The RADEC Learning Model Improves Explanatory Text Writing Skill in Elementary Schools

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A B S T R A K

Keterampilan menulis teks eksplanasi merupakan keterampilan yang sangat penting untuk dikuasai oleh siswa sekolah dasar. Namun Sebagian besar siswa masih memiliki keterampilan menulis teks eksplanasi yang rendah. Tujuan dari penelitian ini adalah untuk menganalisis model Read, Answer, Disscuss, Explain, dan Create (RADEC) dalam meningkatkan keterampilan menulis teks eksplanasi siswa kelas V sekolah dasar. Penelitian ini menggunakan pendekatan kuantitatif dengan desain Quasi Experimental Design tipe Nonequivalent Control Group Design. Populasi dalam penelitian ini adalah siswa Kelas V SD yang terdiri atas dua kelompok. Teknik penentuan sampel yaitu purposive sampling. Metode pengumpulan data dalam penelitian ini adalah tes dengan menggunakan rubrik penilaian menulis teks eksplanasi. Teknik analisis data dalam penelitian ini adalah analisis statistik deskriptif dan analisis statistik inferensial. Hasil penelitian menunjukkan bahwa terdapat perbedaan yang signifikan keterampilan menulis teks eksplanasi antara kelompok yang menerapkan model RADEC dan kelompok yang menerapkan metode konvensional. Dengan demikian, model RADEC dapat meningkatkan keterampilan menulis teks eksplanasi siswa kelas V sekolah dasar.

A B S T R A C T

The skill of writing explanatory text is an essential skill to be mastered by elementary school students. However, most students still have low explanatory text writing skills. The purpose of this study was to analyze the Read, Answer, Discuss, Explain, and Create (RADEC) model in improving the writing skills of explanation texts of fifth grade elementary school students. This study used a quantitative approach with a Quasi Experimental Design type of Nonequivalent Control Group Design. The population in this study were fifth grade elementary school students consisting of two groups. The technique of determining the sample is purposive sampling. The data collection method in this study was a test using an explanatory text writing assessment rubric. Data analysis techniques in this study are descriptive statistical analysis and inferential statistical analysis. The results showed that there were significant differences in the skills of writing explanatory texts between the group that applied the RADEC model and the group that applied the conventional method. Thus, the RADEC model can improve the skills of writing explanatory texts of fifth grade elementary school students.

1. INTRODUCTION

Language skill is one of the essential abilities that every human should have because language is one of the media used in the communication process. In language skills there are four aspects which include the ability to write, read, listen and speak. These four aspects support each other in the process of mastering language skills. The development of language knowledge and skills in schools emphasizes the four language skills as complete and interrelated skills (Karataş & Tuncer, 2020; Lervåg et al., 2018; Miralpeix & Muñoz, 2018). Language skills have various types including structural linguistic competencies such as mastery of vocabulary and syntax as well as competencies in using language effectively in social contexts which are referred to as social communication (Ma'azi & Janfeshan, 2018; Ramsook et al., 2020; Riad et al., 2023). Language skills are very closely related to the process of communication or the process of conveying information. Communication is a daily social activity that becomes an important component and is inherent in every human. Communication can be used as a medium for receiving and sending information to other people who can done in writing or verbally (Charkaluk et al., 2019; Ilankumaran & Deepa, 2018). Written language is a manifestation of ideas or thoughts that are expressed in written form by following the rules of good and correct writing. The composition of good writing is required to follow patterns and grammar, syntax, standard choice of words, good mechanics, arrangement of paragraphs, and content so that writing does not only focus on linguistic skills, but also involves general (cognitive)

