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Enhancing Students' Reading Comprehension Skills through the RADEC Model: A Focus on Elementary Education

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ABSTRACT

This study proposes the utilization of the RADEC (Read, Answer, Discuss, Explain, Create) learning model, a structured approach that incorporates independent reading, collaborative discussions, peer explanations, and creative activities, as an intervention to enhance reading comprehension skills. Its objective is to investigate the impact of the RADEC learning model on the enhancement of reading abilities among fourth-grade students learning Indonesian. This study employs a non-equivalent post-test only control group design, with the experimental class using the RADEC model and the control class employing conventional teaching methods. The study included all 78 fourth-grade students from SDN 20 Kurao Pagang, divided into two classes. Random sampling yielded 22 participants in the experimental group and 23 in the control group. Data collection was conducted using evaluation tests, and the average reading comprehension scores were 82.72 for the experimental class and 63.58 for the control group. Data analysis began with initial assessments, including normality and homogeneity tests, followed by hypothesis testing using the t-test. Findings revealed a noteworthy enhancement in reading comprehension scores within the experimental group in contrast to the control group, as evidenced by a significance value of (0.00<0.05), indicating a statistically significant difference between the two groups. The results of this study highlight the potential of the RADEC learning model as an innovative solution for increasing students' reading interest and reading comprehension skills at the basic education level. These findings inform curriculum development, teacher training programs, and educational policies in Indonesia to enhance reading comprehension outcomes.

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1. INTRODUCTION

The need for education is something that cannot be separated from human civilization. Through education, humans are humanized by human values, which are reflected in character and personality (Triwiyanto, 2014). Nowadays, education continues to grow along with advances in technology and

information. In the 21st century or the Society 5.0 era, various aspects of human life have changed, including the world of education. This means that the implementation of education often experiences changes in terms of systems, perspectives, curriculum, and practice in the field. In the 21st century, students require a set of competencies to actively engage and thrive competitively. These include high-level thinking skills rooted in problem-solving (critical thinking and problem-solving), collaboration, creativity, and effective communication abilities) (Mudrikah, 2022). The developments and demands of the times must of course be in line with strengthening the competence of educators so that they can hone and explore their abilities to educate and educate the nation's children. This can be realized from innovation in the world of education which can create an active, student-centered, effective, and enjoyable learning atmosphere for students so that the process of internalizing knowledge can be carried out well (Iwanda, 2023).

Indonesian is an important subject because it plays a role in supporting students' success in studying other fields of study (Nuramalia et al., 2023). In elementary school, the Indonesian language is a subject that fosters student engagement and activity development. Language serves as a means of communication, and learning a language entails acquiring communication skills. Language proficiency greatly impacts students' learning achievements (Cahyarani & Tirtoni, 2023). As a very important means of communication, language needs to be taught from an early age in elementary school (SD)(Aldona et al., 2023). Without language, it will be difficult to realize the vision of national education. Students are required to attain proficiency in four essential language skills: listening, reading, speaking, and writing (Abidin et al., 2015; YA Pratama et al., 2020).

Reading is one of the language skills that involves understanding and receiving information conveyed through written text (Abidin et al., 2015). Reading serves as a gateway to diverse realms that individuals aspire to explore, enabling them to broaden their knowledge, derive enjoyment, and delve into written messages simply through reading. Nonetheless, mastering reading is a complex endeavor. It involves employing suitable approaches, techniques, strategies, and methods aligned with the reading purpose. Reading encompasses various types, with reading comprehension, a silent reading variant, being particularly significant. Reading comprehension entails the cultivation and refinement of critical reading skills, aiming to obtain thorough information and comprehension of the material read. It is crucial for students as it enables them to grasp logical arguments comprehensively, identify the main idea within the text, carefully navigate through the entirety of the reading material, and articulate its content in their own words (Widasari, 2017).

