THE EFFECT OF READ, ENCODE, ANNOTATE, PONDER (REAP) STRATEGY AND READING INTEREST ON READING COMPREHENSION ACHIEVEMENT

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Abstract

Applying appropriate teaching strategy can give huge contribution to students' achievement. This study investigated the effects of Read, Encode, Annotate, Ponder (REAP) strategy and reading interest on reading comprehension achievement (RCA) of the third semester students of English study program at IAIN Kerinci by applying experimental research method with factorial design. A questionnaire was distributed to the population to find out their reading interest level. Forty students were divided into Experimental and Control groups equally; they were given reading comprehension test as the pre-test and post-test to measure their RCA. The results indicated that REAP strategy significantly improved students' RCA. Moreover, although the interaction effect between REAP strategy and reading interest on students' RCA was not found, the mean difference of the post-test scores from the whole sample indicated that the achievement of High reading interest students were significantly better than Low reading interest students. These results suggest that English teachers should apply various appropriate teaching strategies and monitor students' reading interest while teaching reading.

Keywords: REAP Strategy, Reading Comprehension Achievement, Reading Interest

INTRODUCTION

Reading comprehension as one of the receptive language skills is very important. Durkin (1993) states that reading comprehension has come to be the essence of reading. Pritchard, Romeo, and Muller (1999) add that the essence of reading comprehension is not only to academic learning in all subject areas, but also to professional success and to lifelong learning. In line with this, Richards and Renandya (2002) state that benefits of reading comprehension are for gaining information, entertainment, and education purpose. Specifically, for students of English as a foreign language, reading comprehension is very important to master in order to ensure success not only in learning English, but also learning in any content class where reading in English is needed. This means, with reading comprehension students will get benefits from their reading not only in acquiring a language, but also in obtaining knowledge.

Furthermore, one of the factors which can influence students' reading comprehension achievement is their reading interest (Meiers, 2004). In line with this, Cullinan (2000) found that interest have a positive effect on learning and school achievement. In addition, a study conducted by Squires (2014) found that there is a positive significant relationship between reading comprehension and reading interest. Therefore, reading interest is considered as the moderator variable in this study.

However, several national and international surveys have shown that there is still a problem with Indonesian students' reading interest and reading literacy. A report issued by Indonesian Statistic in 2006 (Auzar, 2013) described that Indonesian students had not yet made reading as their primary activity in searching for information. They preferred to watch television (85.9%) and/or listen to the radio (40.3%) instead of reading newspapers (23.5%). In addition, a study conducted by Diem, Purnomo, Ihsan, Sofendi, and Vianty (2015) found that reading topics which students would like to read are science (54%), adventure stories (48.7%), and comic strips (41.9%). Furthermore, a survey conducted by United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2012 showed that reading interest of Indonesian is 0.001; it was the lowest reading interest in South-East Asia (Baswedan, 2014). This means, there is only 1 out of 1.000 Indonesian who has interest in reading.

Moreover, there are some surveys indicate that Indonesian students' still have problems in reading literacy. Internationally, Program for International Student Assessment (PISA) (2010) which conducted an international survey aiming to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students focusing its survey on reading literacy in students' own national language reported that in 2009 the mean of Indonesian students' reading score was 402; it was 91 points below PISA's mean score (493). Moreover, PISA database in 2012 showed that the mean of Indonesian students' reading score was even worse (396); it was 100 points below the mean of PISA's reading score (496). Furthermore, based on database of PISA from 2000 to 2012, the reading score of Indonesian students neither showed any significant improvement nor reduction; unfortunately Indonesia's position was stagnant with low score (Baswedan, 2014). Another survey which was conducted by Progress in International Reading Literacy Study (PIRLS) (2013) provides the information on trends in reading literacy on students 'national language achievement in 2011. The result showed that the mean of Indonesian students' reading score was 428 and it was 82

points below the mean of PIRLS's reading score (500), and Indonesia's position was at bottom four (41 out of 45 countries).

