REAP (READ, ENCODE, ANNOTATE AND PONDER) STRATEGY IN TEACHING STUDENTS' READING COMPREHENSION

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Abstract: This study aimed to know whether or not the use of REAP strategy is effective in teaching students reading comprehension on descriptive text. The researcher conducted this research in English Education Study Program, Teacher Training and Education Faculty, Tanjungpura University, Pontianak in academic year 2014/2015. This research was conducted as a pre-experimental research with the one group pre-test post-test. The sample of this research was 35 students. The data were collected through pre-test and post-test by using multiple choices test consisting of twenty items. The finding shows that there are significant difference of the students' achievement that can be proved by *t*-test is higher than *t*-table. Moreover, the effect of treatment is categorized as modest effect. It indicates that the use of REAP strategy is effective in teaching reading comprehension especially in teaching descriptive text. Therefore, REAP strategy is a good strategy used to develop students' better understanding in reading and thinking through the use of writing.

Keywords: REAP strategy, Reading Comprehension.

Abstrak: Penelitian ini bertujuan untuk mengetahui apakah penggunaan penggunaan strategi REAP efektif atau tidak dalam mengajarkan pemahaman membaca siswa dalam teks deskriptif. Peneliti melaksanakan penelitian ini pada Program Studi Pendidikan Bahasa Inggris, FKIP UNTAN, Pontianak, tahun ajaran 2014/2015. Penelitian dilaksanakan dengan menggunakan metode pre-experimental dengan satu grup pre-test post-test. Sampel pada penelitian ini berjumlah 35 orang. Data dikumpulkan melalui *pre-test* dan *post-test* dengan menggunakan test pilihan ganda terdiri dari 10 soal. Hasil penelitian menunjukan bahwa ada perbedaan yang signifikan dari pencapaian siswa yang dapat dibuktikan dengan nilai *t-test* lebih tinggi dibandingkan nilai *t-table*. Selanjutnya, pengaruh dari perlakuan dikategorikan cukup berpengaruh. Hal ini menandakan bahwa penggunaan strategi REAP efektif dalam mengajarkan pemahaman membaca siswa khususnya dalam mengajarkan teks deskriptif teks. Oleh karena itu, strategi REAP adalah sebuah strategi yang baik digunakan untuk mengembangkan pemahaman siswa yang baik dalam membaca dan berfikir melalui penggunaan menulis.

Kata kunci: Strategi REAP, Pemahaman Membaca.

Reading is fundamental to function in today's society. It becomes more important because many sources of information about technology, science, economy, politic and education are mostly in written form. Brown (2002: 298) writes "Written word surrounds us daily". Particularly in education field today, the greater part of students' ability in reading is necessary. According to Wilson & Trainin (2007) in Westwood (2008: 1) "The cornerstone of academic achievement and the foundation of success across the curriculum is learning to read and write proficiently." Certainly, reading ability can broaden and enlarge students' knowledge that lead them to success in their study. For instance, when the students face a test, they have to learn by reading previous material in order to have better understanding and give good answer. Therefore, the ability to comprehend the content of reading material plays an important role in determining the students' success in study.

In addition, reading as a receptive skill provides the students' opportunities to study about how to locate the main idea, make connections, questions, infers, and predicts (Westwood, 2008: 32). Besides, reading also helps them to find how to understand good and correct English sentences, indeed, it helps them to communicate, or to speak and write. Therefore, reading generally forces logical and analytical thinking.

In the process of teaching and learning English in the classroom particularly in improving students' reading comprehension, the teacher needs to master their teaching strategies. By presenting an interesting teaching strategy, students can enjoy their lesson more. Harmer (2001: 3) stated that good teachers should care more about their students' learning and do with their own teaching. By giving good strategy, teachers indirectly concern about their students learning. Hence, the ability of teacher in using meaningful strategy is determining the success in teaching reading comprehension.