Despite its importance, reading comprehension remains a significant challenge for Indonesian students. According to the latest Programme for International Student Assessment (PISA) results in 2018, Indonesia ranked among the lowest in reading performance, with an average score of 371, significantly below the OECD average of 487 (OECD, 2019). This poor performance highlights the pressing need to address the reading comprehension difficulties faced by Indonesian students. Research has identified several factors contributing to this issue, including limited vocabulary knowledge, inability to grasp main ideas and important details, and difficulties in making inferences and connecting information with prior knowledge (Kholiq & Luthfiyati, 2020) (Isfihananti, 2016). To address these challenges, innovative and effective teaching strategies are required. One promising approach is the RADEC (Read, Answer, Discuss, Explain, and Create) model, which aims to enhance students' reading comprehension skills through active engagement and collaborative learning.

Reading ability is the basis for other skills. Reading skills are very important because they play a role in developing a person's knowledge, understanding, and communication skills (Zan, 2019). Government Regulation No. 19 of 2005 regarding National Education Standards Article 6, subsection (6), underscores the significance of fostering reading and writing proficiency, numeracy aptitude, and communication skills within the curriculum and syllabus of elementary schools (SD), Islamic elementary schools (MI), special schools for children with disabilities (SDLB), Package A programs, or similar equivalents. This foundation indicates the importance of reading ability (Nuramalia et al., 2023). Reading skills are receptive because they involve receiving and understanding the message conveyed by the author. By

having good reading skills, individuals can have proper knowledge of the grammar, vocabulary, and writing styles used in a particular language. This can contribute to their ability to compose writing, express opinions orally, and better understand messages conveyed by other people (Aldona et al., 2023).

The ability to read comprehension is a person's ability to reconstruct the message contained in the text they read (Santoso & Sunata., 2022). Dalman, 2014) the passage elucidates that reading comprehension entails cognitive engagement during the reading process. Meanwhile, according to (Somadayo, 2011) reading comprehension entails actively grasping the meaning and integrating the reader's preexisting knowledge and experiences, which correlate with the text's content. Hence, within the elementary school curriculum, students should recognize the significance of reading comprehension due to its numerous benefits and the acquisition of this skill (A. Pratama, 2022). Students' success in the learning process is greatly influenced by their reading ability. Through engaging in this activity, students actively acquire information, as reading enables individuals to access knowledge and gain fresh experiences. While the primary aim of reading comprehension is to comprehend the material being read, it's evident that not all students can attain this objective. Many students may possess fluency in reading, yet struggle to grasp the content of the material being read (Widasari, 2017). For readers to understand reading, readers must understand the content of what has been read. After reading the text, readers can express their understanding of the text they read by summarizing the contents of the text in their language in oral and written form. Therefore, reading comprehension needs to be known and understood.

Based on the observations made at SD N 20 Kurao Pagang, it has been identified that the fourth-grade students' reading comprehension abilities have not reached their optimal level. This assessment is derived from interviews conducted with the teacher of the fourth-grade class. Students have difficulty understanding the text which is characterized by difficulty understanding the main idea or important details in the text. Another problem is that students have difficulty reasoning based on the information provided in the text. They are unable to connect existing information with previous knowledge or experience to produce deeper understanding. Apart from that, there is also limited vocabulary. Some students do not know or understand the words used in the text, so they have difficulty building complete meaning and understanding. In line with the results of observations carried out by researchers, (Kholiq & Luthfiyati, 2020) stated that the results of the Program For International Student Assessment (PISA), Indonesia ranked last in the field of Reading Performance with an average of 371 in 2018. This achievement was lower than other countries with an average of 487. Indonesia's achievement was also stated as below average. This means that his reading comprehension ability is also very low.

Reading comprehension skills are consistently required across various learning themes, underscoring the significance of mastering this skill. Proficiency in reading comprehension is deemed fundamental in Indonesian language and literature education, and it is essential for attainment at all educational levels, including elementary school. Not only for teaching Indonesian itself, reading comprehension skills are also the basis for teaching other subjects, but in reality in the field, we still encounter several difficulties which cause reading comprehension to be less mastered (Isfihananti, 2016). In current conditions, most teachers prefer to use the lecture method or traditional learning approach where the focus of learning is more on the teacher as the center (teacher-centered). Innovation in learning models is very crucial and can influence student learning achievement. The learning model is a logical sequence for teaching students (Adevita et al., 2021).

