



## **APPLYING COOPERATIVE INTEGRATED READING AND COMPOSITION TO IMPROVE READING COMPREHENSION AND WRITING ACHIEVEMENT**

**Sri Wahyuni**  
sriwahyuni\_pga@yahoo.com  
STKIP Muhammadiyah Paga Alam

**Chuzaimah D Diem**  
chuzaid@gmail.com  
Sriwijaya University

**Dian Ekawati**  
dekawati@yahoo.com  
Sriwijaya University

*Received 15 December 2015*  
*Received in revised form 25 Januari 2016*

*Accepted 19 April 2016*  
*Published online 15 May 2016*

**Abstract.** The aim of this study was to find out whether or not; Cooperative Integrated Reading and Composition (CIRC) could improve the students' reading comprehension and writing achievement. The population covered the whole eighth grade students of SMP 1 Pagaram. 40 students were selected purposively as the sample and divided into two groups, experimental and control group each comprising of 20 students. During the research, the students in the experimental group were taught reading and writing by using CIRC. To check whether the application of CIRC could improve the students' achievement, the students were given reading comprehension and writing test. The obtained data were analyzed by using paired sample t-test and independent t-test. Statistically, based on the result of paired sample t-test and independent t-test analyses, it strongly showed that there was significant improvement and difference in reading comprehension and writing achievement after the students were taught by using CIRC.

**Key words:** *Reading Comprehension, Writing Achievement, CIRC*

### **Introduction**

Reading and writing are the basic language skills that are important from the first phase of primary education because they are integrated each other. Celce-Murcia (1992) states that the interaction between reading and writing skill has often been a focus in the methodology of teaching especially EFL classroom. Learners need to practice writing the letters in order to facilitate their perception of

words and sentences during the reading process. Students can learn by writing and reading and a teacher can teach by reading and writing or having students read or write (Bloom, 1979). Pedagogy to be adopted in the teaching process should ensure both accurate comprehension and correct and effective self-expression by students during reading and writing activities.

In Indonesia, writing is still neglected in school and many graduate students are not able to write because they are not equipped with writing skill and in the most cases what is claimed to be a writing class is in reality a non-writing class (Alwasilah, 2001). In addition, Alwasilah found in his longitudinal study of writing process that there were 62.1% students from elementary school to collage had failed in the term of writing skill. It can be inferred that in Indonesia the major goal of writing is not yet successful. It can be concluded that the students face some difficulties in writing because they are not custom with writing activity.

One cooperative learning strategy which is appropriate to develop students' reading and writing skills in English is Cooperative Integrated Reading and Composition (CIRC). "The strategy presents a structure that increases not only opportunities for direct teaching in reading and writing but also applicability of composition writing techniques" (Slavin, 2002, p. 89). CIRC is developed to support conventionally used skill based reading groups strategy. Reading groups are established in the classroom. When the teacher works with a reading group, couples try to teach each other meaningful reading and writing skills. They help each other in performing basic skill-building activities (such as oral reading, contextual guessing, asking questions, summarizing, writing composition based on the story, and revising-correcting composition).

CIRC is one of cooperative learning strategies for teaching reading, writing, and language arts especially for the students in the upper elementary grades. The method emphasizes group goals and individual accountability. Cooperative learning refers to a variety teaching methods in which students work in small groups to help one another learn academic content. In cooperative classrooms, 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 work rarely replaces teacher instruction, but rather replaces individual seatwork, individual study, and individual drill. When properly organized, students in cooperative groups work with each other to make certain that everyone in the group has mastered the concepts being taught (Slavin, 1998).

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.

### **Research Methodology**

In this research, the writer used an experimental design because she wanted to know the effect of the independent variable on dependent variables. Creswell (2005, p.194) states "an experimental design is done when we want to establish

possible cause and effect of independent on influence of dependent variables". In this study, quasi-experimental research was used in order to assess the influence of CIRC on students' reading comprehension and writing achievement. In doing this study, the writer used quasi experimental design and specially chose non-equivalent group pre-test – post-test design. There were two groups. The first group is experimental group. It was given pretest, treatment by using CIRC strategy and finally post-test. The second group is control group. It was not given pretest and post-test. The design of study used is shown in the following diagram.

