



Examining the Effect of Cooperative Integrated Reading and Composition (CIRC) on Students' Reading Comprehension

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ABSTRACT

The study's overarching goal is to determine whether or not CIRC instruction has a statistically significant effect on students' ability to comprehend narrative literature. In this study, we used a one-group, pre-post-test design for our experiments. Students from SMP Hasanuddin 6 Semarang's eighth grade made up the study's sample population. Twenty-four pupils from VII A were involved as the sample of this study. A reading test was carried out as this study's primary instrument of data collection. Before being taught using the CIRC method, students had a mean score of 40.91, indicating that their reading ability in narrative text was inadequate and needed improvement; after being taught using the CIRC method, students had a mean score of 64.12, indicating that their reading ability in narrative text was good and had already improved. In other words, the CIRC technique works well for teaching students to read narrative texts.

Introduction

English as a foreign language is required at all levels of formal education in Indonesia, from senior high school (SMA in *bahasa*) to university. Recently, English has also been introduced to primary school kids beginning in the first grade (Nurjanah, 2021). According to the curriculum, SMA/MA pupils should be able to utilize language at an informational level in order to acquire knowledge through language abilities. In this case, the Indonesian students in SMA are expected to use and explore English in their study activities. It may start in their classroom activities so that English is used in their daily life.

Student proficiency in English necessitates mastery of the language's four fundamentals: listening, speaking, reading, and writing. The ability to read is essential, but other skills are valuable (Erhan, 2011; Sunggingwati & Nguyen, 2013). Because children need to read from a variety of sources to learn as much as possible, reading is crucial. As much as the direct

communication to the eye from the text, reading is improved by the unpredictable indirections of a reader's conclusions and thoughts (Hayatina & Fajrina, 2018; Mubarok et al., 2016). Point to that, reading is an essential tool for children to acquire knowledge and prepare themselves for the world beyond school.

Many Indonesian students have trouble reading and understanding texts written in English because it is not their first language. Hamra & Syatriana (2015) in their study suggest that these deficits are a result of a lack of language and working memory. Vocabulary was cited as a major barrier to reading comprehension by the kids in her study. Moreover, many students feel they are not retaining what they read. Students' inability to comprehend written material is exacerbated by their lack of a sufficient vocabulary (Prastikawati & Adi, 2020). If they have poor working memory, they will need to read the passage multiple times before they fully understand it. As a result, they are unable to determine what the text's central message is.

To overcome these issues, it is crucial to select an effective strategy for teaching reading comprehension. Because when a teacher employs the appropriate teaching approach, it not only aids the students in comprehending the lesson's topic and obtaining as much relevant information as possible, but also makes the students interested in and comfortable with learning. Therefore, the CIRC approach (Cooperative Integrated Reading and Composition) was employed to help students who had trouble reading do better in this study. According to Slavin (1990) classes typically have groups of four students work together on a project. They take part in a variety of activities together, including as reading aloud, speculating on the outcomes of narratives, summarizing each other's readings, composing responses to texts, and working on their spelling, decoding, and vocabulary.

As one of cooperative learning, CIRC emphasizes collaborative efforts to learn. The students' struggles with terminology, low motivation, difficulty locating the text's central argument, and general ennui are all ameliorated by this strategy (Maryani et al., 2020; Sulistianingsih, 2018). Because students are more likely to participate in class discussions and offer constructive feedback while working as a group (Ginting, 2017). As a plus, they were able to discover comprehensive solutions to all issues through mutual understanding.

Alghamdi & Gillies (2013) demonstrates the benefits of cooperative learning as an instructional technique. Implementing cooperative learning in reading comprehension could enhance students' performance in cooperative partner and group activities, attainment of learning objectives, and individual assessment. According to Nejad & Keshavarzi (2015), CL is practical and useful for students in developing an effective classroom climate to achieve common goals by playing a significant role in the emotional and linguistic development of kids. Based on these benefits, CIRC as cooperative learning method may encourage the classroom climate and students' reading enthusiasm.