Nowadays, students at the University must have the ability to read comprehensively. It encourages them to become successful in mastering the knowledge then increases their achievement. Hussein (2012, p: 237) states "reading comprehension enables students to pursue their studies and to meet their interests in all fields of knowledge. Based on the observation that researcher has done to Regular B first semester students of English education study program of language and arts education department of teacher training and education faculty of Tanjungpura University Pontianak in academic year 2014/2015 found that the students often had a problem in comprehending the reading text caused by the difficulties in understanding the writer's role and comprehending the text especially about the literal and inferential meaning presented in the text. Meanwhile, the comprehension of meanings arises at the different levels of comprehension. As Logan et al and Spache cited in Hussein (2012, p: 241) classified the reading comprehension skills into three levels: 1) literal level of comprehension which refers to the process of identifying the information that is directly stated by the author; 2) inferential level of comprehension which refers to the process of finding the ideas which is not directly stated in the text and it involves the reader in making inferences; 3) Critical comprehension which refer to the process of evaluate the ideas found in the text. The problem occurred due to the fact that they merely introduced the various learning strategies by the teacher. They only asked to read the text, listen to the explanation given by teacher then

answer the questions related to the text. Therefore, it is necessary to introduce them the new learning strategy in comprehending the text.

Reflecting to the problems, the researcher focuses on the strategy which is applied to develop students' greater understanding of the writer's role in writing and to improve their reading comprehension that is REAP strategy. In clarification, REAP strategy was first proposed by Marilyn G. Eanet & Anthony V. Manzo (1975). Manzo & Manzo (1990: 221) states, "Read-Encode-Annotate-Ponder, or REAP was among the earliest strategies developed to stress the use of writing as a means of improving thinking and reading." REAP is an acronym stands for read, encode, annotate, and ponder. REAP strategy makes students think precisely and deeply about what they read. Moreover, it requires students to participate in summarizing ideas from the text. Hence, REAP strategy is used to encourage students to read and analyze the text than summarize it into their own words.

Moreover, students at the first semester in English education study program of Language and Art Education Department of Teacher Training and Education Faculty of Tanjungpura University Pontianak are introduced by several types of text such as descriptive, recount, procedural, expository, and news items. It is expected that students are able to comprehend the texts and gradually become efficient and independent readers. Descriptive text is text which gives illustration and description about something. Something that can be described may include a person, place or thing in such a way that a picture is formed the reader's mind. Specifically, the researcher wanted to know about how reading comprehension of the first semester students on descriptive text would be increased after giving a treatment.

The previous study conducted by Arijuddin (2013) found that the use of REAP strategy in teaching basic reading class in IKIP PGRI Semarang is effective. The students' reading ability who were taught by REAP strategy is better than the students who were taught without the REAP strategy.

In conclusion, it was hoped that the use of REAP strategy helps students to deeper understanding the meaning presented in the text through different levels of comprehension involving: literal, inferential, critical and creative comprehension. Through the use of REAP strategy, students encouraged to monitor their own understanding about the reading. Moreover, the strategy facilities students with higher-order of thinking through reading, writing, and thinking. Therefore, in order to know the effectiveness of the use of REAP strategy, researcher conducts the Pre experimental study on the students of FKIP UNTAN Pontianak.

METHOD

The researcher determined to use Pre-Experimental design in this research. According to Best and Khan (2006: 177) "pre experimental design is the least effective, for it provides either no control group or no way of equating the groups that are used." Again, they add that the design provides some improvement over the first, for the effects of the treatment are judged by the difference between the pretest and the posttest scores, no comparison with a control group is provided. In this research, the pre experimental design applied the one group pre-test post-test. In one group pre-test post test there is no control group, and the students are give treatments for a period of time. At the beginning of the period of time, the

students have pre-test, and at the end of it the students have post-test. Ary et al (2010: 303) stated that the one group pre-test post-test design usually involves three steps:
1. Administering a pre-test measuring the dependent variable;
2. Applying the experimental treatment X to the subjects; and
3. Administering a post-test, again measuring the dependent variable.