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problem-solving mental processes (Kim, 2020; Pae, 2019; Yusuf et al., 2019). Spoken language is a complex system involving listening (receptive) and speaking (expressive) skills. Language occurs in a communicative (pragmatic) context and reflects an interactive process that touches on phonological, semantic, and grammatical structures (Chou, 2018; Hulme et al., 2020). A number of studies have shown that mastery of language skills, especially children's language skills and early pre literacy, is a determining factor for future success (Merz et al., 2020; Slot et al., 2018). Mastery of language skills needs to be taught as early as possible. The language ability can be mastered through the learning process. This can be realized through language learning in schools. One aspect that is closely related to language skills, especially in conveying information in writing, is the ability to write explanatory texts. One of the writing skills that students must master is learning to write explanatory texts (Khairullah et al., 2019; Schoonen, 2019). This type of text can be found in various forms of media, such as books, articles, reports or even presentations. The goal is to provide a better understanding of a particular topic, be it in the fields of science, technology, social, or even culture. In explanatory texts, writers usually use a clear and structured organizational structure. This is done so that the reader can follow the flow of explanations logically and systematically. The structure of explanatory text can be in the form of concept definitions, process descriptions, or comparisons with other phenomena (Schoonen, 2019; Winita et al., 2020).

The explanatory writing skill is one of the important writing skills that needs to be learned by students at the Elementary School. The basic competencies of learning explanatory text can be integrated with learning that applies critical thinking skills so that they can be analyzed from a critical thinking perspective (Cahyono et al., 2019; Ebadi & Rahimi, 2018; Haerazi et al., 2020). To be able to write explanatory texts well, students need to follow several important steps, including: (1) studying the topic to be explained in depth; (2) develop the framework of explanatory text; (3) write the contents of the text clearly and structured, using sentences that are easy to understand; and (4) preparing a cover that concludes the contents of the text and provides conclusions or suggestions. The steps for writing an explanatory are setting a writing topic, setting writing goals, compiling a writing framework according to a predetermined topic, writing an explanatory text by developing a writing framework, revise the results of writing, editing, and publication. Furthermore, the core stage in writing explanations is the development of writing content based on topics and concepts within a predetermined writing framework. The post-writing stage consists of revising and reading the written results. The activity carried out in the revision activity is to improve the results of the writing as a whole, both in terms of structure and grammar, then the writing is corrected so that it is easy for readers to understand (Cheong et al., 2018; Palupi et al., 2020; Thompson & Childers, 2021). Teaching regarding the explanatory writing skill in elementary schools will usually be carried out through student-oriented learning methods, such as the use of pictures, videos, and group discussions. In addition, teachers can also provide feedback and tips to improve students' writing skills. By learning to write explanatory texts in elementary school, students will have important writing skills to help them communicate ideas and information clearly and effectively. Students need to be taught to write explanatory texts because the ability to convey information clearly and systematically is a very important skill in everyday life and in future careers. In writing explanatory texts, students must be able to organize information systematically and present explanations clearly and easily understood by readers. This skill will be very useful when students have to convey information in writing in various contexts, such as in school assignments, job applications, or other official documents.

In addition, writing explanatory texts can also help students improve analytical and problem-solving skills. In writing explanatory texts, students must be able to analyze a phenomenon or event and explain it logically and systematically. These skills can help students develop critical and creative thinking skills, which are very important in facing future challenges. Thus, teaching students to write explanatory texts can help them develop skills that are very important in everyday life. Learning to write explanatory texts provides enormous benefits for learning in elementary schools, this implies that learning to write explanatory texts is very important to be taught at the elementary school level (Keller et al., 2020; Kharisma et al., 2022). The implementation of explanatory text learning in elementary schools has not achieved optimal results. This is based on the findings of various learning problems that occur in Indonesia which include (1) material for writing explanatory texts is still new in the current learning curriculum; (2) teachers do not master the material about writing explanatory texts; (3) there is no specific model applied in learning to write explanatory texts in elementary schools (Imelda et al., 2019; Kharisma et al., 2022). The low skills of writing explanatory texts will have a negative impact on the development of students' language skills because students will have difficulty expressing ideas clearly and systematically. In addition, students will find it difficult to communicate information effectively. One of the causes of the low ability to write explanatory texts of students is the lack of focus on developing writing skills. In some countries, the education curriculum may not have enough focus on developing students' writing skills. As a result, the ability to write explanatory text may not be honed optimally. Seeing this

phenomenon, it is necessary to make concrete efforts to solve the problem of language proficiency. Educational institutions play a vital role in fostering and mastering aspects of language. Based on the results of observations and interviews with teachers at SDN Kalipang 1, it is known that there are problems in the learning process, one of which occurs in class V. The problem is related to the process of language proficiency, namely the explanatory text material in Bahasa subjects.