These facts mentioned in the previous paragraph indicate that Indonesian students still have problems in reading literacy in Bahasa Indonesia (see also Diem, et al., 2015). Since English is a foreign language in Indonesia, it can be assumed that for Indonesian students to comprehend a text written in English can be more difficult than in Bahasa Indonesia. As Nation (2009) states, it is because learning to read a foreign language involves a great deal of language learning (sounds, vocabulary, grammar, discourse). In line with this, Anderson (2003) states that before students are able to comprehend a text, they have to know the meaning of words in the text and familiar with the structure of the language.

Using appropriate strategy in the process of teaching reading will be a solution to enhance students' ability in comprehending a text. Long and Richards (1987) state that strategy is an important aspect in education and instruction process. In line with this, Hewit (2008) states that there are four essential aspects which can make teaching and learning process successful, they are strategy, style, motivation, and attitude. Therefore, English teachers are really expected to be creative and aware in applying a certain strategy, because one strategy may be very effective for a certain skill, but may not for other skills. In addition, appropriate teaching strategy can encourage students' motivation to learn and make them focus during learning process (Wang, 2007).

In this study, Read, Encode, Annotate, Ponder (REAP) strategy will be applied to enhance reading comprehension achievement of the third semester students of IAIN Kerinci. REAP which is acronym for Read, Encode, Annotate, and Ponder is firstly promoted as a teaching-learning strategy by Eanet and Manzo in 1976. They state that REAP is a strategy which will ensure meaningful reading. Furthermore, REAP is a cognitive enrichment approach that helps students to think more precisely and deeply about what they read by following the four-step strategy (Manzo, Manzo, & Albee, 2002). Some benefits of REAP strategy have been proved by previous studies focusing on reading comprehension. For example, Tiruneh (2014) who conducted a research involving the eighth graders of a public primary school in Ethiophia found that there was a significant progress in the students' reading comprehension after they were taught by using REAP strategy. Similarly, a study conducted by Mehmet (2010) involving elementary school students found that REAP strategy could improve the students' reading comprehension skill significantly.

This study had the third semester students' of IAIN Kerinci as the participant. For the purpose of measuring the reading level of the participants, a reading level test using Informal Reading Inventory (IRI) Jennings (Richeck, 2001) has been administered. The test was consisted of five degrees of reading level: 1st level, 2nd level, 3rd level, 4th level, and 5th level. The result of the test showed that 80% of the students were at the level three; and this result is used as a consideration for selecting the texts for the learning material.

In addition, some students and lecturers have been interviewed for the purpose of finding the preliminary data. Based on the information shared by the students, it is noticed that the students often find difficulties in answering reading comprehension test, especially for the three aspects of reading comprehension which are main idea, sequence, and inference; the lack of information about how to apply reading strategies is one of the factors which caused the problem. Furthermore, the students and lectures admitted that they never applied REAP strategy to improve and teach reading comprehension.

Based on the description above, the writers focus on REAP strategy, reading interest, and reading comprehension achievement through a study entitled "The Effect of REAP Strategy, and Reading Interest on Reading Comprehension Achievement." The problems of the study were formulated in the following questions: 1) was there any significant improvement in reading comprehension achievement after the students were taught by using REAP strategy?; 2) was there any significant difference between reading comprehension achievement of the students who were taught by using REAP strategy and those who were not?; 3) was there any interaction effect between REAP strategy and reading interest on students' reading comprehension achievement?; 4) was there any significant difference between reading comprehension achievement of the students with High and Low level of reading interest?