A learning model is an intentional structure delineating a systematic method for arranging educational sessions to achieve particular educational aims. It functions as a resource for instructional designers and educators to proficiently design teaching and learning activities (Huda, 2013). The learning model offers teachers a structured framework and guidance for instructional delivery. An interesting learning model tends to make students interested in participating in learning. Hence, there is a need for innovative learning models characterized by straightforward syntax and applicability for teachers, facilitating easy implementation and aligning with the competency-based learning objectives essential for the 21st century. These models should not solely emphasize cognitive assessment but also encompass psychomotor and affective aspects, ensuring thorough internalization of knowledge transfer among

students. Specifically, in subjects like the Indonesian language, which entails vast content and extensive reading requirements, educators necessitate learning models tailored to the Indonesian context (Iwanda, 2023).

Researchers propose the RADEC learning model as an innovative approach to enhance students' reading engagement and consequently improve their reading comprehension abilities. The RADEC learning model emphasizes placing students at the center of classroom teaching and learning activities, aligning with the principles of student-centered learning. It is derived from and builds upon the scaffolding learning method, incorporating adaptations and modifications to suit its specific instructional objectives (W. Sopandi, 2017). The scaffolding method involves students seeking assistance and guidance from supportive figures, particularly teachers, during teaching and learning activities, facilitating the enhancement of students' learning capabilities leading to mastery of the subject matter. Likewise, the RADEC learning model is described as an educational method that nurtures the acquisition of 21st-century skills in students, concurrently aiding in their understanding of the learning concepts being explored (D. Sopandi, 2019). This approach entails various stages such as comprehending concepts, collaborating, problem-solving, and generating ideas or projects. It addresses the demand for 21st-century skills, where students are expected to cultivate the 4Cs: critical thinking and problem-solving, creativity, communication skills, and collaboration. This method serves as a learning solution that empowers students to independently develop their abilities while also fostering collaboration with peers in exchanging ideas and resolving challenges. Moreover, it aligns with the educational landscape in Indonesia, which mandates students to grasp numerous subjects within a constrained timeframe, encompassing both conceptual understanding and practical application through creative thinking skills (W. Sopandi, 2019).

Preliminary studies indicate that the RADEC learning model is suitable for improving the effectiveness of learning processes and outcomes within the Indonesian educational setting. However, its widespread implementation remains relatively limited, warranting further testing across broader scopes and various educational levels to ascertain its efficacy. A study (Pratama, Y., 2020) states that the RADEC learning model can have a positive influence on higher-order thinking skills. According to (Handayani et al., 2019) the RADEC model holds promise in motivating students to delve into comprehensive reading, enrich their understanding of the subject matter, and ignite their enthusiasm to attain the necessary competencies in today's setting.

Previous research has demonstrated the potential of the RADEC model and other innovative teaching approaches in improving students' reading comprehension. For example, a study by (Pohan et al., 2021)) found that the implementation of the RADEC model significantly improved the reading comprehension scores of junior high school students in Yogyakarta compared to traditional learning. Similar findings were also reported by (Tarulitha et al., 2020) who implemented the READ (Read, Encode, Annotate, Ponder) strategy on high school students in Surabaya, where students showed significant improvement in critical and analytical reading skills. Nonetheless, most of the previous studies focused on junior and senior high school students, while the impact of the RADEC model or similar strategies on elementary students remains less explored. This study aims to broaden the understanding of the effectiveness of the RADEC model by evaluating its application to grade IV elementary students, an age group that often experiences difficulties in building strong reading comprehension (Nurcahyanti, 2018; Nurdiyanti & Suryanto, 2020).

By conducting this study, we seek to expand our understanding of the effectiveness of the RADEC model in enhancing reading comprehension, particularly for elementary school students who often face difficulties in developing strong reading comprehension skills. The findings of this research will contribute valuable insights into innovative teaching approaches that can address the reading comprehension challenges faced by Indonesian students.