The explanatory text material is one of the topics of discussion or material related to students' writing abilities. It is expected that students will be able to summarize explanatory texts from print or electronic media and present these summaries using standard vocabulary and effective sentences orally, in writing, and visually. However, in practice, students have not been able to achieve these learning objectives. According to the information from the teacher of the fifth class at SDN Kalipang 1, students experienced difficulties in compiling explanatory texts. This is marked by the inability of students to express their ideas, thoughts and ideas in written form. Some students have been able to identify the structure of explanatory texts but have not been able to express these ideas using their own language in written form. The low skills of students writing explanatory texts result in students not being able to achieve learning objectives by obtaining grades below the minimum completeness criteria. Students are expected to master the skills of writing explanatory texts, especially at the 5th grade level in elementary schools, because these skills are one of the essential materials, especially in Indonesian material. However, in the implementation of learning explanatory texts in grade 5 of elementary schools, most students have not been able to fully master the skills of writing explanatory texts.

Based on these problems, it is necessary to make an effort to solve these learning problems. Writing is a complex process because it requires skills to produce symbols and signs to express feelings and thoughts so that individuals need certain strategies in planning, designing, organizing, revising, and evaluating written results. For this reason, actions that involve metacognitive abilities are needed to improve writing skills (Cer, 2019; Schoonen, 2019). One effort that can be done is to apply a learning model that is relevant to the problem. For this reason, a model is needed that makes it easier for teachers to understand the steps for writing explanatory texts correctly (Haerazi & Haerazi, 2020; Imelda et al., 2019; Kharisma et al., 2022). The learning model that can be applied is the learning model Read, Answer, Discuss, Explain and Create (RADEC). This learning model has stages that allow students to learn actively and productively so that students' explanatory writing skill increased significantly after being given learning using the RADEC model (Ramadini et al., 2021; Setiawan et al., 2019).

The steps of the RADEC learning model as follows, Read activities in the form of reading information from various sources. Answer which means answering pre-learning questions on student worksheets. Discuss in the form of group activities to discuss answers to pre-learning questions. Explain in the form of a classical explanation related to the material that has been discussed previously. Create is to generate problem-solving ideas whose end result is a product (Nugraha & Prabawanto, 2021; Sopandi, 2019). The implementation of the RADEC model is expected to improve students' ability to write explanatory texts. The element of novelty in this study lies in the population and sample used. In this study, the sample used consisted of two groups of students who were in two different schools. The experimental group consisted of 27 students from SDN 1 Kalipang while the control group consisted of 27 students from SDN Jatirejo as the comparison group. This research is very important to do in order to improve the skills of writing explanatory texts of elementary school students. This study aims to analyze the skills of writing explanatory texts by applying the Read, Answer, Discuss, Explain and Create (RADEC) learning model which can be used as an alternative learning model for teachers to improve the skills of writing explanatory texts of elementary school students.

2. METHOD

This study uses a quantitative approach to the type of experimental research namely Quasi Experimental Design with type of Nonequivalent Control Group Design. Quasi-experimental is research that compares the whole group of students who are given directions with a group that does not get directions or research that tests two or more groups that are given different treatments (Taguchi, 2018). Quasi-experimental aims to show the relationship between treatment and outcome, while the type Non-equivalent Control Group Design there were two groups, one group received treatment while the other group did not receive treatment (Krishnan, 2018). In this research design, there were two groups, namely the experimental group and the control group which served as a comparison. The experimental group was given treatment in the form of applying the model Read, Answer, Discuss, Explain and Create (RADEC) while the control group was not given any treatment. The independent variable in this study is the RADEC model while the dependent variable is the explanatory writing skill. Each group was given a pretest to determine students' initial abilities, then the experimental group was taught by applying the RADEC

model while the control group was taught by conventional methods. After that, the two classes were given a pos test to find out the students' abilities after receiving the teaching. The sampling technique used is purposive sampling while the number of samples in this study were 54 students consisting of an experimental class totaling 27 students and a control class totaling 27 students. The data collection technique used in this study was a test consisting of pretest and posttest. Pretest used to measure the students' explanatory writing skill before being given a treatment in the form of implementing the RADEC model. Meanwhile posttest used to measure students' explanatory writing skill after being given treatment in the form of implementing the RADEC model. The test used is an explanatory text writing test using an assessment rubric. While testing the validity of the instrument using content validity and construct validity. The aspects assessed in writing explanatory texts are presented as show in Table 1.

