds. For example, practice using sounds, summarizing, skimming and scanning and etc. the teacher can apply so many activities using all sub categories of cognitive strategies.

The third, the teacher should motivate the students to use the strategies and provide explicit training to the students. Those all help the learner to achieve success in the process of language learning.

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