According to the benefits of CIRC as cooperative learning, this current study is investigating the effect of CIRC on the student' reading comprehension especially in high school students in Indonesia. This study underlines a main research question as follows:

"How effective is CIRC method in improving the students' reading comprehension?"

Research Methods

In this study, the researchers employed a pre-experimental one-group pretest-posttest strategy. It indicates that only one group from one class participated in this study. Before administering the treatment, the researcher administered a pre-test to determine the students' proficiency, and then, after administering the treatment, he or she administered a post-test to evaluate the students' improvement.

In this study, eighth-graders at SMP Hasanuddin 06 Semarang served as the participants. A random sample of 24 students from Class VIII, Group A was used for the study. A questionnaire was employed as the research tool in this study. Ability can be evaluated by means of a test. There is an initial test (pre-test) and a follow-up test (post-test).

After collecting the data, the researcher analyzed the data by using the following steps:

1. The researcher calculated the mean of the pre-test and the post-test. In scoring the test, the researcher used some criterions according to Chan et al. (2015):

Table 1 Scoring Rubric for Reading Comprehension

Criteria	College-level work 1-5	Unacceptable 6-11	Adequate to Fair 12-14	Good to Adequate 15-17	Excellent to Good 18-20
Theme	Identifies theme or message with guidance.	Identifies theme or message inconsistently	Restates understanding of theme or message and identifies supporting details.	Able to explain the theme but could be more fully developed.	Explains theme or message in own words, acknowledging different interpretations, and offering supportive evidence.
Moral value	Disregards or does not understand the information of the moral value.	Recognizes basic knowledge of the information of the moral value but does not to understanding.	Applies understanding of how informational moral value contributes to understanding.	Have an adequate understanding and able to mention the moral value.	Analyzes how informational moral value contributes to the reader's understanding of the text.
Characteristic	Struggles to recognize the characters of the text.	Recognizes the characters of the text.	Recognizes the characters of the text and provides general support.	Able to mention more than one characters.	Mention every character of the text and able to explain their characteristic.
Identifies facts and opinions	Struggles to recognize an opinion, and /or may not identify facts from the text	Recognizes an opinion and provides general support and/or facts from the text	Expresses an opinion and uses specific examples from the text to	Able to mention and develop their opinion of the text.	Expresses an opinion and seeks unique ways/evidence to enhance the

	to support opinion.	when prompted.	defend an opinion.		interpretation of the text.
Summarize	Recognizes a summary statement, but lacks the ability to write a summary independently/ Retells selection randomly	Attempts to summarize in own words, but lacks one or more main points or include unnecessary details.	Summarizes in own words by identifying three or more main points from the text.	Able to summarize but could be more developed.	Summarizes in own words by identifying three main points and elaborating with evidence using correct form.

2. Classifying the Students' Reading Achievement

The researchers calculated the students' score then categorized it in five absolute grading scales as the following table 2:

Table 2 Classifying of Students' Level of Mastery in Reading

Grade	Level of Mastery	Criteria	Level of Achievement
A	80 – 100	Excellent	Outstanding Achievement
B	66 – 79	Good	Above Achievement
C	56 – 65	Adequate	Average Achievement
D	40 – 55	Inadequate	Below Achievement
E	30 – 39	Failing	Insufficient Achievement

- After classifying the students' reading achievement, the researchers measured the pre-test and post-test mean scores and standard deviation (SD).
- The last measurement is t-test for measuring the significant difference among two groups.
- The researchers next entered the results from the t-test into a t-table to determine if the hypothesis was accepted. The hypothesis would be accepted if the t-test were given greater weight than the t-table. This suggests that students who were taught utilizing the CIRC approach have higher levels of achievement in reading comprehension of narrative content. The hypothesis would be rejected, however, if the t-test scored lower than the t-table. What this indicates is that there is no discernible change in the learning outcomes of pupils taught either before or after the CIRC approach was implemented.

