

Cooperative Integrated Reading and Composition (CIRC) and Jigsaw: Which is More Effective on EFL Reading Comprehension?

Rizal Arisman

Department of English Education, Education and Teacher Training Faculty, Dayanu Ikhsanuddin University, Baubau, 93700, Indonesia
ikhsan@unsyiah.ac.id
rizalarisman@unidayan.ac.id
*Corresponding Author
Whatsapp Number [085342335254]

How to Cite : Arisman, R. (2019). Cooperative Integrated Reading and Composition (CIRC) and Jigsaw: Which is More Effective on EFL Reading Comprehension. *International Journal for Educational and Vocational Studies*, 1 (3), 224-228.

ARTICLE HISTORY

Received: 13 April 2019

Revised: 20 May 2019

Accepted: 18 July 2019

KEYWORDS

*Cooperative Integrated Reading and Composition (CIRC),
Jigsaw,
Reading Comprehension*

ABSTRACT

The objective of this research was to find out the significant difference of two learning method from cooperative learning; those are Cooperative Integrated Reading and Composition (CIRC) and Jigsaw method and which method is more effective in EFL reading comprehension. This research used a quantitative approach by applying a quasi-experimental method. The data were collected from two classes at grade eight students of SMP Negeri 3 Baubau, Southeast Sulawesi in the school year of 2018/2019 using test. The test was applied twice; those were pretest and posttest for each class. The results indicated that there was not any significant difference in EFL reading comprehension between CIRC and Jigsaw group. But, the range between pretest and posttest for each class indicated the Jigsaw method was more effective than the CIRC group since the mean score of EFL reading comprehension in Jigsaw group was greater than the CIRC group.

This is an open access article under the CC-BY-SA license.



1. INTRODUCTION

Learning reading is important to acquire new information or knowledge. By reading, people can obtain something new that they do not know before. Reading comprehension is the process of understanding the message that the author is trying to convey. Very simply, it is making meaning from the text at hand. In the other hand, reading comprehension is about guessing or grasping meanings from texts (Farris, 2004). In the context of learning language, reading is useful for language acquisition. It is because it affects the acquisition of other skill or elements of English. Provided that students more or less understand what they read, the more they read, the better they get at it. Reading also has a positive effect on students' vocabulary knowledge, on their spelling and on their writing (Harmer, 2007).

Reading is an important way which can improve the students' general skill in English like improving their vocabulary and comprehension, increasing their reading speed, gaining more knowledge and information also finding examples of many different ways people speak and write (Mikulecky & Jeffries, 2004). In addition, reading helps students to become better writers. Through reading, students have incidental contact with the rules of grammar. Students develop a sense for the structure of the language

and grammar and increase their vocabulary (Johnson, 2008).

English as Foreign Language (EFL) learners in Indonesia specifically face difficulties in generating the content and the organization of ideas in their English compositions (Dewi in Mustafa, 2018). In Baubau town, Southeast Sulawesi province, most students in junior high school get problem in reading comprehension, especially students at SMP Negeri 3 Baubau. Some problems had been identified related to their reading comprehension. For instance, the students' way of learning, students worked individually, therefore they found difficulties to understand the materials given by the teacher because there was no interaction or discussion in comprehending the text. Furthermore, the teaching technique used by the teacher. Some English teachers still use traditional or conventional methods to teach reading. The conventional method usually makes students undesirable to learn because the method is monotonous and the students were not active in learning.

Based on the problem faced, an English teacher should apply the appropriate method to enhance students' reading willingness to read to solve the problem. The teacher must change the class climate to be more enjoyable, instead of

being bored. The method that can be utilized by the English teacher to enhance the students' reading comprehension or understanding in teaching reading is using cooperative learning method.

