



The effectiveness of CIRC learning model and PQ4R learning model on reading comprehension skills of elementary school students

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Abstract

This study aims at identifying the effectiveness of Cooperative Integrated Reading Composition (CIRC) Learning Model on Reading Comprehension Skills, the Preview Question Read Reflect Recite Review (PQ4R) Learning Model on Reading Comprehension Skills and the differences in terms of effectiveness between the two learning models on the Reading Comprehension Skills of Grade V students in elementary school. The study was quasi-experimental research with pretest, posttest non-equivalent group design. The sample for this study was taken from Grade V students from Task Force 1 Lendah Kulon Progo. Simple random sampling technique was applied to select samples. Then, in order to identify the effectiveness of CIRC Learning Model and PQ4R Learning Model collected data were analysed by running the t-test and the ANOVA with the assistance of SPSS software version 22. The results of the study show that both CIRC and PQ4R have been effective for exercising the Reading Comprehension Skills with significance rate $0.000 < 0.050$. However, both models are insignificant for exercising the Reading Comprehension Skills to the Grade V students with significance rate $0.828 > 0.050$.

Keywords: CIRC, PQ4R, reading comprehension

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Introduction

In this 21st century, language students need to be critical thinker, creative, communicative and collaborative. In order to couple with these skills, the four macro language skills: reading, listening, writing and speaking are essential in any level in language teaching. Reading skills in particular is among the essential receptive skills because it combines the linguistic, social-cultural, physical and cognitive activities (Curriculum Planning & Development Division, 2010, p.31). It primarily starts with decoding language symbols to get meaning. Hence it is very important skills for the basic learner, intermediate and advanced learners of languages. Reading is also important to master since it is influential for the students' cognitive development. Good reading skills might be assessed by observing how an individual complete his or her reading assignment easily and

efficiently altogether with their improvement on the understanding of the text based on the given context. Generally, reading skills assesment is enevitable in any language learning level. However, the micro skills to be assessed and the materials for comprehension vary based on the language proficiency of the language learners.

Burn (cited in Rahim, 2011, p.1) states that reading skills is a vital component in the life of an educated community. Therefore, through the mastery of reading skills people will gain new knowledge and be updated from varieties of new information. The more the people read, the more they will retrieve new knowledge and information. Furthermore, reading as an activity is essential for the productive skills too. The information and knowledge gain through reading can be applied in speaking, writing presentation writing projects, applying in social-cultural context and in any other given context.



In addition, Rosenblatt (as cited in Moreillon, 2007, p.19) described that reading refers to the interaction among the readers, the texts and the meanings as planned by the author. Consequently, reading activities might bring about both interest and motivation to the readers and their surroundings. Departing from the statement, it is clear that reading demands a directed mental activity that might capture and understand the hidden ideas behind every symbol. Since reading is highly important for the life of an individual, reading can be considered as part of life skills and linguistic skills that every individual should master (Efendi & Suhardi, 2015, p.98).

Linguistic learning, or commonly known as language learning, refers to how language might be learned by means of experiential learning that emphasizes on the process of habituating and learning in an immediate manner (Mustadi, 2013, p.361). Based on the statement, it is important that the reading skills should be immediately mastered by all elementary school students through the overall learning process. In other words, reading might serve as part of interactive learning activities in communication with other people especially in relation to the interpretation and decoding of the written symbols. Then, the reading skills might be developed through exercises. Therefore, the experts agree effective reading skills should be taught to the students in order to retrieve the knowledge and information better (Syamsi, Sari, & Pujiono, 2013, p.82).

In the elementary school, the students are expected to be able to understand a text well both in the reading aloud activities and the silent reading activities. Therefore, the students should identify how to form the metalanguage as they try to understand texts. From this context, it might be inferred that reading comprehension is one of the important activities in the reading activities. Reading comprehension aims at understanding the content of the discourse, which might be seen from the mastery of fundamental elements in the discourse itself namely main ideas, characteristics of the figures, plot, setting of time and place, inference from the narrative text and mandate that the author would like to deliver. Bormouth (as cited in Zuchdi, 2012, p.8) states that reading comprehension skills refer to the set of skills for attaining the generalized comprehension that enables an individual to attain and process the information for creating new texts as the results of their reading activities.

