

THE EFFECTS OF COOPERATIVE INTEGRATED READING AND COMPOSITION
(CIRC) ON ENGLISH READING COMPREHENSION AND WRITING
ABILITIES OF GRADE 7 STUDENTS IN LAO PDR

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Abstract

The purposes of this research were to compare the English reading comprehension and writing abilities before and after teaching using CIRC method and compare the English reading comprehension and writing abilities after learning with the defined criteria of 70% of grade 7 students in Lao PDR. The samples were 20 Grade 7 students at Sengsouly School, Dongkhamxang Village, Hadsayfong District, Vientiane Capital, Lao PDR in the first semester of the academic year 2023. The sample were selected by cluster random sampling. This research was a one group pretest-posttest design. Research instruments employed for this research included 6 lesson plans, an English reading comprehension test and a writing ability test. The experiment lasted for 6 weeks, 3 hours a week, total of 18 hours in total. The mean, percentage, standard deviation, t-test for dependent samples, and t-test for one sample were used in data analysis. The findings of this research were as follows:

1. The students' pretest and posttest mean scores of English reading comprehension ability were 14.35 (47.83%) and 22.70 (75.66%) respectively. The students' pretest and posttest mean scores of writing ability were 10.85

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(54.25%) and 16.15 (80.75%) respectively. The students' English reading comprehension and writing abilities after the experiment were higher than those of the pretest. It indicated that the students' English reading comprehension and writing abilities after learning using CIRC method were statistically higher than before learning.

2. The English reading comprehension and writing abilities of grade 7 students after learning by using CIRC method were statistically higher than the criteria of 70%.

Keywords: CIRC, English Writing ability, English Reading Comprehension Ability

Introduction

English language is important, it is also the working language of the Association of Southeast Asian Nations (ASEAN) (Association of Southeast Asia Nations, 2020). As a member of the ASEAN, Lao PDR has been driven to develop English skills among their people. Lao government sees the importance of English language and therefore Ministry of Education and Sports (MOE) had included English teaching in its national curriculum from primary to high school level. The national English curriculum for secondary students helps build confidence for students to communicate with foreigners in English, able to utilize English for their further studies, and has a positive attitude towards foreign languages and their cultures (Ministry of Education and Sport, 2010).

To successfully learn English language, four language skills are needed to be developed, listening, writing, speaking and reading. Today, reading and writing are the main means of communication, especially with the growing use of social media and online platforms that can be used for entertainment, shopping, access to information, work, and school.

Knowing that English reading and writing abilities are important, however these abilities are still challenging for Lao students to learn in English classes. In secondary levels students have difficulties in putting sentences together to write a story. They also can't understand the overall picture of the story after reading texts. These challenges were mentioned in an interview of experts who had been writing English curriculum, textbook and teacher guide (Vilaisack & Thongkeam, Interview, November 29, 2018). In many schools, the problem with English achievement score below 7 is still shown for secondary level students. The criteria set by the Ministry of Education and Sports (2014) that score of 7 (70%) and above are preferable for achievements and considered good score level. An additional issue was that low performing students are struggling in learning English reading and writing. There is a difference in students' English reading and writing abilities between the high and the low performing students.

From the above reasons, the researcher was interested in developing both English reading comprehension and writing abilities and having students working in small groups to support each other while learning. Cooperative learning transforms lessons into fun, interactive sessions where students are really involved in their learning (Jolliffe, 2007). The technique of Cooperative Integrated Reading and Composition (CIRC), one of cooperative learning methods basically applied to develop reading and writing skills, is one of the techniques used in language teaching. The purpose of this technique is not only to find solutions to the problems experienced in traditional teaching of reading and writing skills but also to develop these skills (Slavin, 1995). Therefore, the researcher had utilized Cooperative Integrated Reading and Composition (CIRC) to develop English reading comprehension and writing abilities of the students.