METHOD

Since the two main purposes of this study were to investigate the effects of REAP strategy on students' reading comprehension achievement and analyze the interaction effect between REAP strategy and reading interest level (High and Low) toward students' reading comprehension achievement, an experimental research method with 2x2 factorial design was applied. The 2x2 referred to two groups and two reading interest levels. This study was conducted at IAIN Kerinci. The writer had all the third semester students of English Study Program as the population of the study (60 students). Next, forty students were selected as the

sample based on their reading interest level (High and Low); they were divided into Experimental and Control group equally. To find out the students' reading interest level, a questionnaire consisted of 86 items with 4 point Likert scale named Reading Interest Inventory (RII) was distributed to all population. The questionnaire written in English by Nafisah and Shorman (2011) was modified and translated into Bahasa Indonesia in order to make it easier for the students to comprehend and respond each item of the questionnaire. Next, a reading comprehension test consisted of 40 multiple choice items which included seven aspects of comprehension (Main Idea, Detail, Inference, Reference, Sequence, Cause Effect, and Vocabulary) was administered to the students as the pretest and posttest. All of the items of each instrument were valid and reliable. The reading comprehension test had been checked by two raters to get their views about the difficulty and appropriateness level of each item. Then, both reading comprehension test and RII questionnaire were tried out to non-sample students to check the internal consistency of those. SPSS program was used for analyzing the data. The writer used paired sample t-test to find out the significant difference between pre-test and post-test in each group. Independent sample t-test was used to analyze the significant difference in students' reading comprehension achievement between Experimental and Control group. To measure the interaction effect between REAP strategy and reading interest on students' reading comprehension achievement, two-way ANOVA was used.

RESULT AND DISCUSSION

Result

Descriptive Statistics

For the descriptive purpose, the scores of reading comprehension test from the whole sample (N= 40) were converted and categorized into 5 categories of achievement; ≤ 40 (Very Poor), 41-55 (Poor), 56-70 (Average), 71-85 (Good), 86-100 (Very Good).

Table 1
Score Distribution of Students' Reading Comprehension Achievement

Score Interval	Category	Pretest			Posttest		
		Frequency and Percentage		Mean	Frequency and Percentage		Mean
86-100	Very Good	-	0%	-	-	0%	-
71-85	Good	-	0%	-	16	40%	76.25
56-70	Average	3	7.5%	57.5	24	60%	64.44
41-55	Poor	37	92.5%	48.36	-	0%	-
<40	Very Poor	-	0%		-	0%	-

As presented in Table 4, most of the students' reading comprehension achievement in pre-test was at Poor category (92.5%), surprisingly it increased to Average category (60%) after the treatments were given. Furthermore, the table also showed that there was no student at Very Good and good level in pre-test, but although there was still no student at Very Good level, 16 students (40%) could reach the Good level in post-test. The students at Average level increased from 7.5% (3 students) in pre-test to 60% (24 students) in post-test.

Paired Sample and Independent t-Test

The raw scores of the students' reading comprehension achievement and its aspects were analyzed using paired sample t-test for the purpose of answering research question number one and independent sample t-test was used to answer research question number two and four. The scores were considered having significant improvement within group and significant difference between groups when p (Sig.) < .05.

Based on the result of paired sample t-test, it was found that REAP strategy significantly improved reading comprehension achievement; the significant improvement was also found in Control group (see Table 6).

Table 2
Result of Paired and Independent t-test of Reading Comprehension

Group	Mean Pre	Mean Post	Mean Difference of Pre and Post	Mean difference of Post-test between Experimental and Control group	T value and Sig. between Pre and Post		T Value and Sig. post-test between Experimental and Control group	
					t	Sig.	T	Sig.
Experimental	17.30	26.97	9.67	2.40	27.607	.000	2.321	.024
Control	16.50	24.57	8.07		19.307	.000		

Furthermore, the result of independent t-test showed that there was a significant difference between Experimental and Control group in term of posttest results.

Two-way ANOVA Analysis

Two-way ANOVA was used to answer research question number three which was whether or not there was an interaction effect between REAP Strategy and reading interest on students' reading comprehension achievement. They were considered having interaction effects when ρ value (Sig.) ≤ .05 (see Table 9).

Table 3
Result of Two-Way Anova Analysis

Dependent Variable	Type III Sum of Squares	Mean Square	F	Sig.
Total Score	.067	.067	.004	.948

As presented in Table 9, the results of two-way ANOVA analysis showed that the ρ-value (Sig.) of the interaction effect was .948 (higher than .05). Based on this result, it can be concluded that there was no interaction effect between REAP strategy and students' reading interest on their reading comprehension achievement. In other words, REAP strategy was effective to be applied to both students with High and Low level of reading interest.