Findings

The purpose of this study was to investigate whether or not the CIRC Method significantly improved students' reading comprehension of narrative content. This study was carried out at SMP Hasanuddin 06 Semarang. Students in eighth grade at SMP Hasanuddin 06 Semarang in the current school year were the focus of this study. The researchers in this study used data from one class (VII A) with a total of 24 participants. The researchers began by

administering a pre-test prior to treatment and then a post-test following it. Utilizing the CIRC approach while reading narrative literature was the treatment. After the students were taught using CIRC approach, at the end of it they were given a post-test. The post-test was intended to measure their improvement on reading comprehension before and after the treatment. An interview was also conducted to see the student's immediate response on the text given.

The Students' Reading Comprehension before and after being Taught using CIRC

Researchers administered a pre-test to evaluate students' narrative reading comprehension skills before instructing them using the CIRC method. The result of pre-test score was presented in table 3. After their prior reading comprehension on narrative text was measured, the students were exposed by CIRC method during the teaching narrative text in some meetings. After the treatment was done completely, the students were given post-test to see of their reading comprehension is changed or not. The result of post-test was also presented in table 3. Then, the researchers compared both pre-test and post-test scores to see the significant difference by applying t-test formula. The result was also revealed by table 3.

Table 3 The significant difference between pre-test and post-test measurement

NO	Students' Code	Scoring		X ²	Y ²
		Pre-test Mean score (X)	Post-test Mean score (Y)		
1	S-1	52	77	2704	5929
2	S-2	40	60	1600	3600
3	S-3	41	62	1681	3844
4	S-4	46	60	2116	3600
5	S-5	40	66	1600	4356
6	S-6	45	60	2025	3600
7	S-7	41	65	1681	4225
8	S-8	39	69	1521	4761
9	S-9	41	67	1681	4489
10	S-10	50	70	2500	4900
11	S-11	40	65	1600	4225
12	S-12	33	70	1089	4900
13	S-13	40	65	1600	4225
14	S-14	46	70	2116	4900
15	S-15	44	68	1936	4624
16	S-16	38	65	1444	4225
17	S-17	39	63	1521	3969
18	S-18	39	52	1521	2704
19	S-19	32	65	1024	4225
20	S-20	38	51	1444	2601
21	S-21	37	55	1369	3025
22	S-22	40	63	1600	3969
23	S-23	41	66	1681	4356
24	S-24	40	65	1600	4225
		ΣX= 982	ΣY=1539	ΣX²=40654	ΣY²=99477
		SD1=4.44	SD2=5.72	t-test= 15.72	

Once the t-test was computed, the researcher consulted a t-table with the results. A hypothesis is accepted if the t-test score is greater than the value given in the t-table. Based on these numbers, the df was:

$$df = n - k$$

$$df = 24 - 1 = 23$$

When comparing the "t" the researcher obtained from the analysis of t of (t-value=15.72) and t from (t-table=2.06), the df or degree of freedom was found to be 23 and the critical value table at t-table at the level significant of 5% was computed to be 2.06. The t-test and t-table resulted in $t_{value} > t_{table} = 15.72 > 2.06$ because the t-value was greater than the t-table alternative. Therefore, we accept (H) as a valid hypothesis.

The research findings demonstrated a statistically significant improvement after being taught using a CIRC approach. According to the data presented above, the mean score of students who had not been taught using the CIRC method was $X=40,91$; this number, along with the information included in table 3 on the students' level of reading competence, suggests that the students' reading skills were inadequate. The pupils' inability to correctly answer this very straightforward question on the pre-test reflects the fact that they had not been taught utilizing the CIRC approach. Some students have trouble recalling the names of all the characters in the story, some have trouble explaining their thoughts on the characters, and still others have trouble summarizing the story in their own words or even understanding the concept. Below are the examples of the students' reading ability in narrative text before taught using CIRC method.

Example 1

Instruction: After you read the story, what did you think of the Prince's friends?

Student's answer (S-5): *Peter Piper is good, Farnklin Greedy is bath* ('bath' must be written 'bad')

The mistakes done by the student with code S-5 were first because he cannot recognize opinion and provides general support from the text. Second, he cannot write the correct word of *bad* it showed that he was lack of mastering vocabulary. This mistake is crucial because the incorrect of writing a word can change the meaning of the word itself.

Example 2

Instruction: Summarize the story entitled "The Prince and His Best Friends" in a brief!