Cooperative learning refers to a variety of teaching methods in which students work in small groups to help one another learn academic content. The most important goal of cooperative learning is to provide students with the knowledge, concepts, skills, and understandings they need to become happy. Cooperative learning makes the students more active, the students will work together and by promoting an equal opportunity for every student to participate in the activity, improving self-esteem enjoyment of school and interethnic methods are keys in this approach. Research on cooperative learning has shown how these strategies can enhance student achievement (Slavin, 1995). He also explains many cooperative learning methods adaptable to most subjects and grade levels, such as Students Teams-Achievement Divisions (STAD), Teams-Games-Tournament (TGT), Jigsaw, Cooperative Integrated Reading and Composition (CIRC), Team Accelerated Instruction (TAD), Group Investigation, Learning Together, Complex Instruction, and Structured Dyadic Method. Of many cooperative learning methods, this research focuses on using CIRC and Jigsaw method.

There is a difference between Jigsaw and Cooperative Integrated Reading and Composition. According to the goal of implementing Jigsaw and Cooperative Integrated Reading and Composition for teaching reading by using cooperative integrated reading and composition (CIRC) is more effective than Jigsaw because the goal of the implementation of cooperative integrated reading and composition is to help the student comprehend the text. In spite of, Jigsaw can be applied to teach the student in integrated skill and also to develop student' metacognitive and awareness learning in a small group.

CIRC is a technique where the students work in their teams on a variety of cooperative activities including partner reading, identification of main story elements, vocabulary and summarization activities, the practice of reading comprehension strategies, and creative writing using a process writing approach. In the CIRC technique students work within cooperative teams which are coordinate with reading comprehension, vocabulary, decoding, and spelling. And students are motivated to work with one another on this activity (Steven & Slavin, 2000). While, Jigsaw is a cooperative learning technique that reduces racial conflict among school children, promotes better learning, improves student motivation, and increases the enjoyment of the learning experience (Aronson, 2019). Jigsaw technique enables students to learn together in a group and take responsibility in understanding the materials for each other (Hoerunnisa & Suherdi, 2017). states that Jigsaw is a group with five students are set up. Each group member is assigned some unique material to learn and then to teach to his group members. To help in the learning, students across the class working on the same sub-section get together to decide

what is important and how to teach it. After practice in these "expert" groups, the original groups' reform and students teach each other (Spencer, 1994).

Researches prove that the use of CIRC method enables to improve students' reading comprehension. Research to investigate the implementation of CIRC technique in improving the students reading comprehension of descriptive text at MA Al-Mukhtariyah Mande, West Bandung, Indonesia proves that the students' reading comprehension had been getting better. So, they concluded that the CIRC method can improve students' reading comprehension (Anwar & Januar, 2018). Besides, research on Jigsaw was conducted by to find out the influence of using jigsaw on students' reading comprehension at Seventh Grade students of SMPN 7 Kota Serang with the result of the research revealed that there was influence of using jigsaw as a method on students' reading comprehension at the seventh grade of SMPN 7 Kota Serang (Facharyani, Masrupi, & Rahmawati, 2018).

By considering the description above, the researcher is interested to find out which method is more effective on EFL students' reading comprehension. This research is expected to enrich teacher's method in teaching English especially reading and to contribute to the improvement of EFL students' reading comprehension.

2. METHODS

This research used a quantitative approach. Quantitative research is the collection and analysis of numerical data to describe, explain, predict, or control phenomena of interest (Gay, Mills, & Airaisan, 2012). The experimental method was a method used in this research, in which there were two classes taught by using different learning method. Variables used were CIRC and Jigsaw method as independent variables and reading comprehension as the dependent variable.

The population of this research was grade eight students of SMP Negeri 3 Baubau, Southeast Sulawesi in the school year of 2018/2019. The total population is 248 students which were distributed into 11 classes. Cluster sampling was the techniques the researchers used to select the sample. Cluster samples are widely used in small scale research. In a cluster sample the parameters of the wider population are often drawn very sharply; a researcher, therefore, would have to comment on the generalization of the findings. By cluster sampling, the researcher can select a specific number of schools and test all the students in those selected schools, i.e. a geographically close cluster are sampled (Cohen, Manion, & Morrison, 2007). Therefore, this research took two classes in which the CIRC group consisted of 29 students and Jigsaw group consisted of 25 students.