Furthermore, to answer research question number four which was whether or not there was a significant difference in reading comprehension achievement between the students with High and Low levels of reading interest after they were given treatments, the writer analyzed the effect of reading interest on reading comprehension achievement from the whole sample by using independent sample t-test. The result showed that there was a significant difference in the reading comprehension achievement between the students' with High or Low reading interest (see Table 11).

Table 4
Result of Independent t-Test of Reading Comprehension Achievement between The Students with High and Low Reading Interest

Variable		Mean Post	Mean Diff. of High & Low	T-value and sig.	
Reading Comprehension Achievement	High Reading Interest	67.08	5.33	2.043	.046
	Low Reading Interest	61.75			

Discussion

There was a significant improvement in reading comprehension achievement after the students were given treatment using REAP strategy. In spite of having significant improvement, it was still not satisfactory yet since the mean score of post-test (N= 40) was still below 80 (a standard score to get A in IAIN Kerinci). However, it was proved that REAP strategy was effective in improving the students' reading comprehension achievement as has also been stated by Eanet and Manzo (1976). The writer assumed that to get better achievement the students need more practice and read more sources. As Nation (2009) states, students should read a lot and be given training and practice in applying reading strategies. In line with this, Anderson, Wilson, and Fielding (1988) found that the amount time spent on reading correlated significantly to gains in students' reading achievement.

Moreover, detail descriptions and interpretation of the effects of REAP strategy and the interaction effect are described as follows:

The Effects of REAP Strategy

After accomplishing the treatment by applying REAP strategy, it was found that there was a significant improvement in students' reading comprehension achievement. In other words, REAP strategy could improve students reading comprehension achievement effectively. This result was similar to the findings of studies conducted by Mehmet (2010) and Tiruneh (2014) who found that REAP strategy could improve students' reading comprehension achievement significantly.

The improvement of the students' reading comprehension achievement could be affected by some factors. First, the texts used as the teaching materials and the test were appropriate to the students' language proficiency level. It was reasonable because according to Nation (2009), one of the principles for teaching reading is that students should read texts that are appropriate to their language proficiency level. For this purpose, the writer had measured the students' reading level before conducting this study and found that their level was at level 3. Therefore, the readability of the texts used in this study were level 1, level 2, level 3, level 4, and level 5.

Second, *Read* and *Encode* which are the first two steps of REAP strategy were helpful in giving a general picture of the text read by the students. While reading a text, the students were asked to note some key words which they thought related to the main idea of the text. Next, the students were led to have a discussion talking about the main idea of the text; their

background knowledge was exploited in grasping the main idea of the text by being given some questions related to the text. According to Ur (1996) and Anderson (2003), background knowledge/information is one of the elements that should be considered to teach efficient quality of reading. Anderson (2003) adds that after knowing main idea of a passage, students will make predictions and search information in the text to confirm or reject the predictions; this activity can help the students to understand the passage even if all of the individual words are not understood.

Third, by applying *Annotation* which is the third step of REAP strategy, the students were not only able to comprehend the sequence of the story, but also being motivated to focus during reading process. Mike (2011) states that REAP is an *Annotation* strategy which is effective for improving reading skill because Annotating can improve students' attention while reading and makes reading more active process. After knowing the main idea of the text, the students were asked to focus on finding the three structures of the text (orientation, complication, and resolution) and write a summary about the text. It could be the reason why this step could motivate the students to focus while reading the text. It was important because according to Nation (2009), to improve students' reading development the students should enjoy reading and feel motivated to read, and reading should be related to other language skills.

Fourth, the last step of REAP strategy (*Ponder*) was helpful to encourage the students to think about what was not explicitly stated in the text (*inference*), such as moral values of the story or to criticize the story. In this step, the students were asked to give their opinion to criticize the text or conclude the messages of the text they have read. The students were trained to draw *inferences* from a text by analyzing the main idea of the text, looking at the organization of the text, and interpreting characters of the text. This activity was essential because as stated by Nation (2009), teaching reading should cover some purposes, such as reading to learn, reading to criticize texts, and reading to integrate information.