The population of this study was all the eighth grade students of SMP Negeri 1 Pagaralam with the total number 199 students. The writer took 40 students as a sample purposively and divided it into two groups, experiment and control groups.

In collecting the data the writer used test. There were two tests in this research, Reading Comprehension Test and Writing test. The test administered twice as the pre-test and the post-test. The pre-test is to find out the students' achievement before treatment; meanwhile post-test was given after treatment to both groups, experiment and control group.

In reading test, the writer took ready-made questions from Final examination (UN) for SMP/MTs 2008-2012 which consist 50 multiple choice questions test with four options: A, B, C, or D. In order to measure the readability of 9 reading text level of the instruments, the Flesh-Kincaid reading technique was used.

The reading test includes questions reflecting aspects of reading comprehension: MI (main idea) 10 items, D (details) 10 items, seq (sequence) 8 items, Inf (inference) 7 items, V (vocabulary) 10 items, and cause and effect 5 items.

Before the pretest and posttest were conducted the reading comprehension test was tried out on 21<sup>st</sup> January 2014 for one class of 30 eighth graders of SMP Muhammadiyah Pagaralam from 13.00 to 14.20. The texts were graded from 6<sup>th</sup> to 10<sup>th</sup> level. Based on the analysis out of 50 multiple choice test items the obtained reliability coefficient is 0.86. Since the Alpha Cronbach coefficient of reliability exceeds 0.70 the test items are considered reliable. Based on the validity test, out of 50 items, 44 items were found valid while the other 6 are found *not* valid. The writer administered the test with only 30 items because the students only had 80 minutes to do the test.

In analyzing the data, the writer used quantitative data analysis by using SPSS version 20. There were two kinds of data that were analyzed. They were the data of students' reading comprehension and writing achievement. At the beginning, the writer got the score through reading comprehension and writing test which were conducted as pre test and post test. The result of students' reading and writing scores were categorized into five criteria. They were very good (86-100), good (71-85), average (56-70), poor (41-55) and very poor (< 40). In writing test, the writer test used rubric to measure the students' score. The students' writing sheets was corrected by two raters that qualified in English.

Before the analysis, the data of study need to be normally distributed to ensure that data in experimental and control group are not significantly different. If the data were normally distributed and not significantly different the hypothetical

analysis would be applied. Normality is proven when *Shapiro-Wilk* test p-value is higher than  $\alpha$  0.05. After that, in the data of students' reading and writing achievement, the writer compared two population means in the case of two correlated samples by using *Paired sample t test*. It showed the significant difference between experimental and control group by inputting the data of pre test and post test. Then, to find the significance of the difference between the means achieved by the experimental group and the means of control group used *independent t-test*.

## Findings and Interpretations

### Findings

Table 1. Frequency, Mean of Students Reading Comprehension and Writing based on Achievement Levels

Variables	Mean	Freq & perc	SD
Reading			
Very good	89.67	3 (7.5%)	3.511
Good	77.50	12 (30%)	3.424
Average	63.18	22 (55%)	5.350
Poor	47.33	3 (7.5%)	5.131
Very poor	0	0	0
Total	68.27	40 (100%)	11.42
Writing			
Very good	88.75	4 (10%)	3.403
Good	76.75	12 (30%)	3.493
Average	63.05	20 (50%)	5.472
Poor	50.50	4 (10%)	3.316
Very poor	0	0	0
Total	68.47	40 (100%)	11.45\5

There were two main parts in the analysis. They are the analysis of paired sample t-test and independent sample t-test, and multiple regressions. Paired sample t-test was used in order to find out whether or not there was significant progress between pretest and posttest within the group. In the experimental group, it tested whether or not CIRC could improve the students reading comprehension and writing achievement. Meanwhile, in control group, it used to find out the significant difference between pretest and posttest without applying CIRC. Moreover, independent sample t-test was used to measure whether or not there was significant difference between posttest score in experimental and control group. The second was multiple regressions analysis, was used to find out CIRC contribution toward students' reading comprehension and writing achievement.