Research Objectives

1. To compare English reading comprehension and English writing abilities of the grade 7 students before and after learning using CIRC method.
2. To compare English reading comprehension and English writing abilities of the grade 7 students after learning using CIRC method with the set criterion of 70%.

Research Hypothesis

1. Grade 7 students' English reading comprehension and writing abilities after learning using CIRC are higher than before learning.
2. Grade 7 students' English reading comprehension and writing abilities after learning using CIRC are higher than the set criterion of 70%.

Research Framework

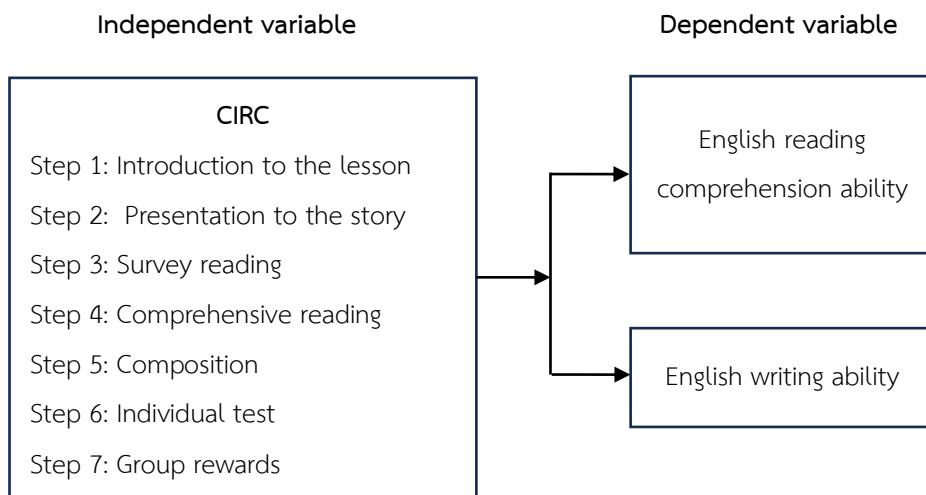


Fig. 1 Research Frameworks

Methodology

1. Population and Sample

1.1 Population

The population of this study were grade 7 students from private schools located in area 4 of Hadsayfong District, Vientiane Capital, Lao PDR, consist of 4 schools total of 8 classes, 245 students in the academic year of 2023. The students were from the same district, having similar family economic status, their parents' occupations are employees, workers and merchants. They all enrolled and passed Grade 6 in academic year of 2022. All classes composed of high, medium and low level of achievement students.

1.2 The Sample

1.2.1 The sample size was calculated using G*power software, the power of test was set at 0.8 with the error probability (α) at 0.05, the effect size was at 0.60, the sample size suggested was 19.

1.2.2 The sample was selected by class through cluster random sampling technique. The samples are grade 7 students in the first semester of academic year 2023 at Sengsouly school, in area 4 of Hadsayfong district, Vientiane, Lao PDR, total of 1 class, 20 students. The students in this class had assorted abilities.

2. Research Instruments

2.1 Lesson plans to teach English writing and reading abilities using Cooperative Integrated Reading and Composition (CIRC) consist of 6 lesson plans, duration of 3 hours for each plan, total of 18 hours. The appropriateness mean score of the lesson plans range from 4.75 to 4.92 and S.D. from 0.08 to 0.14.

2.2 An English reading comprehension ability test. The English reading comprehension test was developed by the researcher to examine students' reading comprehension ability as the pretest and posttest. The test was

constructed with four reading texts, including 30 questions in the form of multiple choices. It indicated the difficulties level (p) from 0.43 to 0.64, discrimination power (r) of 0.29 to 0.64 and the reliability of the test by using Kuder Richardson 20 (KR-20) was at 0.81.

2.3 An English writing ability test. The test includes a writing composition at least 150 words. The reliability value by using Pearson correlation coefficient was at 0.97.