The Differences between Experimental and Control Group

The mean difference of the post-test scores between Experimental and Control group (see Table 13) indicated that reading comprehension achievement of the students in Experimental group were better than that of those in Control group. Some rationales to interpret this finding are discussed below.

REAP strategy was focusing on helping the students to comprehend a text intensively. Eanet and Manzo (1976) state that REAP strategy can teach the students to think more precisely and deeply about what they read by following the four-step strategy. It was reasonable since one of the steps in REAP strategy is *Ponder*. In this step the students were asked to read what was beyond the text by thinking about the moral values of the text or giving their opinion to critique the texts (*inference*). In other words, the students were not only trained to read what was explicitly written in the text, but also think about what was not stated in the text. To be able to draw inference from a text, students should have known and understood about the main idea, organization, and characters of the text.

The Interaction Effect

One of the objectives of this study was to find out whether or not there was an interaction effect between REAP Strategy and reading interest on students' reading comprehension achievement. As shown in the results of two-way ANOVA analysis (see Table 16), no significant interaction effect between REAP Strategy and reading interest on students' reading comprehension achievement may be related to the theory proposed by Anderson, Levine, Wilson, and Fielding (1987) that students' reading interest is changing from day to day, therefore, a strong emotional component may play a critical role in how interest influences learning.

However, even though there was no interaction effect, the result of independent t-test which compared the post-test score between the students with High and Low levels of reading interest from the whole sample (N= 40) indicated that the achievement of High reading interest students was significantly higher than Low reading interest students. This finding confirms the previous research findings (Cullinan, 2000, Meiers, 2004, & Squires, 2014) which showed that reading interest did influence students' reading comprehension achievement.

CONCLUSION

Based on the results of the analyses and interpretation in the previous chapter, several conclusions can be drawn. First, REAP strategy can significantly improve students' reading comprehension achievement; the students' reading comprehension achievement in Experimental group was significantly higher than those who were in Control group. Second, REAP strategy can improve reading comprehension achievement of the students with High

and Low level of reading interest significantly. The last, although there was no significant interaction effect between REAP Strategy and reading interest on the students' reading comprehension achievement, further analysis which compared the post-test scores from the whole sample (N=40) found that there was a significant difference in reading comprehension achievement between the students with High reading interest and those with Low reading interest; this indicated that the achievement of the students with High reading interest was better than those with low reading interest.

REFERENCES

Anderson, N. (2003). Reading. In D. Nunan (Eds.), *Practical English language teaching.* (pp. 67-84). Singapore: McGraw-Hill.

Auzar, A.(2013). The use of computers in teaching approach to improve reading skills among primary school pupils. *Asian Social Science, 9*(12), 244-251.

Baswedan, A. R. (2014). *Gawat darurat pendidikan di Indonesia.* Retrieved from http://www.kemdiknas.go.id/kemdikbud/sites/default/files/Paparan%20Menteri%20-%20Kadisdik%20141201%20-%20Low%20v.0.pdf

Creswell, J. W. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (2nd ed.). Upper Saddle River, NJ: Pearson Education, Inc.

Cullinan, B.E. (2000). *Independent reading and school achievement.* Retrieved from http://www.ala.org/aasl/sites/ala.org.aasl/files/content/aaslpubsand journals /slr/vol3/SLMR_IndependentReading_V3.pdf

Dagostino, L., Carifio, J., Bauer, J. D. D., Zhao, Q., & Hashim, N. H. (2014). Assessment of a reading comprehension instrument as it relates to cognitive abilities as defined by Bloom's revised taxonomy. *Current Issues in Education,1*(17), 1-15.

Diem, C.D., Purnomo, M.E., Ihsan, D., Sofendi, & Vianty, M. (2015). *Students' literacy quality in Bahasa Indonesia: Functional reading achievement and attitude towards and interest in reading.* Paper presented at the 2nd international seminar on literacy and language teaching, Ambon.