2. METHODS

This research employs a quantitative methodology and employs Non-equivalent Post-test Only Control Group Design with two separate groups: the experimental class and the control class. The experimental group undergoes a novel intervention, whereas the control group remains untreated, providing a basis for comparison. The research design employed is the Non-Equivalent Post-test Only Control Group Design, selected due to practical constraints where the experiment takes place within existing classes with pre-existing students, making it unfeasible to alter the class structure. The procedural details of the research design are outlined in the following table:

Table.1 Research Design Non-Equivalent Post-test Only Control Group Design

Group	Treatment	Post-Test
Experiment	X1	O1
Control	-	O2

Information :
X1: Treatment, namely the RADEC learning model (experimental group)
- : Treatment is a conventional learning model (control group)
O1 : Final test (post-test) of the experimental group
O2 : Final test (post-test) control group

This research examined the efficacy of the RADEC (Read, Answer, Discuss, Explain, and Create) learning model, a structured approach that incorporates various activities and instructional strategies to actively engage students in the reading comprehension process. In the experimental group, the RADEC model was implemented over the course of 8 weeks, with two 90-minute sessions per week dedicated to its application. Specifically, during each session, students first read a designated text independently, followed by answering comprehension questions. Subsequently, they engaged in small group discussions to share their understanding and clarify any confusion. Next, students took turns explaining the main ideas and key details to their peers. Finally, they created a visual representation or written summary to demonstrate their comprehension of the text. In contrast, the control group received conventional reading instruction, primarily consisting of teacher-led lectures and individual reading assignments without the structured RADEC activities.

After the intervention period, both the experimental and control groups were administered a final evaluation comprising multiple-choice questions to assess their reading comprehension abilities and identify any significant differences between the two groups. The study involved all fourth-grade students (N = 78) from two classes at SDN 20 Kurao Pagang. To ensure an unbiased allocation of participants, random assignment was employed at the class level, with one class randomly designated as the experimental group (n = 22) and the other as the control group (n = 23). By providing more details about the RADEC intervention, including the specific activities, duration, and frequency, readers can better understand the experimental conditions and evaluate the applicability of the findings. Additionally, clarifying the randomization process at the class level addresses potential selection biases and enhances the credibility of the study.

The instrument used to collect data in this research was a written test in the form of a final evaluation with essay-type questions. The test consisted of 10 questions specifically designed to assess student's reading comprehension abilities and learning achievements based on the objectives and instructional strategies of the RADEC model. The essay questions required students to demonstrate their understanding of the main ideas, important details, ability to make inferences, and capacity to connect information with prior knowledge – all key components emphasized in the RADEC approach. In developing these essay questions, a team of experts in reading instruction and assessment evaluated the content to ensure alignment with the RADEC model's learning objectives and the targeted reading comprehension skills. Additionally, a standardized scoring rubric was established to objectively

evaluate students' responses based on predetermined criteria, such as the accuracy and completeness of their answers, the depth of their analysis, and the quality of their explanations.

To ensure the reliability of the scoring process, a subset of the essay responses was independently scored by multiple raters who underwent training on the application of the rubric. Inter-rater reliability measures, such as Cohen's Kappa or intraclass correlation coefficients, were calculated to assess the consistency of scoring among raters. Any discrepancies or inconsistencies in scoring were then discussed and resolved to maintain a high degree of reliability throughout the evaluation process. Before administering the final test, a pilot study was conducted with a separate group of students to assess the validity of each essay question item. The product-moment correlation was used to determine the validity of the items, as the essay test format is considered polytomous. Additionally, Cronbach's alpha was employed to assess the reliability of the test. After this trial process and examination of content validity and reliability, it was determined that 10 out of the initial 17 questions were valid and suitable for inclusion in the final evaluation instrument (Mulasari et al., 2020).

By elaborating on the test development process, alignment with the RADEC model objectives, the use of a standardized scoring rubric, and measures taken to ensure scorer reliability, the content validity and reliability of the instrument are strengthened, enhancing the overall quality of the data collection process.

