

THE EFFECT OF USING COOPERATIVE INTEGRATED READING AND COMPOSITION (CIRC) TECHNIQUE ON SECONDARY SCHOOL STUDENTS' READING COMPREHENSION

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ABSTRACT

The aim of this research is to investigate whether or not the students who are taught by using CIRC technique get a better score than those who are not in reading comprehension achievement. It focused on answering general information and specific information question. CIRC is one of teaching technique which involves some students to predict, discuss and exchange ideas to solve the problems of the tasks given by the teacher. The researcher used quasi-experimental post test design only as a research design. The research participants were the tenth grade students in Mathematics and Natural Science class 2 and 3 at one of secondary school in Banyuwangi, Indonesia. The data of reading test was analyzed by using independent sample t-test through SPSS program. Homogeneity analysis indicated that the 2 groups/classes were homogenous ($t=0.566 > p=0.05$). The method used for collecting data was test. The form of the test was multiple choices. Based on the data, it also was found the deviation for experimental group was 7.321 and control group was 7.296. After calculating the test scores, it was found the mean score for experimental group was 73.81 and for control group were 69.81. The data was calculated by using independent sample T-Test formula. The result of independent t-test was $0.021 < 0.05$. It means that the null hypothesis (H_0) was rejected. It was proved that studying by using CIRC can give significant effect for students' reading comprehension achievement. The teacher is suggested to use CIRC in order to increase the students' reading comprehension achievement.

Keywords: Reading Comprehension; Cooperative Integrated Reading and Composition; CIRC; Technique.

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INTRODUCTION

Reading is a complex cognitive process of decoding symbols in order to construct or derive meaning (reading comprehension). According to Grellet (1981:3) reading is a

receptive language process. It is the process of recognition, interpretation, and perception of written or printed materials. Reading proficiency plays a great role in understanding a written statement accurately and efficiently. In reading there are many words or sentence that are used to express the writer's feeling and sometimes the writer uses kinds of word as a symbol. So, the reader must understand what the writer's tell in the story. It is a means of language acquisition, of communication, and of sharing information and ideas. Like all languages, it is a complex interaction between the text and the reader which is shaped by the reader's prior knowledge, experiences, attitude, and language community which is culturally and socially situated.

Besides, reading is necessary to both child and adult because reading helps kids develop empathy and develop a child's imagination. When we read, our brains translate the descriptions of people, places, and things into picture. When we are engaged in a story, we are also imagining how the characters are feeling. We use our own experiences to imagine how we would feel in the same situation. Reading improves a child's vocabulary and it also improves their concentration, leads to more highly-developed language skills and improves the child's ability to write well. This is because children learn new words as they read but also because they unconsciously absorb about things like how to structure sentences and how to use words and language effectively. Reading relaxes the body and calms the mind. This is an important point because these days we seem to have forgotten how to relax and especially how to be silent.

Reading in any language poses a challenge, but reading in English is particularly difficult. Reading in English is further complicated by its orthography the spelling of words. In some languages, such as Spanish, one letter has one sound. In English, one letter can represent several different sounds, depending on its placement in the word. McNeil (1992:3) says that the effective reading depends upon difficult level of the text, the unknown words in the text and background knowledge of the reader. It all contributes to the reading successfully getting the message of the writer. Some factors which make reading uneasy or difficult for the learners are vocabulary, sentence structure and background knowledge from the students.

From the explanation above, it can be inferred that reading is one of the language skills that must be mastered by the students. To get the objective of the teaching and learning process, the teacher should be able to apply a suitable approaches or techniques which give a chance to the students to be active. One of the techniques that uses in comprehending the students reading ability is Cooperative Integrated Reading and Composition (henceforth, CIRC). This technique is a part of cooperative learning approach that can help student in easier to comprehend and understand the text.

Bowen (in Durukan, 2011:102-103) states that Cooperative learning can be defined as a learning approach in which small, mixed student groups form both in-the-class and out-of-the-class environments to ensure students help each other in learning an academic subject in the scope of a common goal; where their self-esteem increases and their communication, problem-solving and critical thinking skills develop; and where they actively participate in the teaching-learning process. In cooperative learning, students work together to maximize their own and each other's learning. On the other side, in cooperative learning group, members of a cooperative group generally meet all reasonable expectations of achievement academic goals.