3. Data Collection

The data were collected following these steps:

3.1 The samples took the pretest, the English reading comprehension ability test and English writing ability test before the experiment.

3.2 Proceeded the experiment teaching 6 lesson plans using CIRC method, 3 hours per week, total of 18 hours.

3.3 The samples took the posttest, the English reading comprehension ability test and English writing ability test after the experiment.

3.4 The scores for both the pretest and posttest were collected and prepare for data analysis.

4. Data Analysis

4.1 Data obtained in the test were processed using a statistical software for system analysis.

4.2 The data analysis method of dependent t-test was used to compare between pretest and posttest scores of English reading comprehension and writing abilities.

4.3 The data analysis method of one sample t-test was used to compare posttest scores of English reading comprehension and writing abilities with the criteria of 70%.

Results

1. The result of comparison the English reading comprehension and writing abilities of grade 7 students before and after learning using CIRC method were as follows:

In the data analysis to compare the English reading comprehension abilities of grade 7 students before and after learning by using CIRC method, Dependent t-test was used as the inferential statistics, the results are shown in Table 1.

Table 1 The comparison of English Reading Comprehension abilities before and after learning using CIRC method

Test	Posttest		Pretest		Difference		t-test	p	Effect size	r
	\bar{X}	S.D.	\bar{X}	S.D.	\bar{X}	S.D.				
Literal	9.05	1.10	6.05	1.67	3.00	1.12	11.94	.000	2.67	0.74
Interpretive	7.55	1.00	5.00	1.56	2.55	1.19	9.58	.000	2.14	0.64
Applied	6.10	1.12	3.30	1.49	2.80	1.20	10.47	.000	2.34	0.61
Total	22.70	2.36	14.35	4.46	8.35	2.50	14.95	.000	3.34	0.91

Table 1 presented the results of the English reading comprehension ability test score of grade 7 students before learning by using CIRC method, the mean score (\bar{X}) was 14.35 and standard deviation (S.D.) was 4.46. After learning by using CIRC method the \bar{X} was 22.70 and S.D. value was 2.36. This result shown that after learning using CIRC method students has statistically higher score than before learning at 0.01 level of significance. The effect size of English reading comprehension ability was 3.34 and paired samples correlation (r) was 0.91.

In consideration of each level of reading comprehensions, it can be found that the Literal level before learning with CIRC method had an average score of 6.05, S.D. value was 1.67 while after learning the average score is 9.05

with S.D. value of 1.10. As for Interpretive level, before learning using CIRC method had an average score of 5.00 with S.D. value of 1.56 while after learning has an average score of 7.55 with S.D. value of 1.00. Lastly was the applied level, it shown before learning using CIRC had an average score of 3.30 with S.D. value of 1.49 while after learning is 6.10 with S.D. value of 1.12. All three reading comprehension levels had an average score after learning using CIRC statistically higher than before learning at 0.01 level of significance. The effect size of English reading comprehension ability on Literal, Interpretive and Applied were 2.67, 2.14, 2.34 and paired samples correlation (r) were 0.74, 0.64, 0.61 respectively.

To compare the English writing abilities of grade 7 students before and after learning by using CIRC method, the dependent t-test was used as the inferential statistics, the results are shown in Table 2.

Table 2 The comparison of English writing abilities before and after Learning

Test	Posttest		Pretest		difference		t-test	p	Effect size	r
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD				
English										
Writing Ability	16.15	1.99	10.85	3.51	5.30	1.98	11.95	.000	2.68	0.88

Table 2 presented the results of the English writing ability test score of grade 7 students before learning by using CIRC method, the mean score (\bar{X}) was 10.85 and standard deviation (S.D.) was 3.51. After learning by using CIRC method, the mean score was 16.15 and S.D. value was 1.99. This result shown that after learning using CIRC method students has higher score than before learning at 0.01 level of significance. The effect size of English writing ability was 2.68 and paired samples correlation (r) was 0.88.