According to Brannon (as cited in Linderholm, 2006, p.70), empirical research has shown that the particular purpose for reading influences readers' cognitive processing of texts in terms of time spent reading and strategies employed, which in turn influences the amount of text information recalled. However, in general many people perform their reading comprehension skills for more than once just in order to understand the discourse of a text. The low level of comprehension has become one of the reasons that lie behind such situation whereas reading comprehension skills might be performed to all kinds of literary works such as scripts, short stories, essays, poems and novels. The elements that should be given attention in performing the reading comprehension skills for the fiction works are plot, characteristics of figures, theme, setting, main idea, point of view and mandate. In relation to the statement, if the students are able to explain all of these elements without having to re-read or take notes on the texts, then it will be an indication that the students have already been able to understand a text.

In order to be conducted effectively, the reading comprehension learning activities demand an appropriate model so that the learning process might be conducted easier within the framework of the teaching-learning activities. The selection of the learning model should be well performed in order to achieve the necessary cognitive skills and process in order that the readers might understand the meaning of the text. One of the learning models that might be selected in this regard is the cooperative learning model. Cooperative Learning model is a learning model or a learning strategy that has been characterized by the cooperative objective, reward structure and assignment and that also demands the students to be actively involved in the discussion, the debate, the private course and the team cooperation (Rahmawati & Mahmudi, 2014, p.104). The cooperative learning model is different from any other learning model. The difference might be found in the learning process that emphasizes more on the cooperative process within the group. Through the implementation of the cooperative learning model, the objective that should be achieved is not only related to the mastery of academic skills in the form of subject understanding but also the mastery of cooperation element for mastering the learning materials. With regards to the statement, the cooperative model that will be implemented in the study is the Cooperative Integrated Reading and Composi-

tion (CIRC) and the Preview Question Read Recite Reflect Review (PQ4R). The two models have been selected by the researcher because basically the aim of both models is to improve the students' mastery in understanding the content of a text. Slavin (2010, p.33) states that the most important objective of the cooperative learning model is to provide the students with the necessary knowledge, concept, skills and understanding in order that they will be happy and contributing citizens.

As having been explained previously, CIRC stands for Cooperative Integrated Reading and Composition. This learning model refers to the comprehensive program for teaching the Reading subject with emphasis on the higher grade in the elementary schools by means of group work. In this learning model, the students will be assigned into groups and each group will perform the activities of reading a text from one to another, understanding the content of the text, writing the response to the text and more. In sum, through the implementation of CIRC model the students have equal opportunity to participate actively in the teaching-learning process.

Slavin (2010, p.202) states that the main objective of CIRC is to assign the cooperative teams for assisting the students in mastering the reading skills that might be widely implemented. As a result, within the learning process of CIRC the students will work in pairs in order to identify the elements of a narrative text. In addition, the students work in pairs in order to integrate the writing activities and the reading skills in order to understand a text since the implementation of CIRC in the Reading subject is to design, implement and evaluate the conventional learning process. Then, Slavin, Madden and Stevens (1989, pp.26-27) further states that the steps of CIRC implementation consist of: (1) reading in pairs; (2) re-writing the given narrative text in good grammar; (3) reciting aloud the given words; (4) identifying the meaning of the given words; (5) retelling the given narrative text; and (6) evaluating the pronunciation.

On the other hand, as having been explained as well PQ4R stands for Preview Question Read Recite Reflect Review. The PQ4R Model is one of the elaboration strategies that has been widely implemented in collaborative learning process. As a result, the model is suitable for assisting the students to recall what they have read. In the same time, the implementation PQ4R also displays the behaviour and the mind of the students that influence what they have learned

including their memory and their metacognitive skills. Then, the steps of PQ4R consist of: (1) Preview (performing brief reading in order to identify the main topics/the learning objectives that should be achieved); (2) Question (formulating questions based on the main topics that have been found from the main topics/the learning objectives by using the question words such as what, who and how; (3) Read (reading and responding to/answering the questions that have been formulated); (4) Reflect (simulating/informing the materials in the text); (5) Recite (summarizing the overall discussion on the topic of the given subject); and (6) Review (reading the abstract that has been summarized from the main topics/the learning objectives and re-reading the materials if the students are not sure yet with the abstract). The implementation of PQ4R Model might strengthen the students' reading skills and might encourage the students to study learn independently while attaining a strong grasp on their understanding during the learning process (Omoteso & Sadiku, 2013 p.

PQ4R has been designed to deal with the reading materials in the form of textbooks and has been intended to serve the interest of a study. This model, or this method, enables students to learn systematically by the assistance of correct and efficient steps. Hayes (1992, p.48) states that the PQ4R strategy has been expected to benefit the textual materials and to be implemented in the individual students, the small groups and the overall classrooms in the context of elementary school. In addition, Hayes also asserts that the implementation of PQ4R will provide the students with an experience of using their own learning strategy in their own learning process.