Student's answer (S-1): *One upon a time, there lived a king young prince named Jonathan.*

The mistakes done by the student with code S-1 were first, he attempts to summarize but was not using his own words. Second, he did not understand how to write a summary of a text, because there was only one sentence as his answer. And the last one is his vocabulary mistake. Instead of *one* the correct word should be *once*.

Researcher examines students' ability in reading narrative material by examining its generic structure and linguistic aspects, like in the preceding example. Based on this information, we concluded that students' comprehension of narrative texts is limited because they lack an understanding of the rudimentary structures and language characteristics that make up such texts. Student performance on the assigned task improved after being instructed utilizing the CIRC method. The CIRC method was utilized by the researcher as a strategy to boost students' comprehension of assigned readings and subsequent question-answering. The researcher's intervention consisted of dividing the class into groups of four and assigning each group a worksheet tailored to the lesson's narrative text. The reading comprehension exercise features a narrative

passage followed by five questions. The researcher also had the students collaborate with one another to find answers to the challenges or additional resources the teacher had provided. The students self-divided the workload. Consider, for instance, the questions "who will answer question one," "who will answer question two," and so on. At the conclusion of this procedure, they discussed the best approach to taking for each numerical answer. The students' presentations were the final step. There was a round of group presentations, with representatives from each table giving their take on the class discussion. You will find some examples of student progress in reading narrative text after being taught with the CIRC technique below.

Example 3

Instruction: After you read the story, what did you think of the elephants?

Students' answer (S-8): *Arrogant, bad, and like to underestimate*

The answer done by the student with code S-8 was better after being taught using CIRC method. first when he cannot recognize opinion and provides general support from the text, then he was able to recognize an opinion from the text. Second, he was able to improve his vocabulary. It showed in his answer he did not only mention one word but three. The most important is all of the vocabularies are correct.

Example 4

Instruction: Summarize the story entitled "Mantu's Little Elephant" in a brief!

Student's answer (S-16):

Little Mantu lived in a village deep in the jungle where elephants helped the man with their work. These elephants were so big and strong. Now, Mantu had an elephant of his very own. His name was Opie, he was just a baby. Mantu whispered to Opie's ear that someday he would become the biggest, strongest and bravest elephant in the jungle. The other elephants heard this. They began to laugh at it. Mantu looked up at the huge elephant with a mischievous glint in his eye. Mantu tricked them to think there were snakes. After hearing the word snakes, the elephants' runaway.

The answer done by the student with code S-16 was better after being taught using CIRC method. he was trying to summarize the story using his own words. Second, he was able to mention the main points of the story. Finally, he was not retelling the story randomly.

As can be seen from the preceding samples, the number of errors made by the students has decreased. After being taught utilizing the CIRC technique, students showed improved reading comprehension of narrative content, according to the study's authors. Given the aforementioned information, we can infer that our students have a firm grasp on the subject matter, general structure, and linguistic characteristics that make up narrative texts, thereby attesting to their proficiency in reading such texts.

After being taught with the CIRC approach, test scores also increased. Students can, for instance, plan out and include additional detail inside their answer sheet. They are free to provide further explanation of their response in their own words. Furthermore, the mean score achieved by students taught utilizing the CIRC approach was $Y=64.12$, which, based on the provided data, is indicative of success. Table 3 shows promising results for pupils' reading comprehension. This resulted in a rise from a pre-test to post-test mean difference

of 40.91 to 64.12. The difference between the pre- and post-test means was 23.21, and this was converted to a statistically significant difference using the t-table and t-value. From the result of the pre-test and the post-test, it showed that CIRC method can develop students' reading ability in reading comprehension in narrative text of students at SMP Hasanuddin 06 Semarang. The result of the mean of the post-test was better than the pre-test, it also means that using CIRC method as treatment was effective to improve students' reading comprehension in narrative text. The result of this research was also supported by the result of the questionnaire. The result of the t-test was 15.72 and the value of the t-table was 2.06 in the significance of 5%. The H_a is accepted if the t-value is higher than the t-table ($15.72 > 2.06$).