The collected data is then processed by carrying out statistical analysis tests by testing the research hypothesis. This analysis aims to test whether the proposed hypothesis is accepted or rejected. To test or find the effect of the RADEC learning model on students' reading comprehension abilities, the t-test was used. SPSS 25 for Windows was employed for statistical analysis. Before proceeding with the t-test, preliminary tests, including assessments for data normality and homogeneity, were conducted. The research employed the independent samples t-test for hypothesis testing (Sakinah & Ibrahim, 2023).

3. FINDINGS AND DISCUSSION

3.1 Result

This research is an experiment that involves treating two different samples, namely the experimental class, namely class IVA SDN 20 Kurao Pagang, and the control class, namely class IVB SDN 20 Kurao Pagang. The data utilized in this study comprise the evaluation scores of both the experimental and control groups. Each class undergoes an evaluation test following the learning sessions to gather data on the learning outcomes from each sample. Table 2 presents the descriptive statistics for the reading comprehension scores of the two groups. The mean (M) represents the average score, while the standard deviation (SD) indicates the spread or dispersion of scores around the mean. Higher SD values signify greater variability within the group. The maximum and minimum values denote the highest and lowest scores obtained, respectively. The median (Md) is the middle score when the data is arranged in numerical order, and the mode (Mo) is the most frequently occurring score.

Table 2. Indonesian Language Learning Results

Group	N	Mean	Std. Deviation	Maximum	Minimum	Median	Mode
Experiment	22	82.72	4.72	95	74	83.16	83.72
Control	23	63.58	4.25	70	52	63.10	64.38

The provided data indicates that the mean reading comprehension score for students in the experimental class was 82.72 ± 4.72, whereas for the control class, it was 63.58 ± 4.25. The maximum score observed in the experimental class was 95, while in the control class, it was 70. On the other hand, the minimum score recorded in the experimental class was 74, while in the control class, it was 52. The frequency distribution of reading comprehension abilities data for the experimental group utilizing the RADEC learning model is depicted in the subsequent figure :

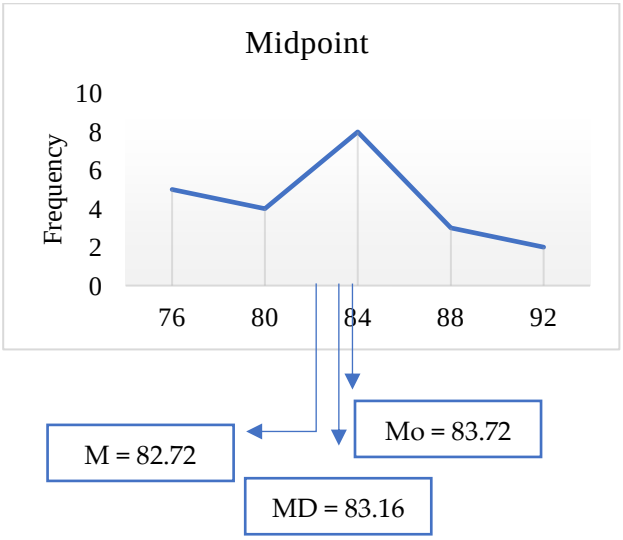

Figure 1. Data Polygon Results of the Reading Comprehension Ability of the Experimental Group

Based on the figure, it can be seen that the group of students taught using the RADEC learning model shows a negative curve Mo>Md>M (83.72 > 83.16 > 82.72). This shows that the score tends to be high. The data polygon depicts the frequency distribution of reading comprehension scores for the experimental group. The x-axis represents the range of scores, while the y-axis shows the frequency or number of students obtaining each score. The negatively skewed curve indicates that the majority of students scored above the mean, with the mode (most frequent score) being higher than the median, which is higher than the mean. This distribution pattern suggests that the RADEC learning model tended to result in higher reading comprehension scores for the experimental group. The frequency distribution of the control group's reading comprehension ability using the conventional learning model is presented in the following figure.