Basically, the focus of this study is related to the mastery of reading skills. Then, the reading skills will be based on the Barret's Taxonomy in which the classroom teachers develop questions in accordance with the level of the reading understanding that the students might achieve. The level of Barret's Taxonomy has been explained in the previous section and thus the reading skills is described as follows: (1) the skills of understanding the meaning of the words in accordance with the use in a discourse; (2) the skills of identifying the organization of the discourse and its inter-related parts; (3) the skills of identifying the main topics that have been displayed; and (4) the skills of responding to the questions in which answers might be explicitly found in the discourse. In order to master these

skills, certainly the students should have good reading comprehension.

The implementation of both CIRC and PQ4R involves the students into pair-work in order to identify the aspects of the reading comprehension to enhance learning process to be more effective. Therefore, it is expected that both CIRC and PQ4R might make the reading comprehension skills more effective for the students of Grade V in Cluster 1 Elementary School of Lendah District, Kulon Progo. In order to support the statement, through the conduct of the study the researcher would like to achieve the following objectives: (1) identify the effectiveness of CIRC-type learning model on the reading comprehension skills among the students of Grade V Cluster 1 Elementary School level of Lendah District Kulon Progo; (2) identify the effectiveness of PQ4R-type learning model on the reading comprehension skills among the students of Grade V Cluster 1 Elementary School of Lendah District Kulon Progo; and (3) identify the differences on the effectiveness between the CIRC-type learning model and the PQ4R-type learning model on the reading comprehension skills among the students of Grade V Cluster 1 Elementary School level of Lendah District Kulon Progo.

The results of the study are expected to contribute to the collection of empirical insights with regards to the implementation of CIRC-type learning model and PQ4R-type learning model especially in the domain of reading comprehension skills. For the students, the results of the study are expected to expand their knowledge on the reading comprehension skills so as to facilitate the students in their learning process. On the contrary, for the teachers the results of the study are expected to expand the range of alternatives in conducting the teaching and learning activities so as to widen the range of teaching and learning activities during reading comprehension. In addition, the results of the study might serve as a basis of implementation for both the CIRC and the PQ4R among the teachers. Lastly, for the researcher, the results of the study are expected to serve as a practical implementation of the theory that has been studied and thus reducing the gap between the theories of reading and actual implementation specifically in reading comprehension skills.

Method

In conducting the study, the researcher implemented the quantitative approach. Specifi-

cally, the quasi experimental design had been conducted. The study took place in Cluster 1 Elementary School of Lendah District Kulon Progo precisely in Semester II of Academic Year 2015/2016.

With regards to the research site, the population in the study was all students of Grade V in Cluster 1 Elementary School Degree of Lendah District Kulon Progo in Semester II of Academic Year 2015/2016. The students came from 5 State Elementary Schools and the total number of the population was 118 people. Then, the sample was selected from the population by means of Simple Random Sampling. The sample that had been selected consisted of 73 students with following composition: (1) 25 students of Grade V in Butuh State Elementary School as the experimental group; (2) 23 students of Grade V in Carikan State Elementary School as the experimental group; and (3) 25 students of Grade V in Wanagiri State Elementary School as the control group.

The variables that had been employed in the study were the independent variable and the dependent variable. The independent variable consisted of the CIRC-type Learning Model (X_1) and the PQ4R-type Learning Model (X_2), while the dependent variable was Reading Comprehension Skills (Y). The data were gathered from the sample by administering a reading comprehension skills test and the test set consisted of 40 test items. Then, in order to ensure the data validity the researcher performed the content validity test and the construct validity test. Furthermore, in order to ensure the content validity the researcher also performed the expert judgment. After the reading comprehension skills test had been completed, the data that had been gathered were analyzed by means of Pearson's product moment test. In the same time, the data were also analyzed by means of Cronbach's Alpha in order to ensure the data reliability.

The design that had been implemented in the study was the Non-Equivalent Control Group Pretest-Posttest Design. Within the design, the researcher should perform a pre-test to all samples from both the experimental groups and the control group. The pre-test was the reading comprehension skills test. After the pre-test had been completed, the researcher provided the treatment to the experimental groups and the conventional activity to the control group. After the treatment had been provided, the researcher conducted a post-test to both the experimental group and the control group. The pre-test score

and the post-test score served as the determiner of score gap (gain score) and thus might be generalizzed as the final result for conclusion drawing activity.