The design of pre experimental study which the researcher applied can be seen in the following table:\

Table 1
The design of pre experimental study one group pre-test post-test

Pretest	Treatment	Posttest
O1	X	O2

A pre-test is given to a group of subjects, then the experimental treatment is administered to that group, and finally a post-test is administered. X symbolizes the treatment, O_1 symbolizes the pre-test, and O_2 symbolizes the post-test.

The design is illustrated as follows:

O_1 : Apply pre-test to measure the students' mean score in mastering reading comprehension on descriptive before giving the treatment.

X : Apply teaching reading comprehension on descriptive text through R.E.A.P strategy

O_2 : Apply post-test to measure students' mean score in mastering reading comprehension on descriptive text after giving the treatment

However, the researcher selected this type of experimental design because the condition hinders the researcher to make an artificial groups; it is nearly impossible to randomize the students from different classes for it will disturb the students' management, so the researcher decided to use one group. It should be noted that this study research methodology is quantitative.

According to Creswell (2012: 142), "a population is a group of individuals who have the same characteristic." Moreover, he adds "a sample is a subgroup of the target population that the researcher plans to study for generalizing about the target population." The population of this research is regular B first semester students of English language study program of language and arts education department of teacher training and education faculty of Tanjungpura University Pontianak in academic year 2014/2015. Total number of population is 74 students. In selecting the sample, the researcher took the sample through cluster randomized sampling technique because the population chosen was not an individual but, rather, a group of individuals who were naturally together. In determining the experimental class, the researcher applies lottery technique. The researcher took class A which consists of 35 students as the experimental class that get treatment in teaching students reading comprehension on descriptive text by using REAP strategy.

The technique used in this research is measurement technique. The measurement technique was applied to collect the data by administering a test which is constructed for the purpose of this research. According to Cohen (2007: 317), "In tests, researchers have at their disposal a powerful method of data

collection, an impressive array of tests for gathering data of a numerical rather than verbal kind". It is intended to measure the students' reading comprehension on descriptive text by using R.E.A.P strategy before and after the treatment

In this research, the researcher used multiple-choice items that offer a useful introduction to the construction of objectives tests. Heaton (1990: 27) argues that multiple-choice items can provide a useful means of teaching and testing in various learning situations. It can help both students and teacher to identify areas of difficulty. In order to gain the valid and reliable data, the researcher tried out the test. The analysis of the try-out test computed the validity and level of difficulty, discriminating power, and reliability of test items.

Concerning to the research question which is formulated to find out significance of the interval score of pre-test and post-test, researcher uses the *t*-test formula.

$$t = \frac{\bar{D}}{\sqrt{\frac{\sum D^2 - \left(\frac{\sum D}{N}\right)^2}{N(N-1)}}}$$

(Ary et al, 2010: 177)

Moreover, in order to answer research problem which is provided to see how far the effectiveness of the treatment is, researcher uses the effect size formula

$$\Delta = \frac{\bar{X}_2 - \bar{X}_1}{S_P}$$

(Ary et al, 2010: 136)

The qualification of the effectiveness is shown in the following table:

Table 2
The qualification of the effectiveness

Effect Size	Qualification
0 – 0.2	Weak effect
0.21 – 0.50	Modest effect
0.51 – 1.00	Moderate effect
> 1.00	Strong effect

(Cohen at al, 2007: 521)

In determining the effect size, The formulas use to compute the mean score ($\overline{X}$) of each test and the pooled standard deviation are needed. The formulas use to compute the mean score of each test which symbolized by $\overline{X}_1$ (mean of pre-test) and $\overline{X}_2$ (mean of post-test) shown in the following formula:

$$\overline{X}_2 - \overline{X}_1$$

To compute the mean score ($\overline{X}$) for both pre-test and post-test in above formula, researcher divides the sum of students' individual score ($\sum X$) with the number of students (N). The students' individual score is obtained from the total score of correct item of the test, Hence, the formula applied is as follows:

$$\overline{X} = \frac{\sum X}{N}$$

(Cohen at al, 2007)