The writer described in detail the total and the aspects of students' reading comprehension and writing achievement, it was found that CIRC could improve the student' reading comprehension and writing achievement. It can be seen that the mean difference in reading comprehension within the experimental group was 16.30, t-value= 12.948,  $p < 0.00$  (N=20) which indicated that there was significant progress between the students' pre-post test within group. And in control group

was 2.000, t-value 2.538,  $p=0.13$ , it meant that  $p>0.05$  which indicated that there was not significant progress between the students' pre-post test score within group.

Meanwhile, the mean difference in writing achievement in experimental group was 13.50, t-value 12.178,  $p<0.00$  (N=20) which indicated that there was significant progress between students' pre-post test within group. And for the control group the mean difference in writing was 1.55, t-value=1.737,  $p>0.05$  (N=20) which indicated that there was no significant progress between students' pre-post test within group.

Table 2. The Summary of Statistical Analyses of Reading Comprehension and Writing Achievement

Variables	t-test for equality of means					
	Pre-post experiment Within		Pre-post Control Within		Post-test between exp and cont	
	mean	t-value	mean	t-value	M dif	T value
Reading Total	16.300	12.948 (0.00)	2.000	2.538 (0.135)	13.450	4.579 (0.000)
a. Main idea	10.000	4.359	4.000	1.453 (0.16)	18.000	4.456 (0.00)
b. Detail	7.350	2.235	2.450	0.993 (0.33)	5.5750	1.582 (0.12)
c. inference	17.250	5.873	0.850	0.567 (0.57)	13.750	3.001 (0.00)
d. sequence	20.000	8.718	4.650	1.598 (0.13)	9.000	1.881 (0.11)
e. Vocabulary	15.650	6.704	0.500	0.175 (0.86)	25.650	5.758 (0.00)
f. Cause and Effect	33.650	5.666	3.350	0.562 (0.58)	16.850	2.678 (0.01)
Writing Total	13.500	12.178 (0.00)	1.550	1.737 (0.09)	15.250	5.626 (0.000)
a. Grammar	14.000	5.092	5.600	1.459 (0.16)	21.400	5.753 (0.00)
b. Vocabulary	11.500	4.787	1.700	0.826 (0.41)	15.500	5.216 (0.00)
c. Mechanic	15.650	5.584	0.850	0.370 (0.71)	11.500	3.387 (0.00)
d. Fluency	9.200	5.842	1.650	0.984 (0.33)	19.600	5.981 (0.00)
e. Organization	13.250	4.304	2.500	1.830 (0.08)	14.900	2.936 (0.03)

In statistical analyses, the writer also found the mean difference between posttest in experimental and control group for reading comprehension was 13.450, t-value=4.579,  $p<0.00$  and for writing the mean difference was 15.250, t-value=5.626,  $p<0.00$ . Based on the analyses, it found that there was significant difference between the students' posttest score in experimental and control group. It

indicated that the application of CIRC could improve the students' reading and writing achievement.

To determine how much CIRC contributed to students reading and writing achievement, Stepwise regression analysis was used. Based on the result, the contribution of CIRC toward reading comprehension as a whole was 97.5%. The result showed that aspects of sequence contributed 73.9% ( $R^2=0.739$ ,  $F=50.996$ ,  $p<0.000$ ), followed by inference for 8.9%, main idea 5.9%, detail 4.1%, vocabulary 3.9% and cause effect 0.7%.

Furthermore, the results of stepwise regression analysis on the contribution of CIRC toward students' writing achievement showed that as a whole was 91.1%. In detail, the aspect of fluency contributed 67.1%, followed by organization 13.7%, mechanic 8.6%, vocabulary 0.9%, and grammar 0.8%.

### ***Interpretation***

On the basis of the above mentioned findings, some interpretations could be drawn. After the treatment through CIRC strategy had been conducted in 24 meetings, and the writer analyzed the data. First, there was evidence that the students' reading comprehension and writing achievement scores significantly increased from pretest to posttest in experimental group. The increase in the reading comprehension and writing score of the experimental group was shown by the means score of the students' reading comprehension and writing achievement in pretest and posttest score. It indicated that the treatment used was a good strategy which can give significant progress in students' reading comprehension and writing achievement.

Second, at the first result of students pretest, the writer found that there is no significant different between experimental and control group. It showed that the students had the equal ability in reading comprehension and writing. However, after the treatment was given to the experimental group, it showed that there is the significant difference in students reading and writing achievement between experimental and control group. Statistically, it was found that the students who were taught through CIRC got better achievement than those who are not.