Descriptive statistics and inferential statistics were applied in data in data analysis technique. The descriptive statistics was implemented in order to describe the students' condition with regards to the reading comprehension skills both before and after the learning process. On the contrary, the inferential statistics was implemented in order to test the hypotheses in the study.

Prior to conducting the inferential statistics test, the researcher performed the analysis prerequisite test that consisted of the normality test and the homogeneity test. The normality test was conducted by means of Kolmogorov-Smirnov Method and the aim of conducting the normality test was to identify whether the data in the study had been normally distributed or not. On the other hand, the homogeneity test was conducted by means of Levene's Test Method and the aim of conducting the homogeneity test was to identify whether the data in the study had been homogeneous or not. The data would be considered normally distributed and homogenous if the significance value > 0.05 . In conducting both the normality test and the homogeneity test, the researcher applied SPSS version 22.

Then, as part of the inferential statistics test the researcher conducted the hypothesis test by means of t-test and ANOVA test. The t-test was conducted in order to identify whether there had been differences between the two models in the experiment, while the ANOVA test was conducted in order to identify the influence between the two independent variables on the dependent variable.

Results and Discussions

Descriptive Analysis

The descriptive analysis has been performed in order to describe the data that have been gathered. The data that have been gathered in the study are the scores of reading comprehension skills test from both the pre-test activity and the post-test activity between the two experimental groups and the control group. The pre-test has been administered to the two experimental groups and the control group prior to the provision of the treatment.

In order to describe the data from the pre-test activity and the post-test activity between the

two experimental groups and the control group, the researcher has performed the statistical techniques that include mean, median, modus, standard deviation, variance, minimum score and maximum score. Then, the results of the descriptive analysis on the mean score among the first experimental group, the second experimental group and the control group might be consulted in Table 1.

Considering the results shown in Table 1, the gain score on the mean score between the control group and the experimental group might be identified. In the control group, the pre-test mean score is 72.18 while the post-test mean score is 77.46. Thus, the gain score in the control group is 5.28. On the contrary, in the two experimental groups the pre-test mean score is 72.71 while the post-test mean score is 88.44. Also, the gain score in the first control group is 15.73. Therefore, the gain score of the two experimental groups is higher than that of the control group and the gap of the gain score between the two experimental groups and the control group is 10.45.

The mean score from the first experimental group, the second experimental group and the control group is shown in Figure 1.

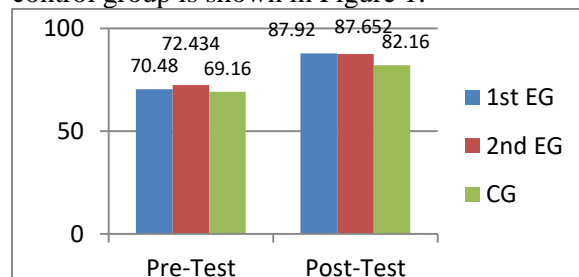


Figure 1. The Column Chart of Pre-Test Score and the Post-Test Score from the Reading Comprehension Skills Test

Based on the results in Figure 1, the gain score between the two experimental groups and the control group might be identified. In the control group, the pre-test mean score is 63.64 while the post-test mean score is 72.50. Thus, the gain score of the control group is 8.86. On the other hand, in the two experimental groups the pre-test mean score is 62.61 while the post-test mean score is 82.17. Thus, the gain score of the two experimental groups is 19.56. Therefore, it is apparent that the gain score of the two experimental groups is higher than that of the control group and the gap of the gain score between the two experimental groups and the control group is 10.70.

Table 1. The Pre-Test Score and the Post-Test Score from the Reading Comprehension Skills Test

Elements	Pre-Test			Post-Test		
	1 st EG	2 nd EG	CG	1 st EG	KE II	KK
Mean	70.480	72.434	69.160	87.920	87.652	82.160
Standard Deviation	6.615	7.057	5.2889	4.600	3.797	4.119
Variance	43.76	49.802	27.973	21.160	14.419	16.973
Minimum Score	60.00	64.00	62.00	80.00	82.00	76.00
Maximum Score	84.00	88.00	80.00	96.00	98.00	92.00
Number of Students	25	23	25	25	23	25

Results of Analysis Prerequisite Test

Prior to conducting the hypothesis test, the analysis prerequisite test that should be performed consists of the normality test and the homogeneity test. The results of both the normality test and the homogeneity are shown in table 2, Table 3, Table 4, and Table 5.