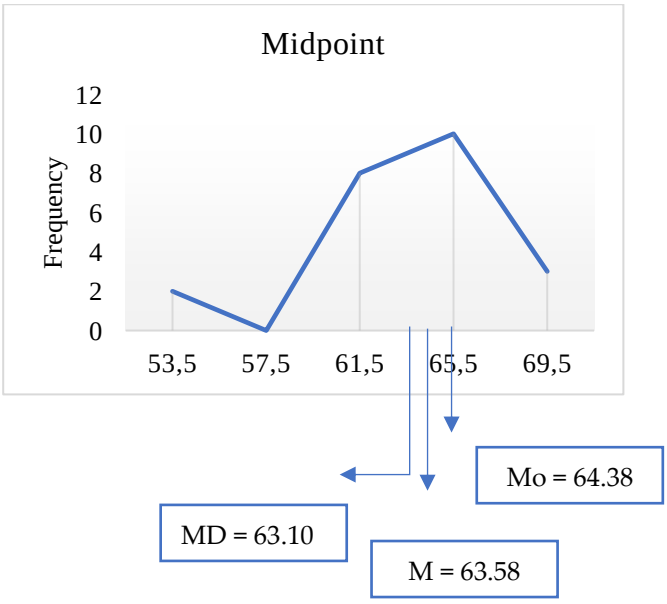

Figure 2. Data Polygon Results of the Reading Comprehension Ability of the Control Group

Based on the figure, it can be seen that the group of students taught using the conventional learning model shows a negative curve Mo>M>Md (64.38> 63.58> 63.10). This shows that the score tends to be high. The data obtained from both classes underwent normality testing through the Shapiro-Wilk Test. The outcomes of the normality analysis are presented in the subsequent table:

Table 2. Normality Calculation Results

Class	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistics	Df	Sig.	Statistics	Df	Sig.
Experiment	0.115	22	0.183	0.918	22	0.417
Control	0.076	23	0.200	0.838	23	0.320

The normality test applied in this analysis is the Shapiro-Wilk test. This type of test was chosen based on the number of samples, which was less than 50 sample data for each IVA and IVB class. The table reveals that the significance values for the normality tests are 0.320 for the control class and 0.417 for the experimental class. Both significance values exceed the threshold of 0.05, suggesting that the reading comprehension data for fourth-grade students in both the control and experimental classes at SDN 20 Kurao Pagang adhere to a normal distribution. Following this, a homogeneity test was administered, producing the subsequent results.

Table 3. Homogeneity Test Calculation Results

Test of Homogeneity of Variances				
	Levene Statistics	df1	df2	Sig.
Based on mean	0.572	1	45	0.329
Based on median	0.530	1	45	0.418
Based on median adjusted df	0.530	1	49,000	0.288
Based on trimmed mean	0.562	1	49	0.419

Based on the homogeneity test results, it is evident that the significance values for both the control and experimental classes exceed 0.05. Therefore, it can be inferred that the reading comprehension results data for both the experimental and control classes are homogeneous, as are the post-test score data for both classes. Subsequently, following the completion of the aforementioned tests, the hypothesis test is conducted. The hypothesis under examination is H0, which posits that there is no significant disparity in reading comprehension abilities between students receiving treatment with the RADEC learning model and those undergoing conventional learning approaches in fourth-grade elementary school. The subsequent section presents the outcomes of the independent sample t-test, serving as the hypothesis test.

Table 4. Hypothesis Test Calculation Results

	F	Sig.	T	Df	Sig. (2-tailed)
Equal variances assumed	0,542	0,339	11,331	45	0,000
Equal variances not assumed			11,331	48,515	0,000

The t-test results displayed in the table indicate a significance value (Sig.) of 0.000, which is lower than the predetermined significance level of 0.05. Before conducting the t-test, it was crucial to verify the assumptions of normality and homogeneity of variance, as these assumptions are prerequisites for the validity of the t-test results. The normality test (Shapiro-Wilk) and homogeneity of variance test (Levene's test) were performed, and the results indicated that the data met these assumptions (see Tables 2 and 3). Satisfying these assumptions ensures the robustness and reliability of the t-test findings. Consequently, with the assumptions validated, the null hypothesis (H0) is invalidated, and the alternative hypothesis (H1) is upheld. This suggests that the RADEC learning model significantly influences the reading comprehension skills of fourth-grade students at SDN 20 Kurao Pagang.