Moreover, to compute the pooled standard deviation (S_P), researcher sums up the standard deviation of post-test (number of students in post-test minus one then multiple by the square of standard deviation of post-test) and pre-test (number of students in pre-test minus one then multiple by the square of standard deviation of pre-test) and then divided by total number of students in post-test and pre-test minus two as shown in the following formula:

$$S_P = \sqrt{\frac{(N_2 - 1)S_2^2 + (N_1 - 1)S_1^2}{N_2 + N_1 - 2}}$$

(Cohen at al, 2007)

In order to compute the standard devation (S) for each test in above formula, researcher uses the following formula:

$$S_1 = \sqrt{\frac{\sum(X_1 - \overline{X}_1)^2}{N}}$$

(Cohen at al, 2007)

In the above formula, the total sum of interval score ($(X_1 - \overline{X}_1)^2$) is obtained by subtracting the sum of the students' score of pre-test minus mean score of pre-test squared divided by total number of students.

FINDINGS AND DISCUSSION
Findings

After conducting the research, researcher obtained the substantial data for the sake of research findings and hypothesis testing. After that, to answer the research problem, the researcher analyzed the data by using *t*-test formula and the result of the computation is as follows:

$$t = \frac{\overline{D}}{\sqrt{\frac{\sum D^2 - \frac{(\sum D)^2}{N}}{N(N-1)}}}$$

$$t = \frac{5.71}{\sqrt{\frac{7800 - \frac{(200)^2}{35}}{35\,(35-1)}}}$$

$$t = \frac{5,71}{\sqrt{\frac{7800 - 1142.85}{35\,(34)}}}$$

$$t = \frac{5,71}{\sqrt{\frac{6657.15}{1190}}}$$

$$t = \frac{5,71}{\sqrt{5.59}} = \frac{5.71}{2.36} = \mathbf{2.41}$$

Before computing the *t*-test formula, researcher compute the sum of pre-test, post-test, the difference of students' score between pre-test and post-test, squared difference score, and the mean score of the difference is shown in the following table.

Table 3
The computation of *t*-test

	$\sum$	$\sum D$	$\sum D^2$	$\overline{D}$
Pre-test	2720	200	7.800	5.71
Post-test	2930			

In the above table, to compute the mean score of differences which is symbolized by $\overline{D}$, researcher divided the sum of the difference of students' score between pre-test and post-test with the number of students.

In order to know the effectiveness of treatment, researcher analyzed the data by using the effect size formula and the result as follows:

$$\Delta = \frac{\overline{X}_2 - \overline{X}_1}{S_P}$$

$$\Delta = \frac{83.42 - 77.71}{11.46}$$

$$\Delta = \frac{5,71}{11.46} = \mathbf{0.49}$$

Before computing the effect size as shown in the above formula, researcher firstly computes the mean difference of pre-test and post-test. The computation of the significance difference of both pre-test and post-test is shown in the following table.

Table 4
The computation of significance difference of pre-test and post-test

	Score (X)	Mean Score $\overline{X}$	The significance difference $X_x - \overline{X}_x$
Pre-test	2720	77.71	0.15
Post-test	2920	83.42	0.30

Based on the above table, to compute the mean score pre-test and post-test, researcher divided the score of each test with the number of students in the each test. After that, the score of each test is minus with the mean score of its test. The results compute to the significance difference of the score.