In addition, Slavin (in Sanjaya, 2006:240) states that there are two reasons of the benefits of cooperative learning. First that the use of cooperative learning can enhance social relationships, cultivate an attitude of accepting the lack of self and others and increase self-esteem. Second, cooperative learning solve problems by integrating knowledge with skills.

Furthermore, CIRC technique is that one of the learning techniques that is based on cooperation and designed to develop reading, writing and other language skills in the upper

grades of primary education. CIRC technique presents a structure that increases not only opportunities to direct teaching in reading and writing but also applicability of composition writing techniques. The advantage of this technique is the optimization of student participation.

An investigation of the significance of CIRC technique was found in Durukan (2011:108). He found that there was a significant difference in reading comprehension between the students who were treated by using CIRC technique. These findings generally suggest that CIRC technique and traditional method are effective on reading comprehension and writing expression skills; however, CIRC technique is more effective for achievement and retention level than the traditional method. In light of these results, it is suggested that CIRC and other cooperative teaching methods (such as Jigsaw, Cooperative Learning, Team-Game-Tournament, etc.) benefit language acquisition. Previous research that was conducted by Asni (2012:166) found that there were some effects of teaching learning process by using CIRC such as: the techniques were effective to improve the students' reading and writing abilities and the teaching and learning process of reading and writing in English and it improved students' confidence in expressing their idea and practicing their reading skills such as oral reading, guessing meaning of the vocabulary, skimming, scanning, and summarizing the text.

Several definitions of reading are proposed by several authors. First, Grellet(1981: 7) defines reading as a constant process of guessing, and what one brings to the texts is often more important than what one finds in text. It means reading is an active skill, it constantly involves guessing, predicting, checking and asking oneself question. Further, McNeil (1992:15) says that reading is an interaction between the writer and the reader by using texts which expands the reader's knowledge to make sense of print. The readers construct information transferred from the writer through written symbols which bear meanings inferred by the writer of the text. This interaction may contribute world information or schemata to understand the text which is new and may be useful for the readers who may live far from the writer. This includes particular information for the learners.

In addition, McNeil (1992:16) says that reading can be defined as a process and product. The process of reading is the interaction between a reader and the text. During the process, many things are happening. Not only is the reader looking at print, deciphering in some sense the marks on the page, deciding the meaning of the words and how they relate to each other but also the reader is presumably thinking about what he is reading: what it means to him, how useful is the text, etc. Meanwhile, reading as a product means the ability to comprehend texts.

Comprehension is making sense out of text. From an interaction perspective, reading comprehension is acquiring information from context and combining disparate elements into a new whole (McNeil, 1991:16). It is a process of using one's existing knowledge (schemata) to interpret text in order to construe meaning. Although writers structure texts for their given purposes, readers must interpret what they read and must arrive at their own construction of what the text means. Comprehension includes in the first place. Understanding the information in text as well as changing the knowledge one used to understand the text.

Reading comprehension achievement involves some skills of the students. The students cannot just read the text, but they also must understand what the author wants to say. To reach the reading comprehension achievement, the students need some skills to understand the meaning of the text. Reading comprehension is combination between the reader's prior knowledge or some skills and the reading process itself.

Furthermore, reading comprehension is a cognitive process which makes it convert activity that cannot be observed directly (Roe et al., 1995:62). What we actually see and hear during reading are its products, such as answer to questions based on textual material. It can

be inferred that reading comprehension is understand about what we read, knowing the meaning and the content of the text. In addition, Budiharso (2006:27) states that reading comprehension is the result of interaction between the perception of graphic symbols that represent language and the reader's prior knowledge.

Reading comprehension in this research refers to result of reading process or the degree of ability in finding general information and specific information of the text. It is based on basic competence of reading of the tenth grade students.