2. The result of comparison the English reading comprehension and writing abilities of grade 7 students after learning using CIRC method with the defined criteria of 70% were as follows:

In the data analysis to compare the English reading comprehension abilities of grade 7 students after learning by using CIRC method with the defined criteria of 70% (70% of 30 scores), the researcher used one sample t-test as the inferential statistics, the result was shown in Table 3.

Table 3 The Comparison of English Reading Comprehension ability after learning using CIRC with the criterion of 70%.

Test	Posttest		Criterion 70%	Difference	t-test	p
	\bar{X}	S.D.				
English Reading Comprehension Ability	22.70	2.36	21.00	1.70	3.22	.005

As shown in Table 3, it indicated that the English reading comprehension abilities of grade 7 students after learning by using CIRC method was statistically higher than the defined criteria of 70% at 0.01 level of significance.

To compare the English writing abilities of grade 7 students after learning by using CIRC method with the defined criteria of 70% (70% of 20 scores), the researcher used one sample t-test as the inferential statistics, the result was shown in Table 4.

Table 4 The Comparison of English writing ability after learning with the defined criteria of 70%

Test	Posttest		Criterion 70%	t-test	p
	\bar{X}	SD			
English Writing Ability	16.15	1.99	14	4.84	.000

Table 4 indicated that the English writing ability of grade 7 students after learning using CIRC method was statistically higher than the defined criteria of 70% at 0.01 level of significance.

Discussion

1. The research result shown that grade 7 students who learned by using CIRC method had English reading comprehension ability after learning higher than before learning and after learning higher than the defined criteria of 70%.

The reasons supported these results might have been caused by:

Firstly, the stages of Cooperative Integrated Reading and Composition method were developed by Slavin (1990) to enhance the reading and writing abilities of learners. The researcher utilized the stages of CIRC method in this research by divided students into groups of 4 consisted of low, medium and high achievement students working together. By working in groups, students worked on reading activities and completed the reading comprehension worksheet together. Therefore, students felt more confident to participate in the learning activities and exchange knowledge with their friends.

Secondly, studying in teams allow team members to support each other, the lower performing students will be guided and suggested by the higher performing students which result in better understanding of the lessons. This reason is in accordance with Vygotsky's approach (Vygotsky, 1978 cited in Muangpratom, 2017), the Social Constructivism that each learner has different level of learning ability, but lower ability learners can develop their learning ability by the help of higher ability learner, who has the same language and culture. As the low learning ability students develop their ability by teaching other, the high learning ability student will have a better mastery concept, retention and recall of the lessons. According to the Learning Pyramid by the

National Training Laboratories Institute cited in Letrud (2012), the students who teach other about the lessons will retain 90% of what they are able to teach other. Beside supporting the learning of each team member, by implementing CIRC method students will also gain social skills, team work skills, helping one another by having the same goal realizing that the team results is more important than their individual result.

Thirdly, the learning activities using CIRC allow students to have a chance to read individually and as well as in team. These reading activities are essentials in developing the language skills, the more students practice the better their skills will become which is in line with the Law of Exercise by Thorndike (Thorndike, 1930 cited in Hergenhahn & Matthew, 1997). Frequent practice or action with understanding will make the learning lasting. If it is not repeated often, the learning will not last long and may eventually be forgotten.

The results that the students' English reading comprehension ability were higher after learning than before learning and after learning higher than the defined criteria of 70% were supported with the study of Wisetsri (2015) who stated that after learning using CIRC grade 5 students had higher English reading comprehension ability at 0.01 level of significance. It is also in consistent with the research of Tipsuk (2009) who stated that the learner of grade 9 students who learned by using CIRC had English reading comprehension ability after learning higher than defined criteria of 70%. Imam (2022) found that CIRC approach has a positive impact on pupils' reading comprehension. The mean of the pretest experiment group was 50.00, while the standard of the post-test experiment group was 80.00. Students who were taught by using the Cooperative Integrated Reading and Composition (CIRC) technique outperformed those who were taught alternative strategies.