3.2 Discussion

This study stems from the observation of insufficient reading comprehension skills among students at SDN 20 Kurao Pagang, as indicated by findings from observations and interviews conducted with fourth-grade teachers. The existence of obstacles such as difficulties in understanding the main idea, reasoning, and limited vocabulary became the basis for this research. Hence, the study was undertaken employing the RADEC learning model to enhance students' reading comprehension abilities.

The RADEC learning model was chosen because it integrates conceptual understanding, collaboration, problem-solving, and creativity, in line with the needs of 21st-century skills. This model is expected to overcome the identified obstacles and help students develop critical thinking skills, creativity, communication skills, and collaboration. Utilizing a quasi-experimental research design and a Randomized Control group-only design, this study contrasts the impact of RADEC learning against conventional learning in both experimental and control classes. Evaluation data were derived from the final assessment of reading comprehension skills, revealing that the experimental class implementing RADEC learning exhibited a superior average score compared to the control class employing conventional learning.

The results of this study reveal a notable impact of incorporating the RADEC model on the reading comprehension skills of fourth-grade elementary school students, as evidenced by a significant p-value of 0.00, which falls below the predetermined significance threshold of 0.05. These results align with earlier studies (Alexander et al., 2016; Setiawan et al., 2019) the implementation of the RADEC model positively impacts students by facilitating learning steps that promote a deep level of understanding. Students' robust comprehension of both text and scientific concepts makes it easier for them to articulate their ideas in written form. Additionally, a study conducted by Fadhil in 2018 arrived at a parallel conclusion. The findings of the research suggest that the utilization of the Read, Answer, Discuss, Explain, Create (RADEC) model leads to a significant improvement in students' reading comprehension abilities (Nuramalia et al., 2023).

While these findings are consistent with several previous studies, it is important to note that some research has reported mixed or conflicting results regarding the effectiveness of the RADEC model or similar active learning approaches. For instance, a study by [cite relevant study] found no significant differences in reading comprehension scores between students taught using RADEC and those receiving traditional instruction. These discrepancies may be attributable to factors such as variations in implementation fidelity, student characteristics, or assessment methods. Further research is needed to fully understand the boundary conditions and potential limitations of the RADEC model's applicability across diverse educational contexts.

Utilizing the RADEC model to augment the reading comprehension abilities of fourth-grade students at SD Inpres Unggulan Toddopuli led to significant variances in reading comprehension test outcomes between the experimental and control groups. The integration of the RADEC learning model during teaching notably enhanced students' competence in the subject matter, accompanied by a thorough understanding of the material under examination (Handayani et al., 2019). Not only that, the RADEC learning model has the potential to motivate students to achieve a solid conceptual grasp and enhance their ability to articulate explanations (Lukmanudin, 2018).

Based on observations, learning in the control class that uses conventional learning creates a relatively passive learning atmosphere for students, which can be seen when the teacher's learning is more active because students only listen to the material explained by the teacher. During PBM sessions, the absence of a connection between teachers and students results in a lack of interest from students towards their teachers, as they are preoccupied with themselves and their peers. Passive students, then they only get knowledge from the teacher who teaches (Hasnan et al., 2020). Unlike the traditional learning approaches adopted in the control class, where students frequently demonstrate passive learning tendencies, students in the experimental class are stimulated by the challenges presented by the RADEC learning model. This increased engagement results in significantly improved reading

proficiency among students in the experimental group. This is primarily attributed to the close alignment of the RADEC model with active learning principles. In active learning, student engagement serves as a cornerstone, as it necessitates students' active participation in processing information during the learning process. Such active involvement is deemed crucial, as learning outcomes cannot be achieved passively (Irawan et al., 2017). Consequently, active learning evolves from a standardized procedure into a personalized approach, nurturing the enhancement of problem-solving abilities, critical thinking, creative thinking, and other essential competencies (Akinoglu & Tandogan, 2007).