Durkin, D. (1993). *Teaching them to read* (6th ed.). Boston, MA: Allyn and Bacon.

Eanet, M., & A. Manzo. (1976). R.E.A.P. A strategy for improving reading/writing study skills. *Journal of Reading, 19*, 647-652.

Freeman, D. (2000). *Techniques and principles in language teaching*. Oxford: Oxford University Press.

Grabe, W., & Stoller, F. (2002). *Teaching and studying reading*. Harlow, UK: Pearson Education Longman.

Haris, A., & Sipay, E. (1990). *How to increase reading ability*. New York, NY: Longman Publishing Group.

Hewit, D. (2008). *Understanding effective learning*. New York, NY: McGraw- Hill Education

Hornby, A. S. (1995). *Oxford advanced learners' dictionary of current English* (5th ed.) New York, NY: David Mckay company.Inc.

Manzo, A., Manzo, U., & Albee, J. (2002). iREAP: Improving reading, writing, study, thinking and aesthetics in the wired classroom. *Journal of Adolescent and Adult Literacy, 46*(01), 42-47.

Mehmet, T. (2010). The effect of the REAP reading comprehension technique on students' success. *Social Behavior and Personality: An International Journal, 38*(4), 553-560.

Meiers, M. (2004). Reading for pleasure and literacy achievement. *Research Developments, 12*(12),1-2. Retrieved from http://research.acer.edu.au /resdev/vol12/iss12/5

Nafisah, K., & Shorman, R.A. (2011). Saudi EFL students reading interests. *Journal of King Saud University-Language and Translation, 23*, 1-9.

Nation, I. S. P. (2009). *Teaching ESL/EFL reading and writing*. New York, NY: Routledge.

PIRLS. (2013). *Highlights from PIRLS 2011 reading achievement of U.S. fourth-grade students in an international context*. Retrieved from http://nces.ed.gov/pubs2013/2013010.pdf

PISA. (2010). *PISA 2009 results: Executive summary*. Retrieved from http://www.oecd.org/pisa/pisaproducts/46619703.pdf

PISA. (2012). *PISA 2012 results in focus*. Retrieved from http://www.oecd.org/pisa/keyfindings/pisa-2012-results-overview.pdf

Pritchard, R. E., Romeo, G. C., & Muller, S. A. B. (1999). Integrating reading strategies into the accounting curriculum. *College Student Reading, 33*(1), 77–82.

Richards, J. C., & Renandya, W. A. (2002). *Methodology in language teaching: An anthology of current practice*. New York, NY: Cambridge University Press.

Richeck, M.A. (2001). *Reading problems* (4ᵗʰ ed.). London, UK: Allyn & Bacon

Robb, L. (1997). *Pinpoint kid's reading interest and habits*. Retrieved from http://www.19844852&num=1&ctrllnfo=Round9j%3Aprodctrl%3asR%3AResult&ae

Rosmalina, I. (2006). *Developing reading comprehension and writing skills of the university students through literature-based instruction* (Unpublished magister's thesis), Sriwijaya University, Indonesia.

Schraw, G., Flowerday, T., & Lehman, S. (2001). Increasing situational interest in the classroom. *Educational Psychology Review, 13(3)*, 211-224.

Scott, W. A., & Ytreberg, L. H. (2000). *Teaching English to children.* New York, NY: Longman

Squires, S. (2014). *The effects of reading interest, reading purpose, and reading maturity on reading comprehension of high school students.* (Unpublished dissertation). Baker University, USA.

Ur, P. (1996). *English language teaching theory and practice.* Cambridge, England: Cambridge University Press.

Wang, X. (2007). Three ways to motivate Chinese students in EFL listening style. *Asian EFL Journal, 17*(2)*,* 1-6.

Zwiers, J. (2004). *Building reading comprehension habit in graders 6-12: A toolkit of classroom activities.* Menlo Park, CA: International Reading Association, Inc.