Table 2. Results of Normality Test for the Pre-Test Mean Score of Reading Comprehension Skills

No.	Group	Sig.	Status
1.	Control	0.153	normal
2.	First Experimental	0.821	normal
3.	Second Experimental	0.215	normal

The results in Table 2 show that the pre-test data of the reading comprehension skills test from the three groups have significance score that is higher than 0.05. The implication is that the data in the study have been normally distributed.

Table 3. Results of Normality Test for the Post-Test Mean Score of Reading Comprehension Skills

No.	Group	Sig.	Note
1.	Control	0.777	normal
2.	First Experimental	0.909	normal
3.	Second Experimental	0.972	normal

The results in Table 3 show that the post-test data of the reading comprehension skills test from the three groups have significance score that is higher than 0.05. The implication is that the data in the study have been normally distributed.

The results in Table 4 show that the pre-test data and the post-test data from the first experimental group, the second experimental group and the control group have significance score > 0.05 . The implication is that the data in the study have been homogenous.

Results of Hypothesis Test

After the results of analysis prerequisite test have already met the requirements that the

data are normally distributed and homogenous, the researcher proceed to the hypothesis test.

Results of First Hypothesis Test

The results of the first hypothesis test for the reading comprehension skills between the first experimental group and the control group might be consulted in Table 5.

Table 4. Results of Homogeneity Test Analysis

	Levene Statistic	df1	df2	Sig.
Pre-Test	1.640	2	70	0.201
Post-Test	1.373	2	70	0.260

Table 5. Results of Hypothesis Test by Means of t-test for the Reading Comprehension Skills

	Method	N	Mean	t	Sig.
Pre-Test	CIRC	25	70.480	0.779	0.440
Note	Group	25	69.160		
Post-Test	CIRC	25	87.920	4.664	0.000
Note	Group	25	82.160		

The results of the t-test show that the significance value that has been attained is 0.000, which is lower than 0.05. On the other hand, the t-count value is 4.664, which is higher than the t-table value namely 1.009 ($4.664 > 1.009$). Therefore, it might be concluded that there is a significant difference between the use of CIRC-type learning model and the conventional learning model with regards to the mastery of reading comprehension skills.

In other words, it may be assured that the CIRC-type learning model is more effective in supporting the mastery of reading comprehension skills. The support of the CIRC-type learning model might be traced back into the comparison on the gain score of the pre-test mean score and the post-test mean score between the first experimental group and the control group. In the first experimental group, the pre-test mean score is 70.480 while the post-test mean score is 87.920. Thus, the gain score of the first experimental group is 17.54. In the meantime, in the control group the pre-test mean score is 69.190 while the

post-test mean score is 82.160. Thus, the gain score of the control group is 13.00.

Results of Second Hypothesis Test

The results of the second hypothesis for the reading comprehension skills between the second experimental group and the control group are shown in Table 6.

Table 6. Results of Hypothesis Test by Means of t-test for the Reading Comprehension Skills

	Method	N	Mean	t	Sig.
Pre-Test Note	CIRC	25	72.434	1.829	0.440
	Group	25	69.160		
Post-Test Note	CIRC	25	87.652	4.790	0.000
	Group	25	82.160		

The results of the t-test show that the significance value that has been attained is 0.000, which is lower than 0.05. On the other hand, the t-count value is 4.790 which is higher than the t-table value namely 0.440 ($4.790 > 0.440$). Therefore, it might be concluded that there is a significant difference between the PQ4R-type learning model and the conventional learning model with regards to the mastery of reading comprehension skills. In other words, the PQ4R-type learning model is more effective in supporting the mastery of reading comprehension skills. The support of the PQ4R-type learning model might be traced back to the comparison on the gain score between the pre-test mean score and the post-test mean score from the second experimental group and the control group. In the second experimental group, the pre-test mean score is 72.434 while the post-test mean score is 87.652. Thus, the gain score of the second experimental group is 15.218. In the meantime, in the control group the pre-test mean score is 69.190 while the post-test mean score is 82.160. Thus, the gain score of the control group is 13.00.

Results of the Third Hypothesis Test

The results of the third hypothesis test for both the CIRC-type learning model and the PQ4R-type learning model are shown in Table 7.