To obtain the research data, an instrument in this research was a test, in which the test was administered into two parts; those were pretest and posttest. For analyzing the data, descriptive and inferential statistics

were applied. The descriptive statistics were applied to find out the students' reading scores both in the pretest and in posttest for either experimental or control group, which consist of mean, median, mode, standard deviation, minimum score, maximum score, and the score dispersion from the test. Before doing the inferential statistics, the researcher employed a prerequisite analysis; those were normality and homogeneity test to determine whether the inferential statistics would use parametric or nonparametric statistics.

The inferential statistics were applied to find out whether there was a significant difference in reading achievement for the class who was taught by using CIRC method and Jigsaw method. In the inferential statistics, the Independent Sample Test was used to test the hypothesis.

Criteria of rejecting or accepting the hypothesis with significant value of 0.05 were:

- a. If the t_{test} was greater than t_{table} , it meant there was a significant difference of students' reading comprehension of those who were taught by CIRC method and Jigsaw method at grade eight of SMP Negeri 3 Baubau.

If t_{test} was fewer than t_{table} , it meant there was not any significant difference of students' reading comprehension of those who were taught by CIRC method and Jigsaw method at grade eight of SMP Negeri 3 Baubau.

3. RESULTS AND DISCUSSION

3.1 The Result in CIRC Group

In the CIRC group, there are 29 students are involved. Before the treatment applied, a pretest is administered to know their reading comprehension. The result of the test is displayed in the following table:

Table 1. Pretest Score in CIRC Group

No	Score	Frequency	Percentage
1	35	2	6.9
2	40	2	6.9
3	45	7	24.1
4	50	7	24.1
5	55	7	24.1
6	60	1	3.4
7	65	1	3.4
8	70	2	6.9
Mean score = 50.52			

Based on the table above, it is seen that the lowest score is 35 obtained by 2 students and the highest score is 70 obtained by 1 student. Besides, most scores are 45, 50, and 55 obtained by 7 students for each score. The mean score for pretest in this group is 50.52. After the treatment using CIRC method is applied, the posttest is then administered and the result of the test is presented below:

Table 2. Posttest Score in CIRC Group

No	Score	Frequency	Percentage
1	50	1	3.4
2	55	4	13.8
3	60	2	6.9
4	63	1	3.4
5	65	5	17.2
6	70	8	27.6
7	73	1	3.4
8	75	2	6.9
9	80	4	13.8
10	90	1	3.4
Mean score = 67.96			

Based on the table above, it can be seen that the lowest score is 50 obtained by 1 student and the highest score is 90 obtained by 1 student. Besides, most scores the students obtain is 70, in which the score is obtained by 8 students. The mean score for the posttest is 67.96.

3.2 The Result in Jigsaw Group

Another group is a group which is taught using the Jigsaw method. This group consists of 25 students. Before the treatment applied, the pretest is administered and the result of the test is presented in the following table:

Table 3. Pretest Score in Jigsaw Group

No	Score	Frequency	Percentage
1	28	1	4
2	32	2	8
3	36	3	12
4	40	2	8
5	44	4	16
6	48	3	12
7	52	5	20
8	56	3	12
9	60	2	8
Mean score = 45.92			

Based on the table above, the lowest score is 28 obtained by 1 student and the highest score is 60 obtained by 2 students. Besides, most scores are 52, in which the scores are obtained by 5 students. In the pretest at the Jigsaw group, the mean score is 49.52. After the treatment using the conventional method is applied, the posttest is then administered and the result of the test is presented below:

Table 4. Posttest Score in Jigsaw Group

No	Score	Frequency	Percentage
1	52	1	4
2	56	2	8
3	60	2	8
4	64	3	12
5	68	4	16
6	72	3	12
7	76	7	28

8	80	2	8
9	84	1	4
Mean score = 69.60			

Based on table 4, the lowest score is 52 which is obtained by 1 student and the highest score is 84 which is obtained by 1 student. Besides, most scores are 76, in which the score is obtained by 7 students. The mean score in the posttest is 69.60. Before analyzing the hypothesis, the prerequisite test is applied which consists of normality and homogeneity test. The normality test is used to determine whether the data are normally distributed. The result of the normality test is displayed below:

Table 5. Result of Normality Test for Pretest

Type	Methods	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Pretest	CIRC	.165	29	.042	.937	29	.086
	Jigsaw	.148	25	.165	.954	25	.316

Of the table above, because the sample in this research is less than 50, the data used to analyze is from the Shapiro-Wilk test. It can be seen that sig. value for CIRC is 0.086 and for Jigsaw is 0.316. Because the values are higher than 0.05, it is concluded that the data are normally distributed. To determine whether there is any significant difference between EFL students' reading comprehension at CIRC and Jigsaw group at pretest, the Independent Sample test is used. The result of the data analysis is presented below:

Table 6. Independent Sample Test for Pretest

		Score	
		Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F	.588	
	Sig.	.446	
t-test for Equality of Means	t	-1.896	-1.889
	df	52	50.063
	Sig. (2-tailed)	.064	.065
	Mean Difference	-4.59724	-4.59724
	Std. Error Difference	2.42486	2.43321

Of the table above, it can be seen that the result of the homogeneity test performed by Levene's Test obtains the value of F is 0.558 and is significant at 0.446. Since the value of sig. is greater than 0.05, it is concluded that the variance data from CIRC and Jigsaw group are homogenous before treatment applied. To determine whether there is any significant difference of EFL students' reading comprehension between CIRC and Jigsaw group, the data that will be read is in equal variance assumed from the table above. It can be seen that the value of Sig. (2-tailed) is 0.064 in which it is greater than α (0.05). Therefore, it means there is not any significant difference of EFL students' reading comprehension between both classes before treatment applied.

Further analysis is using normality and homogeneity test for posttest data from CIRC and Jigsaw class. The result of the analysis is displayed below:

Table 7. Result of Normality Test for Posttest

Type	Methods	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Posttest	CIRC	.138	29	.164	.963	29	.391
	Jigsaw	.177	25	.043	.949	25	.232

In the table above, because the sample in this research is less than 50, the data used to analyze is from the Shapiro-Wilk test. It can be seen that sig. value for CIRC is 0.391 and for Jigsaw is 0.231. Because the values are higher than 0.05, it is concluded that the data are normally distributed. To determine whether there is any significant difference between EFL students' reading comprehension at CIRC and Jigsaw group at posttest, the Independent Sample test is used. The result of the data analysis is presented in the following table:

Table 8. Independent Sample Test for Posttest

		Score	
		Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F	.047	
	Sig.	.828	
t-test for Equality of Means	t	.674	.679
	df	52	51.859
	Sig. (2-tailed)	.503	.500
	Mean Difference	1.63448	1.63448
	Std. Error Difference	2.42601	2.40797

Of the table above, it can be seen the value of sig. from Levene's Test is 0.828. Since it is greater than 0.05. It means the variance data between CIRC and Jigsaw group are homogenous. To analyze the result of Independent Sample Test, we take the data from Equal variance assumed. It is known that the value of sig. (2-tailed) is 0.503. Therefore, it is concluded that there is not any significant difference in reading comprehension between students who are taught using CIRC and Jigsaw method.

Based on the data analysis above, it is obtained the pretest mean score of students' reading comprehension whose group are taught using Cooperative Integrated Reading and Composition (CIRC) method is 50.52 and it is 67.96 in the posttest. It means there is an improvement of the mean score as many as 17.44 points. It can be said that the CIRC method is effective to improve students' reading comprehension. Cooperative Integrated Reading and Composition (CIRC) is a comprehensive program for teaching reading, writing, and language arts in the upper elementary grades (Slavin, 1995). It means that the CIRC method is appropriate to use in teaching English skills, such as reading and writing in junior high school level in Indonesia.

In class whose students are taught using the Jigsaw method, the mean score of the pretest is 49.52 and it is 69.60. Of those results, it is known that there is an also an improvement of students' reading comprehension which can be seen from the improvement of the mean score from pretest to posttest as many as 20.08 point. Jigsaw cooperative learning technique provides greater opportunities to the teachers and students in giving and receiving course materials which are delivered. The teachers can give the whole creativity of instruction ability. Then the students can be more communicative in conveying the difficulties encountered in studying the material. It will be more motivated for the students in order to support and show their motivation in the learning process by using teammates (Yuliani & Karwono, 2012).