Based on the analyses, the writer also found the advantages of applying CIRC as an alternative strategy in teaching reading and writing to the eighth grade students of SMP Negeri 1 Pagaram. It can be interpreted that CIRC contributed to the students' progress in reading comprehension and writing achievement. The students in experimental group got a better achievement in reading and writing test if compared to the students in the control group. CIRC is an effective strategy in teaching reading and writing. This strategy allowed the students to work in group with their partner, find out the main idea, difficult words and the correct pronunciation of the word. This strategy not only improved the students' achievement but also their motivation in learning. The students with less ability would be helped by those who have good ability.

### **Conclusions**

Based on the result of the data analyses and interpretations, it can be concluded that there was significant difference in reading comprehension and

writing achievement between the eighth grade students of SMP Negeri 1 Pagaralam who were taught by using CIRC and those who were not. The students who were taught by using CIRC strategy got a better achievement in reading comprehension and writing achievement than those of the students who were not taught by using CIRC. Therefore, the writer assumed that CIRC has improved the score in students reading comprehension and writing achievement. So she concluded. First, reading comprehension and writing achievement will improve as naturally if the students are taught by the teacher using a good strategy like CIRC that contained interaction among the students in teaching and learning process.

Second, the students in the experimental group applied all of stages in CIRC strategy during the learning process. However, CIRC strategy was not only one factor which caused the students' achievement in experimental group improved. There are other factors such as students' environment, class facilities, learning activities, and so on that might be the factors that influenced their achievement.

Third, based on the result of step wise regression analysis, the aspects of reading comprehension and writing gave a significant contribution to their reading comprehension and writing achievement. The result of reading comprehension, sequence, inference, main idea, detail and vocabulary gave the strong contribution to students' reading comprehension. Meanwhile, there is no significant contribution in cause and effect. In writing achievement, fluency, mechanic, organization gave better contribution toward students' writing achievement if compared to vocabulary and grammar.

## **References**

- Alwasilah, C. A. (2001). Empowering college student writers through collaboration, *TEFLIN Journal* 12(1).
- Bloom, B.S. (1979). *Human characteristics and school learning*. Ankara: Milli Egitim Publications.
- Brandon, L. & Brandon, K. (2011). *Sentences paragraphs and beyond with integrated reading*. Boston, MA: Wadsworth.
- Calderon, M., Lazarowitz, R.H., Ivory, G. & Slavin, R.E. (1997). *Effects of bilingual CIRC on students transitioning from Spanish to English reading*. Los Angeles, CA: Center for Research on Education of the Students Placed at Risk (CRESPAR).
- Celce-Murcia, M. (1992). *Teaching English as a second or foreign language*. Boston, MA: Stratford Book.
- Creswell, J.W. (2005). *Educational research: planning, conducting and evaluating quantitative and qualitative research*. Columbus, OH: Pearson Education, Ltd.
- Diem, C. D. (2011). 3-Ls: A model for teaching young learners. *TEFLIN journal*, 22(2), pp. 125-149.
- Diem, C. D. (2012). How to presence of a technologically supported library influences high school students' reading habits and skill. *TEFLIN journal*, 1(1) pp. 001-005.

- Kemendikbud. (2013, Mei). *Hasil UN SMP – Sederajat Tahun Ajaran 2012-2013*. Pusat Data dan Statistik Pendidikan dan Kebudayaan. Jakarta: Kementrian Pendidikan dan Kebudayaan.
- Lewis, R. (1996). Indonesian Students' Learning Styles. *EA Journal*, 14(2), 27-32.
- OECD. (2010). PISA 2009 result; Executive summary, <http://dx.doi.org/10.1787/888932343342>
- OECD. (2013). PISA 2012 result; executive summary, <http://www.oecd.org/pisa/keyfindings/pisa-2012-result-overview.pdf/>
- Slavin, R. E. (2005). *Cooperative learning: Theory, research, and practice*. Boston, MA: The Johns Hopkins University.
- Vygotsky, L. S. (1962). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wiliam, J. D. (2003). *Preparing to teach writing: Research, theory and practice.(3rd ed)*. London, UK: Lawrence Erlbaum Association