Table 7. Results of Hypothesis Test with ANOVA for the Reading Comprehension Skills

	Method	N	Mean	t	Sig.
Pre-Test Note	CIRC	25	70.480	0.991	0.327
	PQ4R	23	72.434		
Post-Test Note	CIRC	25	87.920	0.219	0.828
	PQ4R	23	87.652		

The results of the ANOVA test show that the significance value that has been attained is 0.828 which is smaller than 0.05. Therefore it might be concluded that the implementation of CIRC-type learning model and PQ4R learning model might simultaneously improve the students' reading comprehension skills because the results between both models are equal. Then, from Table 7 the pre-test score and the post-test score of the first experimental group are 70.480 and 87.920, respectively, with gain score 17.440; meanwhile, the pre-test score and the post-test score of the second experimental group are 72.434 and 87.562 respectively, with gain score 15.217. On the contrary, the pre-test mean score and the post-test mean score of the control group are 69.190 and 82.160 respectively, with gain score of 13.000. Apart from the mean score it is apparent that the CIRC-group has higher performance on the mastery of reading comprehension skills in comparison to the PQ4R group while the PQ4R-group has higher performance on the mastery of reading comprehension skills in comparison to the control group.

Discussions

Reading comprehension skills are among the macro skills that are very essential for language learners in all levels. These skills also influence to a great extent the mastery of language in any level. In the assessment of the students' mastery of reading comprehension skills conducted by administering an objective test is in the form of 30 item-multiple choice test prior to the assignment of the sampled students into three different groups. The provision of the pre-test aims at identifying the students' preliminary mastery of reading comprehension skills prior to the provision of the treatment and ensuring that the preliminary situation of the two experimental groups and the control group is the same (homogenous).

The improvement on the students' mastery of reading comprehension skills is suspected to be influenced by the stages in the CIRC-type learning model. The implementation of CIRC-type learning model involves comprehensive activities for giving instructions in the form of reading, arrangement and pronunciation on the higher classroom of elementary school level. As it is stated by Slavin (1996, p.201), all cooperative learning methods share an idea that students cooperate to learn and to be responsible to one another, in the process of learning language the students also learn about them-selves. In the

same time, within the implementation of CIRC-type learning model team success should be the common objective to be achieved.

During the learning process, the teacher assigns the students into several small groups that consist of male and female students with heterogeneous level of reading comprehension skills. Each small group consists of 3 to 4 students. With regards to the group assignment, the underlying reason of CIRC and PQ4R advantage is in accordance with the statement by Suprijono (2010, p.54) who explained that the students are responsible for their own learning process and thus they will strive for finding the information in order to answer the questions they have. The students will achieve the learning objectives only when they work together; consequently, team success becomes the common objective of all students.

After the teacher has assigned the students into several small groups, the teachers distributes reading texts in order to be discussed based on the teacher's instructions. Then, the teacher explains the objective of reading new vocabulary, repeating the new vocabulary and discussing the reading texts after the students have finished reading them. In the first place, the students read the reading texts silently and afterward they take turn to read one paragraph after another loudly with their pairs. In the meantime, the other students became the listener and they correct every mistake that the reader has committed. During these activities, the teacher go around the classroom in order to assess the students' performance and listen to the students while they are reading the texts loudly. Next, the students raise questions in relation to the piece of information and the main topics within the reading texts. In order to elicit the students' reading comprehension skills, difficult vocabulary is provided into the reading texts and the students should learn pronouncing the difficult vocabulary correctly with their pairs in the same group. After the students have completed reading and pronouncing the difficult vocabulary correctly, they discuss the reading texts with their pairs in the group, summarize main points of the reading texts and re-tell the reading texts according to their own language both in oral and written manner. During this sequence, the students correct the pronunciation of the vocabulary and provide assistance to one another.

At the end of the overall activities, the teacher administers a post-test on the students' reading comprehension skills. In this test, the

students are expected to do independently. Then, the administration of the post-test is intended to identify the size of the improvement on the students' reading comprehension skills mastery after the treatment has been provided. After the post-test has been completed, the results of the post-test are analyzed by means of t-test.

The results of the t-test show that the CIRC-type learning model is effective for improving the students' mastery of reading comprehension skills. This statement is in accordance with the results of a study by Gupta and Ahuja (2014) which show that the experimental group that implements the CIRC-type learning model has gained better score in reading a narrative text in comparison to the control group that implements the conventional learning model. Similar conclusion is also described by the results of a study by Zainuddin (2015) who states that the implementation of CIRC-type learning model has significant influence on the learning process of descriptive reading activities in comparison to the conventional learning model. The results of the study by Yeh (2007, p.83) also show that the students' preliminary knowledge and the implementation of CIRC-type learning model has brought about positive influence on the achievement of reading comprehension skills and other linguistic skills. The students' reading comprehension skills have been improved from the mean score due to the effectiveness of the stages in the CIRC-type learning model.