Discussion

This study's findings are consistent with those of other research on the topic, including that of Gonzales & Torres (2015) who investigated the impact of the CIRC technique on students' comprehension of recount text in Philippines. They discovered a statistically significant gap in performance between CIRC-taught and non-CIRC-taught students. Additionally, Nanda & Azmy (2020) demonstrated that CIRC can enhance students' reading comprehension. In addition to seeing improvements in reading and writing, primary school kids using the CIRC technique, Rihayati & Rosnija (2016) also discovered its benefits. The statistical analysis of this study showed a statistically significant difference in reading before and after the use of CIRC method in reading narrative text.

In most CIRC activities, students do not take the quiz until their teammates have assessed that they are ready based on results from a series of pre-quiz team assessments. Reading books and reading groups are used by CIRC method teachers just as they are in more conventional reading programs (Rihayati & Rosnija, 2016). However, everyone works in teams of four, with each team consisting of two couples from separate reading groups. While the teacher is guiding one reading group, the other groups work on a variety of fun activities together, such as reading aloud to one another, making predictions about the outcomes of narrative stories, summarizing stories to one another, writing responses to stories, and practicing spelling, decoding, and vocabulary. Understanding the primary idea and other comprehension abilities is a group effort for students. During language arts classes, students write rough drafts, peer-review each other's work, and polish their team books (Aziz, 2020).

Our research shows that the CIRC method can successfully involve the vast majority of students in classroom activities. Prior to being taught with CIRC, students were educated using the traditional technique, where they relied solely on translation and comprehension of the text (Keramati, 2011). Students, especially those in the lowest socioeconomic brackets, are intimidated and reluctant to participate in class because of this approach. Because of the grammatical changes that must be made when translating a text from a foreign language into a student's native tongue, students may struggle to understand and comprehend the material. The study's authors also concluded that CIRC provides pupils in grades two through eight with a well-rounded reading and writing curriculum. It consists of reading- and language arts-related activities that revolve around stories, as well as more traditional

methods of teaching reading comprehension. Students work in pairs (grouped by or across ability levels) to read aloud to one another, make predictions about the stories' outcomes, summarize the texts, respond to the texts in writing, and practice the four language arts skills (spelling, decoding, vocabulary, and writing). In this activity, students work in groups of four to analyze a story's central premise and complete the writing process.

It is worth noting that students' prior knowledge and vocabulary acquisition may come to play an increasingly important role in reading instruction in the future. The reason being that students may better understand texts when they are culturally familiar or when they relate to well-developed disciplinary information obtained by the students. Teachers should develop alternative methods that help pupils learn to comprehend, particularly those that help them make connections between new information and what they already know. To help pupils make connections between what they read and what they already know, Azhari et al. (2019) suggested giving them background information. For instance, if pupils can make connections between the books they read at home and at school, this could be a window into their level of comprehension.

Using CIRC as a reading lesson plan method could also encourage students to work together to master the course content. Students could work in groups to complete a variety of tasks, such as identifying and discussing the meaning of challenging words. It was decided that everyone in the group would take a turn pronouncing the words until they were all able to do it with ease. Students work in pairs to read a paragraph aloud, discuss its likely meaning, and answer questions about it.

Furthermore, the success of this method of instruction depends on the students' ability to effectively convey, discuss, and pitch their ideas to one another as they work together on a common goal. Students engage in groups during classroom instruction to determine the passage's elements, such as characters, setting, problem, time period, central concept, and storyline (Donal & Niati, 2017). In order to improve their reading comprehension, students could work with a partner to explain the topic they are struggling with, work out a solution together, or simply summarize the passage before asking the teacher for clarification.

Conclusion

According to the findings, it can be summarized that CIRC method increase the student's reading comprehension. For that reason, the teachers can implement useful and applicable exercises to boost their pupils' reading abilities through CIRC-style cooperative learning. Students' ability to learn and retain information improved when they were placed in groups to work on projects and discuss assigned readings instead of being lectured to individually. The study's findings suggest that more investigation on the efficacy of CIRC in terms of variables including students' perspectives on their own reading progress, their social skills, and intergroup relations, among others, is warranted.

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