General information deals with the main idea of each paragraph, the title of the text, and the topic of the text. It can also be said as the main idea of the text. According to Roe et al (1995:15) main idea means the big idea that the author develops and supports with details throughout the paragraph. Main idea becomes an umbrella that covers the supporting details. Finding general information of the text means the students are asked to find and identify what is the big idea of each paragraph.

Specific information deals with the supporting details of the text. Specific information or supporting details are the smaller pieces of information or ideas that are used to support the main idea (Roe et al., 1995:15). Specific information is the smaller parts of general information to support the big idea of the text. Finding specific information of the text means the students are asked to comprehend the text given and find the specific information that is stated explicitly in the text.

Cooperative learning stands for cooperative and learning. Cooperative is collaboration between learner's experience, beliefs, thoughts, and perceptions. It means that in cooperative there are a group of people which acting together to meet the common needs and aspirations of its member, sharing ownership and making decisions democratically. Besides, learning is an active process of gaining knowledge, insights, and skills through study, experience, or instruction. Based on the definitions above, it can be concluded that learning is a process change individual behaviour through interaction with environment to achieve the goal.

According to Slavin (2008:2) cooperative learning refers to a variety of teaching methods in which students work in small group to help one another learn academic content. In cooperative classroom, students are expected to help each other, to discuss and argue with each other, to assess each other's current knowledge and fill in gaps in each other understands.

Cooperative learning is a generic term for various small group interactive instructional procedures. Students work together on academic tasks to help themselves and their teammates learn together. It is a beneficial to students because there is a mutual relationship among the classmates academically. Cooperative learning is a model of small group work which is structured or managed (Lie, 2002:17). They are free to express their thought tentatively and expose their idea one another (Kohonen, 1992:35). It can be said that cooperative learning is a model of group work which provides positive chance to all students in developing their ability or achievement of their learning.

Cooperative Integrated Reading and Composition is a comprehensive reading and writing program for students. It includes story-related activities, direct instruction in reading comprehension, and integrated reading and language arts activities. Pairs of students (grouped either by across ability levels) read to each other, predict how stories will end, summarize stories, write responses, and practices spelling, decoding and vocabulary.

According to Calderon et al (1997:2) in CIRC, students work in heterogeneous learning teams for all reading, language arts, and writing activities. In reading, students work with partners during follow-up times on partner reading, decoding, story structure, prediction, and story summary activities related to the base stories. Students also receive direct instruction on comprehension and meet comprehension activities, followed by team practice. In line with this, Slavin (2008:7) states that in CIRC teachers use reading texts and reading groups, much

as in traditional reading programs. However, all students are assigned to teams composed of two pairs from two different reading groups. Students work as a total team to master “main idea” and other comprehension skills. During language arts periods, students engage in writing drafts, revising and editing one another’s work, and preparing for publications of team books.

CIRC is conducted based on the several principles in teaching and learning processes. Slavin (2008) mentions four principles of CIRC involving effective use of follow-up activities, oral reading, reading comprehension activities, and writing processes.

The first principle is the effective use of follow-up activities. While the teacher is working with one reading group, the other students in the class should be occupied with activities they can complete with minimal teacher directions. Students work within cooperative teams on these activities, which are coordinated with reading-group instruction, in order to meet objectives in such areas as reading comprehension, vocabulary, decoding, and spelling.

The second principle is oral reading. Oral reading is a reading aloud activity which can increase students’ ability to decode more automatically and therefore focus more on comprehension. In CIRC, students will get more opportunities to read aloud and receive feedback on their reading by having students read to teammates and by training them on how to respond to one another’s reading.

The third principle is enhancing reading comprehension skills. CIRC uses cooperative teams to help students learn applicable reading comprehension skills such as summarizing, questioning, clarifying and predicting skills. Students also learn the critical features of texts. For example, students will learn characters, setting, problems, and solutions in narrative texts. Students in CIRC also make and explain predictions about how problems will be resolved and summarize main elements of stories to one another, both of which are activities found to increase reading comprehension.