Second, to computation of the standard deviation of pre-test and post-test is shown in the following:

$$S_P = \sqrt{\frac{(N_2 - 1)S_2^2 + (N_1 - 1)S_1^2}{N_2 + N_1 - 2}}$$

$$S_P = \sqrt{\frac{(35 - 1)13.50 + (35 - 1)8.97^2}{35 + 35 - 2}}$$

$$S_P = \sqrt{\frac{6196.5 + 2735.64}{68}}$$

$$S_P = \sqrt{\frac{8932.14}{68}} = \sqrt{131,35} = \mathbf{11.46}$$

To compute the pooled standard deviation, it is needed to compute standard deviation of pre-test and post-test. The computation of standard deviation is as follows:

$$S_1 = \sqrt{\frac{\sum(X_1 - \overline{X}_1)^2}{N}}$$

$$S_1 = \sqrt{\frac{2817}{35}}$$

$$S_1 = \sqrt{80.48} = \mathbf{8.97}$$

$$S_2 = \sqrt{\frac{\sum(X_2 - \overline{X}_2)^2}{N}}$$

$$S_2 = \sqrt{\frac{6388.35}{35}}$$

$$S_2 = \sqrt{182.52} = \mathbf{13.50}$$

The computation of total sum of interval score $\sum(X_x - x)^2$ in the standard deviation computation is shown in the following table:

Table 5
The computation of the total sum of interval score

	The significance difference $X_x - \overline{X}_x$	Sum of interval score $\sum(X_x - x)^2$
Pre-test	0.15	2817
Post-test	0.30	6388.35

Based on the above table, the sum of interval score each test is obtained by squaring of the significance difference's score of each test.

Discussion

In this research, firstly, the researcher administrated the pre-test on the experimental class. The pre-test was given on December 17th, 2014. The result showed that the mean score of pre-test was 77.71 or categorized as average to good. After analyzing the result of pre-test, the researcher gave treatment to the experimental class. The treatment was teaching reading comprehension through the use of REAP strategy. The treatment was given two times in two meetings. In the first meeting, the researcher used descriptive text entitled "*The Blue Whale*". Meanwhile, in the second meeting, the researcher used descriptive text entitled "*The Sumatran Rhino*".

The first treatment was given on December 17, 2014 after the pre-test. In teaching process, an introduction to the strategy of REAP was explained briefly in order to make students interested to learn with the strategy. They were given explanation about what REAP strategy was, the procedure, the advantages and how to apply it in reading activity. In the activities, students started to be familiar with the strategy used and they participate in the discussion despite the fact that still not all students participate actively. As a result, some students took a lot of time to do the steps especially in encoding and annotating. In encoding step, the students found some difficulties to determine the main idea and identified the specific information of the text. Meanwhile, in annotating, they showed a slow respond to review what they had read. Consequently, they take a long time to finish the writing.

Furthermore, the second treatment was given on January 7, 2015. In this session, researcher did not introduce the strategy, but only reviewed what he had explained in the previous meeting. The students had a better understanding about what the strategy is about and how the steps of this strategy are applied. In other word, The students' understanding about REAP strategy and their comprehension about the reading text were better than the first treatment. They did not take a longer time to read, understand, and fill out the REAP sheet. Thus, there are more students who participate actively in the discussion since the students be confident than in the previous meeting. After giving second treatment, researcher

administrated the post-test on the experimental class. The post-test was given on January 7th, 2015. The result showed that the mean score of post-test is higher than pre-test. The mean score of post-test was 83.42 or categorized as good to excellent.

After analyzing the data collected from research activities, the researcher found some number concerns with the effectiveness of REAP strategy in teaching students' reading comprehension on descriptive text. The result of calculating the mean score of pre-test was obtained from dividing the total score of pre-test with the whole number of research sample (35). Therefore, the mean score of pre-test is 77.71 which based on Harris' criteria; this score indicates that the students' performance was "average to good". However, the mean score of post-test is 83.42 with the total score is 2920 which indicate the students' performance was "good to excellent". The result of post-test indicated a better result than the pre-test in the third column. Thus, different result also indicated the students' interval score of pre-test and post-test is 5.71.