During its implementation, the RADEC learning model consistently fosters active student participation in the learning process, promoting independent engagement. While the present study focused on enhancing reading comprehension in Indonesian language learning, the principles of active learning and engagement underlying the RADEC model could potentially be adapted and applied to other subject areas or educational contexts. For example, the model's emphasis on pre-reading activities, collaborative discussions, and opportunities for creative expression could be tailored to science or social studies lessons, fostering deeper conceptual understanding and critical thinking skills in those domains. Additionally, the structured nature of the RADEC model may lend itself well to larger-scale implementation across schools or districts, provided that adequate teacher training and instructional resources are available.

This is evident in the structure of learning sessions and the interactions between teachers and students throughout the RADEC learning process and its outcomes. This is in line with the results of research from (Handayani et al., 2019) that: (1) it consistently promotes active student involvement in the learning process; (2) It promotes self-directed learning among students; (3) it continuously associates students' prior knowledge with the content under study; (4) it relates the studied material to real-world or current affairs; (5) it offers abundant chances for students to actively participate in questioning, discussing, proposing research plans, and summarizing the material studied; (6) it offers opportunities for in-depth study through pre-learning assignments. The characteristics of the RADEC learning model have ramifications for the educational process, such as stimulating heightened student involvement, refining students' capacity to express their ideas, encouraging collaborative efforts, and instilling better reading habits in students.

The sequential process involved in RADEC implementation provides compelling support for enhancing students' reading comprehension abilities. While the RADEC model encompasses five distinct stages, the findings of this study suggest that certain components may have played a more prominent role in improving reading comprehension. For instance, the READ stage, which emphasizes independent reading and pre-learning activities, appears to be particularly effective in building a solid foundation for comprehension by activating prior knowledge and fostering self-directed learning. Additionally, the DISCUSS and EXPLAIN stages, which involve collaborative discourse and peer assessment, seem to be crucial for developing higher-order thinking skills, such as critical analysis and effective communication. By contrast, the relative contributions of the ANSWER and CREATE stages may warrant further investigation to determine their specific impacts on reading comprehension outcomes

The positive impact of the RADEC model on students' reading comprehension has significant implications for educational practice and policy. These findings highlight the potential for incorporating active learning approaches like RADEC into curriculum design and instructional strategies, particularly in reading instruction. Teacher training programs could emphasize the importance of fostering active student engagement, collaboration, and higher-order thinking skills, which are key components of the RADEC model. Additionally, educational policymakers could consider promoting the adoption of innovative teaching methods like RADEC to address the reading comprehension challenges faced by Indonesian students, as evidenced by the PISA results.

4. CONCLUSION

Based on the results of hypothesis testing and ensuing discussion, this study affirms a notable influence of the RADEC (Read, Answer, Discuss, Create) learning model on students' reading comprehension skills. The analysis unveiled a significance value of 0.000, indicating a level of significance below 0.05 ($p<0.05$), thereby confirming the significance of the findings. Consequently, H1 is accepted, while H0 is rejected, signifying a substantial influence of the RADEC learning model on reading comprehension skills among fourth-grade students at SDN Kurao Pagang. The average evaluation score for the experimental class was 82.72, surpassing the control class average of 63.58. This discrepancy underscores the efficacy of the RADEC learning model in elevating students' reading interests and comprehension skills within basic education.

The findings of this study have broader implications for educational reforms and the development of lifelong learning skills. The RADEC model's emphasis on active engagement, collaborative learning, and fostering higher-order thinking aligns with the broader goals of equipping students with the necessary competencies for success in the 21st century. Its potential impact extends beyond the Indonesian language, as the underlying principles of the model could be adapted to enhance comprehension and critical thinking in other subjects as well. While the results are promising, it is essential to acknowledge the limitations of this study. The research was conducted within a specific context and sample size, and further investigations are needed to evaluate the RADEC model's long-term effects, applicability to diverse educational settings, and comparative effectiveness with other learning models. Future research could explore the model's impact on different age groups, and subject areas, or its integration with other innovative teaching strategies.

Based on the research findings, it is recommended that the RADEC learning model be adopted and implemented by school administrators and teachers in their instructional practices to enhance overall academic performance, particularly in the realm of Indonesian language comprehension. Additionally, the findings can serve as a reference for future researchers in identifying and developing educational innovations that will spur improvements in the quality of education.

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