The fourth principles are writing and language arts. It designs, implements, and evaluates a writing-process approach to writing and language arts that would make extensive use of peers. Peer response groups are a typical component of most writing-process models, but peer involvement is rarely the central activity. In CIRC, students plan, revise, and edit their compositions in close collaboration with teammates. Language mechanics is completely integrated with and subordinated to writing, and writing is integrated with reading comprehension instruction both by the incorporation of writing-process activities in the reading program and by the use of newly learned reading comprehension skills in writing instruction.

METHOD

Research Design

In this research, the researcher used quasi-experimental research design. Post-test-only control group design was applied in this research. The design needs two classes: one as experimental group who was given the treatment and other as the control group who was not given the treatment. The post test was done after the experimental treatment was applied.

In this research, the experimental group received treatment, in which they were taught reading comprehension skill by using CIRC technique, while the control group was taught by using lecturing and the students work individually. Afterwards, both groups were given post-test.

Participants

It is important to choose the research respondents that would enable the researcher to conduct the research. The respondent of the research were then tenth grade majoring Mathematics and Natural Sciences 2 and 3. In each class, there were 38 to 37 students. So, the whole population was 75 students. In taking research respondents, the homogeneity analysis was conducted to the population. By analyzing the homogeneity, the researcher knew the result of this analysis. The result of the calculation Independent sample T-Test was higher than level of significance ($t=0.566 > p=0.05$), it means the grade is homogeneous. Then, by having two classes as respondents of the research, lottery used to determine which class was the experimental group and which class was control group. After determining the control group and the experimental group, the researcher gave the treatment to the control group by using conventional method (the method that was usually used by the English teacher) and the experimental group by using CIRC technique.

Data Collection Method

In this research the researcher used test to collect the data. Test is a tool to measure the ability of person. According to Brown (2003:3) test is a method of measuring a person's ability, knowledge, or performance in a given domain. It means that it purposes to measure students' knowledge and ability individually. Based on the purpose of giving the test, Hughes (2003:11) divides the test into four types, namely proficiency test, achievement test, diagnostic test and placement test. Meanwhile in this research, the test that would be used was achievement test because it was used to measure what students achieved after they learnt something.

In addition, Arikunto (2006:168) states that a good test should have validity and reliability. Content validity was established in this research since the test material was constructed by considering the indicators to be measured. Furthermore, Brown (2004:22) explains that the test will be reliable if it is consistent and dependable. To know whether or not the test was consistent and dependable, the researcher had to measure the reliability of the test. The reliability of the test in this research was measured by administering try out and then analyzed by using product moment formula through SPSS program.

Data Analysis

In data analysis method, the result of reading test was analyzed statistically by using independent sample t-test through SPSS program. It was to know whether or not there was significant mean difference between the experimental group and the control group. Significance levels show how likely a result is due to chance. The significant level set by the researcher was 95% (0.5 sampling error).

FINDINGS AND DISCUSSION

Findings

The test reliability was conducted in order to know whether or not the test was free from error. The computation of reliability was analyzed statistically by Reliability Analysis through SPSS program. Based on the calculation, the result of Coefficient was 0.274 and Correlation was 0.159. The data was consulted to the significant level of 0.05. It was indicated that the coefficient and the correlation was higher than 0.05 ($0.274 > 0.159 > 0.05$). So, the instrument was not reliable. The description of the result in SPSS program of coefficient and correlation of Reliability Analysis in the following table.

Table 1. The Result of Reliability Test

Case Processing Summary			
		N	%
Cases	Valid	40	100.0
	Excluded ^a	0	.0
	Total	40	100.0

Table 2. Independent Samples Test

Reliability Statistics			
Cronbach's Alpha	Part 1	Value	.231
		N of Items	19
	Part 2	Value	-.413
		N of Items	19
	Total N of Items		38
Correlation Between Forms			.159
Spearman-Brown Coefficient	Equal Length		.274
	Unequal Length		.274
Guttman Split-Half Coefficient			.263

The reading scores of the tenth year students from the English teacher were analyzed statistically by using Independent Sample T-Test through SPSS program.