The PQ4R has been implemented in the elementary schools for assisting the Reading subject because the model might help the students to remember what they have read and to be involved in the learning process of reading comprehension skills. In the beginning of the learning process, the students are assigned into a group that consists of 2-3 people. The group is assigned based on the students' seating arrangement. The seat of the students have been manipulated by the teacher in order to make the students skills to be equally distributed; as a result, each group consists of the students with high and low level of reading comprehension skills. According to the statement by Hayes (1992, p.48), the strategy of PQ4R might be implemented to individual students, small groups and overall classroom. In the classroom, each group is provided with a reading text that should be discussed. After the student's discussion on the reading text, they are provided with the student worksheet that adopts the steps that have been elaborated by Slavin (2011, p.257). The description on the PQ4R

treatment might be consulted in the following sections.

In the learning process, the students are asked to read at a glance the reading texts that have been distributed. This step is performed in the first place because in the PQ4R-type learning model the other step that should be performed is reading at a glance the reading texts under the teacher's guidance. Then, after reading the texts at a glance the teacher raises several questions and in this step the teacher provides several examples of question words such as what, who, when, where and how. After-wards, the teacher distributes a reading material that consists of several paragraphs and the students might use the question words for formulating two questions in accordance with their desire. In this situation, the teacher merely serves as a facilitator. Then, the questions that the students have formulated are similar from one to another and demand simple responses; not to mention, these questions do not cover the content of the reading materials. This stage takes quite a long time for the students because the students have difficulties in formulating their questions. After the overall stages have been completed, the questions that have been formulated over a piece of paper should be kept first and the students proceed again to their worksheet and the textbook of Bahasa Indonesia.

During the works with the student worksheet and the textbook of Bahasa Indonesia, the teacher re-emphasizes that the students should concentrate again to their reading texts. In the meantime, the teacher observes the overall students by visiting the students one by one. During this observation, the students show the results of their work in order to assure whether they have completed their work appropriately or not. Then, the teacher takes a quick look on the students' works and provides more explanation on how to formulate questions appropriately by using the given question works. If the students have formulated the questions appropriately, then they will be allowed to proceed to answer the questions that are relevant to the content of the paragraphs. Next, the teacher assigns the students to re-write the reading texts or the essence of the reading texts according to the given discourse. The relevant questions and answers will help the students to re-write the discourse that they have read. In order to ensure that, a re-observation should be performed toward the overall discourse and the accuracy of the answer toward the questions that have been formulated. At the end

of the learning process, the teacher invites the representative of each group to read what they have written.

At the end of the learning process, the teacher administers a post-test in order to assess the students' reading comprehension skills. The administration of the post-test is intended to identify the size of improvement on the students' reading comprehension skills after the treatment has been provided. After the post-test has been administered, the score of both the pre-test and the post-test is collected and is analysed by using the t-test. The results of the t-test show that the PQ4R-type learning model is effective for improving the students' reading comprehension skills. In relation to the statement, the results of a study by Wahyuningsih (2011) show that the students' preliminary knowledge and the PQ4R-type learning model are effective for improving the students' achievement in the domain of reading comprehension skills. Similarly, the results of a study by Widiyanthi, Sugihartini, Wahyuni, and Kesiman (2014, p.35) show that the students in the PQ4R group has better reading score of narrative text in comparison to the students in the control group that implements the conventional learning model. The method in the PQ4R-type learning model includes a process of adding details so that new information will be more meaningful and thus the coding will be easier and more certain for the students.

The results of the first hypothesis test and the second hypothesis test show that the CIRC-type learning model and the PQ4R-type learning model are effective for supporting the learning process of reading comprehension skills for the elementary school students especially the the students of grade V. In order to elicit the effectiveness, the third hypothesis test is performed and the focus of the third hypothesis test is identifying the different influence between the CIRC-type learning model and the PQ4R-type learning model. The analysis technique for testing the different rate of effectiveness between the two learning models on the reading comprehension skills is ANOVA; in ANOVA, the CIRC-type learning model serves as the first independent variable and the PQ4R-type learning model serves as the second independent variables while the students' reading comprehension skills serve as the dependent variable. Then, the effectiveness of both the CIRC-type learning model and the PQ4R-type learning model on the students' reading comprehension skills is assessed by viewing the pre-test and the post-test