Of the result of Independent Sample Test to know whether there is a significant difference between students' reading comprehension in CIRC and Jigsaw class, it is obtained the value of sig. (2-tailed) is 0.503, in which it is greater than 0.05. It means there is not any significant difference in reading comprehension between students who are taught using CIRC and Jigsaw method. But it is seen by the score of improvement in pretest to posttest, it is agreed that the Jigsaw method is more effective than CIRC method.

4. CONCLUSION

This research attempts to find out the significant difference of two learning method from cooperative learning; those are Cooperative Integrated Reading and Composition (CIRC) and Jigsaw method and which method is more effective in EFL reading comprehension. Of the research finding, it is clearly stated that there is not any significant difference in reading comprehension between students who are taught using CIRC and Jigsaw method. It is proven by the value of sig. (2-tailed) is greater than 0.05. But by looking at the mean score improvement of pretest to posttest, it is concluded that the Jigsaw method is more effective than CIRC method. It can be seen that the value of improvement in the Jigsaw method is greater than in the CIRC method.

The implication of this research is the English teachers are recommended to apply the Jigsaw method in teaching reading comprehension in order to achieve better learning achievement.

REFERENCES

- Anwar, S., & Januar, R. (2018). Improving Students' Reading Comprehension of Descriptive Text Using CIRC Technique, 01(03), 181–186. Retrieved from <https://journal.ikipsiliwangi.ac.id/index.php/project/article/view/890>
- Aronson, E. (2019). The Jigsaw Classroom. Retrieved from <https://www.jigsaw.org/>
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research Methods in Education (Sixth)*. New York: Routledge.
- Facharyani, N., Masrupi, & Rahmawati, E. (2018). The Influence of Using Jigsaw as a Method on Students' Reading Comprehension at the Seventh Grade of SMPN 7 Kota Serang, 3(1), 80–90. Retrieved from <http://jurnal.untirta.ac.id/index.php/JELS/article/download/2638/2402>
- Farris, P. J. (2004). *Teaching Reading: A Balanced Approach For Today's Classrooms*. New York: McGraw Hill.
- Gay, L. R., Mills, G. E., & Airaisan, P. W. (2012). *Educational Research; Competencies for Analysis and Applications (Tenth)*. New Jersey: Pearson Education.
- Harmer, J. (2007). *How to Teach English*. England: Pearson Education.
- Hoerunnisa, N., & Suherdi, D. (2017). The Effectiveness of Jigsaw in Improving Students' Reading Comprehension. *Journal of English and Education*, 5(1), 1–12. Retrieved from <http://ejournal.upi.edu/index.php/L-E/article/view/9895>
- Johnson, A. P. (2008). *Teaching Reading and Writing*. Lanham: Rowman and Littlefield Education.
- Mikulecky, B. S., & Jeffries, L. (2004). *More Reading Power (Second)*. New York: Longman.
- Mustafa, F. (2018). Cooperative Integrated Reading and Composition Technique for Improving Content and Organization in Writing Cooperative Integrated Reading and Composition Technique for Improving Content and Organization in Writing, 2(1), 29–44. <https://doi.org/https://doi.org/10.24815/siele.v2i1.2236>
- Slavin, R. E. (1995). *Cooperative Learning; Theory, Research, and Practice (Second)*. Boston: Allyn and Bacon.
- Spencer, K. (1994). *Cooperative Learning: Resources for Teacher*. San Clemente, CA: Kagan Publishing.
- Steven, C. R., & Slavin, R. E. (2000). *CIRC (Cooperative Integrated Reading and Composition)*. New York: College Board Publications.
- Yuliani, T., & Karwono. (2012). The Effectiveness of Using Jigsaw and SQ3R Technique in Instruction toward the Students' Reading Comprehension of Narrative Text at the Eight Grade of Junior High School State 8 Metro Academic Year 2011/2012. *Premise; Journal of Education*, 1(2), 152–163. <https://doi.org/http://dx.doi.org/10.24127/pj.v1i2.1119>