Table 3. The result of Independent Sample T-Test for Homogeneity Analysis

Group Statistics					
	VAR00002	N	Mean	Std. Deviation	Std. Error Mean
VAR00001	X Mathematics and natural science class 2	38	69.7105	1.92996	.31308

Group Statistics					
	VAR00002	N	Mean	Std. Deviation	Std. Error Mean
VAR00001	X Mathematics and natural science class 2	38	69.7105	1.92996	.31308
	X Mathematics and natural science class 3	37	69.9189	1.06402	.17492

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
								Lower	Upper	
VAR00001	Equal variances assumed	7.494	.008	-.577	73	.566	-.20839	.36123	-.92832	.51154
	Equal variances not assumed			-.581	57.906	.563	-.20839	.35863	-.92630	.50951

Based on the calculation, the significance was 0.566, while the significant level set by the reseacher was 0.05 ($t=0.566 > p=0.05$). It means that the result was not significant. There was no significant difference of the mean score of the two classes. In other words, the two classes were homogeneous. As the result, the two classes were chosen as the experimental and control group by using lottery. The lottery was done to determine the group and the

result was Mathematics and Natural Sciences class 3 became experimental group and Mathematics and Natural Sciences class 2 became the control group.

The treatment that was given to the experimental group was teaching by using CIRC technique. Test was used as an instrument to collect the data. The scores of the students' reading comprehension in post test were analyzed by using independent sample t-test through SPSS 16 program for windows.

Table 4. Result of Independent Sample T-Test
Group Statistics

VAR00002		N	Mean	Std. Deviation	Std. Error Mean
VAR00001	X	37	73.8108	7.32135	1.20362
	Y	38	69.8158	7.29626	1.18361

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
VAR00001	Equal variances assumed	.020	.888	2.367	73	.021	3.99502	1.68801	.63082	7.35922
	Equal variances not assumed			2.367	72.932	.021	3.99502	1.68809	.63062	7.35943

The score of post-test for experimental group and the score of post-test for control group can be seen table 4.3. From that score, it can be seen the mean score for control group is 69.81 and the mean score for experimental group is 73.81. Further, the score deviation for control group is 7.296 and the score deviation for experimental group is 7.321. Next, the result of the independent sample t-test is 0.021. Then, the researcher continued to count the degree of freedom in order to know the data was significance or not, and the result was 73. The last, the score of t-test was compared with t-table with significant level 5% and the result 0.05. It is indicated that $0.021 < 0.05$. Based on the result of the analysis of t-test, it was significant.

Discussion

Independent sample t-test formula was applied to investigate whether or not the students who were taught by CIRC technique got a better score in answering general information and specific information than those who are not. The value of independent sample t-test was consulted with the significant level of 5%.

The data analysis found that the statistical t-value of independent sample t-test was 0.021 while the value of 5% significant level was 0.05. It indicated that the value of t-statistic was

lower than that of 5% significant level ($t=0,021 < p=0,05$). It means that the null hypothesis (H_0) that is formulated “There is no significant effect of Cooperative Integrated Reading and Composition (CIRC) technique on the Tenth Grade students’ reading comprehension achievement” was rejected while the alternative hypothesis (H_a) which formulated “There is a significant effect of Cooperative Integrated Reading and Composition (CIRC) technique on the Tenth Grade students’ reading comprehension achievement” was not rejected or accepted. It means that teaching reading using CIRC technique gave a significant effect.

Besides that, the mean score of experimental group was 73.81 and the control group was 69.81. The mean score of experimental group was higher than control group. Based on the result above, it could be stated that students’ score who were taught by using CIRC technique got a better score than who were taught by using technique that was usually used by the teacher in reading comprehension achievement.

CONCLUSION

Based on the result of data analysis, it can be concluded that there was a significant effect of using Cooperative Integrated Reading and Composition (CIRC) Technique on tenth grade students’ reading comprehension achievement ($t=0.021 < p=0.05$). It means that the students who were taught by using CIRC Technique on experimental group had better achievement than the students who were taught by using Three Phase Technique in the control group. It can be seen from the result of mean score of experimental group and control group ($73.81 > 69.81$). It can be concluded that students who are taught by using CIRC technique get a better score in answering general information and specific information than the students who are not taught by using CIRC technique on reading comprehension achievement.

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