

THE EFFECT OF THE COOPERATIVE INTEGRATED READING AND COMPOSITION (CIRC) LEARNING MODEL ON STUDENTS' LEARNING MOTIVATION AND READING LITERACY

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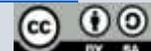
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ABSTRACT

This study examines the effect of the Cooperative Integrated Reading and Composition (CIRC) learning model on students' learning motivation and reading literacy. A quasi-experimental method with a non-equivalent posttest-only control group design was employed. The population consisted of fifth-grade students at Muhammadiyah Elementary School in Kupang City, with a total sample of 58 students divided into an experimental group and a control group. Data were collected using a learning motivation questionnaire and a reading literacy test, both of which had been validated and tested for reliability. Data analysis was conducted using descriptive statistics and multivariate analysis of variance (MANOVA). The results indicate that the CIRC learning model has a significant simultaneous effect on students' learning motivation and reading literacy. Students taught using the CIRC model demonstrated higher learning motivation and reading literacy skills compared to those taught using conventional learning methods. These findings suggest that the CIRC learning model can be considered an effective alternative to support literacy-based learning in elementary schools.

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INTRODUCTION

Learning motivation and reading literacy are two fundamental aspects that play a crucial role in determining students' learning success at the elementary school level, as both serve as the foundation for achieving optimal academic outcomes and comprehensive competency development (Julyanti, 2021; Toste et al., 2020). Reading literacy is not limited to the technical ability to read texts, but also involves the capacity to comprehend, interpret, evaluate, and use written information meaningfully in various contexts. According to Harsiati (2018), reading literacy enables students to construct meaning from texts and apply information to support learning and everyday problem solving. Strong reading literacy skills form the foundation for mastering school subjects, fostering critical and logical thinking,

and developing lifelong learning habits, as most learning activities rely heavily on students' ability to process written information (Fikriyah et al., 2022; Harsiati, 2018; Peterianus et al., 2019).

In addition to literacy skills, learning motivation functions as an internal driving force that encourages students to participate actively, persist in learning tasks, and maintain enthusiasm throughout the learning process. Motivation, both intrinsic and extrinsic, influences students' engagement and effort, which in turn affects learning outcomes (Rizkiyani, 2024; Yusof & Jusoh, 2023). Students with low learning motivation often demonstrate limited participation and reduced persistence, which can hinder the development of literacy skills.

However, various studies have reported that elementary school students' reading literacy and learning motivation remain relatively low. Findings from international assessments such as PISA indicate that Indonesian students' literacy performance is still below the international average, highlighting the need for instructional improvement at the basic education level (OECD, 2019, 2023). At the elementary school level, various descriptive studies have also found that students' scientific literacy skills fall within a low category. For instance, the average percentage of scientific literacy achievement was reported to be approximately 51% (low category) on the topic of the human digestive system, with the science process skills aspect reaching only about 44% (Utami et al., 2022).

One contributing factor to these conditions is the continued use of conventional, teacher centered instructional models. In such approaches, teachers dominate classroom activities, while students tend to act as passive recipients of information. Learning is often conducted through one-way lectures, limiting opportunities for interaction, collaboration, and active engagement with texts (Khalaf & Zin, 2018; Naing et al., 2019). As a result, students have fewer opportunities to develop deeper reading comprehension and sustained learning motivation.

To address these challenges, the Cooperative Integrated Reading and Composition (CIRC) learning model has been proposed as an alternative instructional approach. CIRC is a cooperative learning model designed to integrate reading and writing activities through structured group work. In this model, students collaborate to read texts, identify main ideas, discuss content, and produce written responses, allowing them to actively construct meaning and learn from peer interaction (Ariyana & Suastika, 2022; Sakkir & Haturrahma, 2023). Such collaborative activities reduce teacher dominance and promote positive social interaction, which can support students' engagement and comprehension.

Previous studies have indicated that CIRC can improve students' reading comprehension, writing skills, and classroom participation compared to conventional instruction (Maruf & Anjely, 2020; Rahmi & Marnola, 2020). Through collaborative reading and writing tasks, students are encouraged to take responsibility for their learning, develop confidence, and engage more actively in the learning process. These conditions are expected to contribute not only to improved reading literacy but also to enhanced learning motivation.

Based on these considerations, it is necessary to conduct empirical research examining the effect of the Cooperative Integrated Reading and Composition (CIRC) learning model on elementary school students' learning motivation and reading literacy. This study is expected to provide empirical evidence regarding the effectiveness of CIRC as an instructional alternative and to serve as a reference for teachers in improving literacy-based learning at the elementary school level.