From the result, the researcher concludes that the use of REAP strategy is effective in teaching students' reading comprehension on descriptive text. It proved by the significance different result between pre-test and post-test. The comparison of the result of t-test is higher than t-table. Moreover, the effect size of the treatment categorized as modest effect.

CONCLUSION AND SUGGESTIONS
Conclusions

Based on the analysis of the data, the researcher drawn the following conclusion as follows: First, The use of REAP strategy is effective in teaching students' reading comprehension on descriptive text. the effect of the treatment categorized as modest with the effect size value is 0.49. Second, the significant difference of the students' achievement can be proved by the t-test (2.41) is higher than t-table (2.042). It means that Alternative Hypothesis is accepted and Null Hypothesis is rejected. Fourth, through the REAP strategy, the students also learnt to distinguish and understand the meanings presented in the text through different levels of comprehension involving: literal, inferential, critical, and creative comprehension. Fifth, the use of REAP strategy helps students to monitor their own comprehension by using the self-questioning. And the last, the use of REAP strategy gives students' chance to develop their better understanding in reading and thinking through the use of writing.

Suggestions

After analyzing the data and concluding the research findings, the researcher would like to give some suggestions, as follows: 1) After finding that the REAP strategy is effective, the researcher would like recommend the English teacher to use REAP strategy to teach reading comprehension because this is an effective strategy that can help students to improve their ability in reading comprehension. REAP strategy helps the students not only read the text but also organize the idea and details information through writing. In other words, this reading strategy provides students opportunities to practice in writing. Moreover, REAP strategy enables the students to read in a meaningful rather than

mechanical way. They are required to draw the conclusion of the text in annotation. In addition, REAP strategy is also applicable to teach reading comprehension in any types of text (e.g. expository, report, narrative, etc). 2) Make sure that the students can follow and understand the explanation and the procedure of REAP strategy especially in encoding and annotating steps. It is better for the teacher to give a good model of how to encode and annotate the text before they practice it

REFERENCES

Arijuddin, A. (2013). *The effectiveness of REAP technique in improving the students comprehension of the English department students in basic reading class of IKIP PGRI Semarang in the 2013/2014 academic year.* Semarang: Jurnal IKIP PGRI Semarang.

Ary, Donald et al. (2010). *Introduction to research in education 8th edition.* Belmont: Nelson Education, Ltd.

Best, Jhon W. & James V. Khan. (2006). *Research in education 10th edition.* Boston: Pearson Education Inc.

Brown, H. Douglas. (2002) *Teaching by principles: an interactive approach to language pedagogy 2 nd edition. New York: Pearson Education Inc.*

Cohen, Louis. et al (2007). *Research method in education 6th edition.* New York: Routledge.

Creswell, Jhon W. (2012). *Educational research: planning, conducting and evaluating quantitative and qualitative research 4th edition.* Boston: Pearson Education Inc.

Harmer, Jeremy. (2001). *How to teach English: an introduction to the practice of English language teaching 7th edition.* Harlow: Pearson Education Limited.

Heaton, J. B. (1990). *Writing English language tests.* Harlow: Longman Group UK Limited.

Hussein, B, A. 2012. Analysis of the Real Situation of Teaching Reading Comprehension to First Year Students at Department of English Language and Literature at Al-Zaytoonah Private University in Jordan. *Asian Social Science Journal. Vol. 8*, No. 4, pp. 237-250. www.ccsenet.org/ass. Published by Canadian Center of Science and Education. ISSN. 1911- 2017. E-ISSN. 1911-2025.

Manzo, Anthony V. & Ula Casale Manzo. (1990). *Content area reading: a heuristic approach.* Ohio: Merrill Publishing Company.

Westwood, P. (2008). *What teachers need to know about reading and writing difficulties.* Victoria: The Australian Council for Education Research Ltd.