score of the students' reading comprehension skills in the two experimental groups. The pre-test mean score and the post-test mean score of the students' reading comprehension skills in the CIRC group are higher than the pre-test mean score and the post-test mean score of the PQ4R group, while the pre-test mean score and the post-test mean score of the students' reading comprehension skills in the PQ4R group are higher than the pre-test mean score and the post-test mean of the control group that implements the conventional learning model. Another strengthening fact that has been found is that both the CIRC-type learning model and the PQ4R-type learning model have shown equal performance with regards to improving the students' reading comprehension skills based on the ANOVA results. Therefore, it might be inferred that both CIRC-type learning model and the PQ4R-type learning model are equally effective in improving the students' reading comprehension skills.

Basically, both the CIRC-type learning model and the PQ4R-type learning model possess effective stages for improving the students' reading comprehension skills. Both models have the stage of reading in pairs and re-telling the reading texts. The only difference is that the CIRC-type learning model consists of six stages namely reading in pairs, re-writing the given reading texts, re-pronouncing the given new vocabulary aloud, identifying the meaning of the given new vocabulary, re-telling the given reading texts and re-pronouncing the difficult vocabulary. Within the CIRC-type learning model, the students are assigned to the heterogenous learning groups so that the students might perform several activities in the group such as reading in pairs, identifying the main elements of the given narrative texts and re-telling the content of the narrative text. Similarly, Stevens (Calderón, Hertz-Lazarowitz, & Slavin, 1998, p.155) states that the CIRC-type learning model has shown consistently positive impact from the reading programs on the students' achievements especially in the stages of reading comprehension and meta-cognition. Furthermore, Rapp (1992, p.55) states that the most important aspects in the components of reading comprehension skills within the CIRC-type learning model are the provision of meaning and the cooperative activities during the follow-up when the teacher works with one of the reading groups. The results of the analysis and the elaboration in the previous sections have strengthened the fact that the CIRC-type learning model and the PQ4R-type

learning model are effective for improving the students' reading comprehension skills since both models have equal rate of effectiveness.

Conclusions

The Cooperative Integrated Reading and Composition (CIRC) Learning Model has been effective in improving the students' reading comprehension skills. The effectiveness is already confirmed by the significant gain score in the first experimental group from 70.480 into 87.920. The results of the first hypothesis test by means of independent sample t-test for the first experimental group show that the t-count value for the first experimental group is 10.561, which is higher than the t-table value, namely 2.064, as the comparison. In the same time, the significance value of the first experimental group is 0.00 or lower than 0.05. As a result, the CIRC-type learning model is more effective in improving the students' reading comprehension skills for Grade V in Cluster 1 Elementary School Degree of Lendah District Kulon Progo.

On the other hand, the Preview Question Read Reflect Recite Review (PQ4R) Learning Model is also effective for improving the students' reading comprehension skills. The effectiveness has been confirmed by the significant gain score in the second experimental group from 72.435 into 87.652. The results of the second hypothesis test by means of independent sample t-test for the second experimental group show that the t-count value for the second experimental group is 10.312, which is higher than the t-table value, namely 2.074, as the comparison. In the same time, the significance value of the second experimental group is 0.00 more lower than 0.05. As a result, the PQ4R-type learning model is also more effective in improving the students' reading comprehension skills for Grade V Cluster 1 Elementary School Degree of Lendah District Kulon Progo.

Despite the similar rate of effectiveness, both the CIRC-type learning model and the PQ4R-type learning model have significant differences in improving the students' reading comprehension skills. The significant difference might be traced back to the results of the ANOVA test for both models. The results of the ANOVA test for both model show that: (1) the pre-test mean score and the post-test mean score of the first experimental group are 70.480 and 87.920 respectively with the gain score 17.440; (2) the pre-test mean score and the post-test mean score of the second experimental group are 72.434 and

87.652 respectively with the gain score 15.217; and (3) the pre-test mean score and the post-test mean score of the control group are 69.160 and 82.160 respectively with the gain score 13.000. Although the CIRC-type learning model and the PQ4R-type learning model has similar rate of effectiveness, the mean score of CIRC-type learning is higher than the PQ4R-type learning model while the mean score of PQ4R-type learning model is higher than the conventional learning model in the control group. Thus, it might be concluded that CIRC-type learning model is more effective for improving the students' reading comprehension skills in comparison to the PQ4R-type learning model but both the CIRC-type learning model and the PQ4R-type learning model are more effective for improving the students' reading comprehension skills in comparison to the conventional learning model.

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