METHOD

This study employed a quasi-experimental method with a non-equivalent posttest-only control group design. This quantitative design involves manipulating the independent variable without full randomization and includes a non-equivalent control group, making it suitable for use when random assignment is not feasible in natural educational settings (Gopalan et al., 2020). The study was conducted during the 2024/2025 academic year at Muhammadiyah Elementary School in Kupang City. The research population comprised all fifth-grade students, while the sample consisted of 58 students selected through purposive sampling. This sampling technique is commonly applied in educational quasi-experimental studies when researchers select classes or groups based on specific criteria rather than random assignment.

The experimental group consisted of 29 students who were taught using the Cooperative Integrated Reading and Composition (CIRC) learning model, whereas the control group consisted of 29 students who received conventional instruction. The research instruments included a learning motivation questionnaire using a Likert scale and a reading literacy test consisting of objective and essay items. All instruments underwent content validity testing through expert judgment and reliability testing prior to implementation, in accordance with recommendations that motivation and reading literacy instruments be subjected to validity testing (factor analysis or item total correlation) and reliability testing (Cronbach's alpha) to ensure measurement quality (Indrayadi, 2021; Wang & Jin, 2021).

Data analysis was conducted using descriptive statistics to describe students' levels of learning motivation and reading literacy, and inferential statistics using Multivariate Analysis of Variance (MANOVA) to examine the effect of the learning model on both dependent variables simultaneously. All statistical analyses were performed at a significance level of 0.05.

RESULT AND DISCUSSION

Result

The results of this study are presented based on descriptive and inferential statistical analyses conducted using SPSS Statistics version 25. The variables analyzed included students' learning motivation and reading literacy in the experimental group (CIRC learning model) and the control group (conventional instruction).

Data Description

The descriptive statistics of students' learning motivation and reading literacy are presented in Table 1.

Table 1 Descriptive Statistics of Students' Learning Motivation and Reading Literacy

Variable	Group	Mean	SD	Minimum	Maximum
Learning Motivation	CIRC	77.59	10.48	57	95
	Conventional	60.31	11.95	35	90
Reading Literacy	CIRC	76.28	12.33	45	95
	Conventional	74.66	8.02	50	86

Table 1 shows that, descriptively, the mean scores of learning motivation and reading literacy of students taught using the CIRC model were higher than those of students taught using the conventional learning model.

Assumption Testing

Data normality was examined using the Kolmogorov–Smirnov and Shapiro–Wilk tests, which indicated that most of the data were normally distributed (Sig. > 0.05). Furthermore, the homogeneity of variance was tested using Levene's Test, showing that the variance of reading literacy was homogeneous (Sig. > 0.05), whereas the variance of learning motivation was not homogeneous. Therefore, the analysis was continued by considering the robustness of the statistical tests.

Hypothesis Testing

The first hypothesis of this study states that there is a difference in learning motivation between students taught using the Cooperative Integrated Reading and Composition (CIRC) learning model and those taught using conventional instruction. The results of the ANOVA analysis are presented in Table 2.

Table 2 Summary of the First Hypothesis Test

Source	SS	df	MS	F	Sig.
Between Groups	38.086	1	38.086	0.352	0.555
Within Groups	6062.345	56	108.25		
Total	6100.431	57			

The table 2, shows that students' learning motivation taught using the Cooperative Integrated Reading and Composition (CIRC) learning model and those taught using conventional instruction yielded an F value of 0.352, while the significance level was 0.555 ($p > 0.05$). These results indicate that the null hypothesis (H_0) is accepted and the alternative hypothesis (H_a) is rejected. Therefore, it can be concluded that there is no significant effect of the CIRC learning model on students' learning motivation.

The second hypothesis of this study states that there is a difference in reading literacy between students taught using the Cooperative Integrated Reading and Composition (CIRC) learning model and those taught using conventional instruction. The results of the ANOVA analysis are presented in Table 3.

Table 3 Summary of the Second Hypothesis Test

Source	SS	df	MS	F	Sig.
Between Groups	4327.603	1	4327.603	34.253	0.0001
Within Groups	7075.241	56	126.344		
Total	11402.845	57			

Table 4 indicates that students' reading literacy taught using the CIRC learning model and those taught using conventional instruction yielded an F value of 34.253 with a significance level of 0.0001 ($p < 0.05$). These results indicate that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. Therefore, it can be concluded that there is a significant effect of the CIRC learning model on students' reading literacy.

The third hypothesis of this study states that there is a simultaneous difference in students' learning motivation and reading literacy between students taught using the Cooperative Integrated Reading and Composition (CIRC) learning model and those taught using conventional instruction. The results of the MANOVA analysis are presented in Table 5.