2. The research result shown that grade 7 students who learned by using CIRC method had English writing ability after learning higher than before learning and after learning higher than the defined criteria of 70%.

The reasons supported these results might have been caused by:

Firstly, the stages of Cooperative Integrated Reading and Composition method were developed by Slavin (1990) to develop the reading and writing abilities of learners. The researcher utilizes the stages of CIRC method in this research by divided students into groups of 4 consisted of low, medium and high achievement students working together. By working in groups, students worked on developing outline of the composition together. Therefore, students felt more confident to participate in the learning activities and exchange knowledge with their friends.

Secondly, studying in teams allow team members to support each other, the low ability students will be guided and suggested by the higher ability students which result in better understanding of the lessons. This reason is in accordance with Vygotsky's approach (Vygotsky, 1978 cited in Muangpratom, 2017), the Social Constructivism that each learner has different level of learning ability, but lower ability learners can develop their learning ability by the help of higher ability learner, who has the same language and culture. As the low learning ability student develop their ability, by teaching other the high learning ability student will have a better mastery concept and retention and recall of the lessons. According to the Learning Pyramid by the National Training Laboratories Institute cited in Letrud (2012), the students who teach other about the lessons will retain 90% of what they are able to teach other.

Thirdly, in the implementation stages of CIRC, there is a writing activity which allow students to create an outline together as a group. Before writing the story individually, the discussion within the group helps students to analyze and synthesis the text and create an outline of the story. The

outline of the story lead students to write logically and have a clear direction which is in consistent with the idea of meaningful learning by Ausubel (Ausubel, 1968 cited in Cottingham, 2023). Meaningful learning refers to a focus on understanding rather than just memorizing. It requires connecting new information to prior knowledge. Working in a group to prepare their writing, students therefore have a chance to understand the story even better and connect what they already know with the new information they learn from the story.

The results that the students' English writing ability after learning was higher than before learning and after learning was higher than the defined criteria of 70% were supported with the study of Salee (2013) who stated that the English writing ability of grade 10 students after learning using CIRC was higher than before learning. It is also supported by the research of Tipsuk (2009) who stated that the grade 9 students who learned by using CIRC had English writing ability after learning higher than defined criteria of 70%.

Recommendations

1. Recommendations from The Study

1.1 The English reading comprehension test scores improved overall after using the CIRC method, but some students, especially low performers, still scored below 70%. Interviews revealed that their main challenge was the lack of vocabulary knowledge. It is suggested, the teacher should assess vocabulary knowledge, encourage higher performers to assist, and provide targeted vocabulary support.

1.2 The research showed that some students, particularly low performers, couldn't achieve English writing scores above 70%. This was primarily due to insufficient vocabulary and understanding of sentence structures. To address this, teachers should focus on building vocabulary and teaching sentence

structures. They should facilitate opportunities for students to evaluate and exchange knowledge within groups. Teachers must ensure that all students understand and grasp both vocabulary and sentence structures before moving forward.

2. Recommendations for Further Study

2.1 The research revealed that certain students, particularly low performers, continue to score below 70% in English reading comprehension and writing abilities. Analysis showed that their challenges caused by a lack of vocabulary knowledge and understanding of sentence structure. To address this, future studies should integrate techniques focused on building vocabulary and sentence structure skills for lower-performing students. This integration will support the implementation of the CIRC method in developing students' English reading comprehension and writing abilities.

2.2 In this study, the same set of English reading comprehension and writing abilities tests were utilized for both the pretest and posttest assessments. To lessen the risk of students memorizing test answers, it is recommended to employ parallel sets of test materials for each assessment. Additionally, tests should be randomly selected to be used as pretest and posttest to further minimize the potential for memorization and ensure the validity of the results.

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