Table 4 Summary of the Third Hypothesis Test

Effect	Statistic	Value	Sig.	Conclusion
Learning Model	Pillai's Trace	0.386	0.0001	Significant
	Wilks' Lambda	0.140	0.0001	Significant
	Hotelling's Trace	0.628	0.0001	Significant
	Roy's Largest Root	0.628	0.0001	Significant

Table 4 shows a significance level of 0.0001, indicating that $p < 0.05$. This result demonstrates that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. Therefore, it can be concluded that students taught using the CIRC learning model show a significant effect on both reading literacy and learning motivation compared to students taught using the conventional learning model.

Discussion

Differences in Learning Motivation between Students Taught Using the CIRC Model and Conventional Instruction

The results of the study indicate that the implementation of the Cooperative Integrated Reading and Composition (CIRC) learning model has not produced a meaningful difference in students' learning motivation compared to conventional instruction. This finding suggests that students' learning motivation is influenced not only by the instructional model employed, but also by various other factors, such as individual student characteristics, learning environments, teachers' roles, and previously established learning habits.

The CIRC learning model places greater emphasis on reading activities and group collaboration in understanding texts. This primary focus allows students to be actively involved in the learning process; however, it does not necessarily lead to an immediate increase in learning motivation within a relatively short period of time.

Learning motivation tends to develop gradually and requires consistent implementation of instructional models as well as support from a conducive learning environment.

Several studies have shown that the application of the CIRC model is effective in improving reading comprehension, student activeness, and collaborative skills, as well as fostering enthusiasm and interest in reading activities (Handayani et al., 2022; Mariana et al., 2020; Maruf & Anjely, 2020). However, the observed increase in motivation is often situational in nature, reflected in students' enthusiasm during learning activities and engagement in tasks, whereas more stable forms of learning motivation are generally developed through sustained and continuous instructional practices (Cents Boonstra et al., 2021; Li et al., 2022).

Differences in Reading Literacy between Students Taught Using the CIRC Model and Conventional Instruction

In contrast to learning motivation, the implementation of the CIRC learning model has been shown to have a stronger impact on students' reading literacy. The CIRC model is designed to integrate reading and writing activities through structured group work, providing students with greater opportunities to develop a deeper understanding of reading materials.

Through group discussions and collaborative activities, students are trained to identify main ideas, interpret information, and relate texts to their prior knowledge or experiences. Several studies have reported significant improvements in students' abilities to identify main ideas, draw conclusions, and answer reading comprehension questions following the implementation of the CIRC model (Maruf & Anjely, 2020; Simarmata, 2023; Wongsuwan & Regiana, 2023). These interactive processes have been shown to facilitate more comprehensive text understanding, while simultaneously enhancing students' active participation and self confidence. The CIRC model is also effective in creating an active, enjoyable, and interactive learning environment, in which texts are broken down into more manageable components, making them easier for students to comprehend (Cahyono, 2020; Halizatul & Nuraeni, 2020; Maruf & Anjely, 2020).

Simultaneous Differences in Learning Motivation and Reading Literacy

Simultaneously, the implementation of the CIRC learning model has a significant effect on both students' learning motivation and reading literacy. This finding indicates that although learning motivation alone may not show a prominent difference when examined independently, its combination with improved reading literacy enables the CIRC model to exert a more comprehensive influence on the learning process.

The CIRC model encourages students to actively participate, collaborate, and take responsibility for group tasks, as reading and writing activities are completed collaboratively, ensuring that each group member has a clear role and responsibility (Hendi Ristanto et al., 2018; Shobirin & Wafiroh, 2021). This cooperative learning environment has been shown to increase student engagement and active participation during discussions, reading activities, and summary writing. Such conditions not only enhance students' reading literacy but also foster self-confidence and involvement in learning. Several studies have reported that students become more confident in expressing opinions, engaging in discussions, and presenting group work outcomes following the implementation of the CIRC model (Hartati et al., 2021; Shobirin & Wafiroh, 2021; Sulistianingsih, 2018).

These findings are further supported by studies demonstrating that consistent implementation of the CIRC model enhances overall student engagement and learning outcomes, including reading and writing skills, critical thinking abilities, as well as students' attitudes and learning motivation (Hartati et al., 2021; Hendi Ristanto et al., 2018; Niati & Rasyidah, 2020).

Based on the discussion above, it can be concluded that the Cooperative Integrated Reading and Composition (CIRC) learning model has strong potential as an innovative instructional approach that effectively enhances students' reading literacy while simultaneously contributing positively to their learning motivation among fifth grade elementary school students in Kupang.

CONCLUSION

Based on the research findings, it can be concluded that the Cooperative Integrated Reading and Composition (CIRC) learning model has a significant effect on elementary school students' learning motivation and reading literacy. Students who were taught using the CIRC model demonstrated higher learning motivation and reading literacy skills compared to those who were taught using conventional learning methods. Therefore, the CIRC learning model is recommended as an alternative instructional approach to enhance the quality of literacy based learning in elementary schools.

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