Table 1. Aspects of the Explanatory Text Writing Skill

Aspects of The Explanatory Text Writing Skill	Explanation
Accuracy of determining the main idea	Take the main sentence
	Take the last sentence
	Find problems
	Conclude the contents of the paragraph
The correct use of words in writing a summary of the content	The right choice of words
	The words are not double meaning
	Use standard words
	Use of good grammar
The accuracy of sentence structure in writing a content summary	Use sentences according to the topic
	Convey complete information
	Contains a subject and a predicate
Spelling accuracy	Punctuation suitability
	Punctuation accuracy
	The use of good and correct spelling
Paragraph accuracy	Choosing the right sentence
	Choosing the right explanatory sentence
	Paragraph cohesion (cohesion)
	Paragraph cohesion in terms of meaning (coherence)

There are two kinds of statistics used in this study, namely descriptive statistics and inferential statistics. Descriptive statistics assist summarizing the research variables in a data set to show what specifically applies to the sample. The measures of central tendency are (mean, median), standard deviation, and measures of computable parameter estimates. Inferential statistics serve to test the truth of hypotheses consisting of influences, relationships, or differences (Kotronoulas et al., 2023). The hypothesis test used is a parametric test using an independent sample t test. This test aims to determine the difference in the explanatory text writing skills of the group using the RADEC model and the group using the conventional method. The hypothesis test also uses a paired sample t-test to find out the difference in writing explanatory text skills between before and after receiving instruction using the RADEC learning model.

3. RESULT AND DISCUSSION

Result

This study aims to analyze the Read, Answer, Discuss, Explain, and Create (RADEC) model in improving the explanatory text writing skills of elementary school fifth grade students. In order to answer the research objectives, it is necessary to know in advance the description of students' explanatory text writing skills before and after being given treatment in the form of applying the RADEC learning model. The next step is to analyze the differences in the skills of writing explanatory texts between the group that applies the RADEC learning model and the group that takes part in learning without using the RADEC model. The data analyzed in this study include results of pretest and posttest of the explanatory text writing skill from the experimental and control groups. In the following, descriptive analysis data is presented on the explanatory text writing skills based on the results of pretest and posttest is show in Table 2.

Table 2. Descriptive Statistics of the Explanatory Text Writing Skill

	Mean	Median	Mode	Std. Deviation	Variance	Min	Max	Sum
Pretest of Experimental Group	64.89	64.00	56	12.954	167.795	44	88	1752
Post test of Experimental Group	77.33	76.00	68	8.735	76.308	64	92	2088
Pretest of Control Group	65.04	64.00	56	9.709	94.268	52	92	1756
Post test of Control Group	69.33	72.00	72	7.606	57.846	56	88	1872

Based on Table 2 from descriptive statistic of the explanatory text writing skill is presented in table 2, it is known that the average value of the experimental class pretest was 64.89 while the posttest average value of the experimental class was 77.33, the average difference obtained was 12.44. While the average value of the pretest control class was 65.04, while the posttest value of the control class was 69.33 the average difference obtained was 4.29.

Data Description of Pretest Experimental Group

The experimental group is a class that applies learning using the RADEC model. Pretest given to find out the students' initial skill that were carried out before the RADEC model was applied. Results data of pretest the experimental group can be seen in Table 3.

Table 3. Pretest Results of Experimental Group

Value	Category	Number of Students	Percentage (%)
90 – 100	Very High	0	0.0
80 – 89	High	5	18.5
70 – 79	Moderate	4	14.8
60 – 69	Low	8	29.6
≤59	Very Low	10	37.0

Based on data from pretest results of experimental group is presented in Table 3, it can be concluded that the results of pretest the explanatory text writing skill of the experimental group is in the low category, this can be seen based on the average value (mean) of the explanatory text writing skill of the experimental class as a whole which amounts to 64.89.

Data Description of Pretest Control Group

The control class is a class that carries out learning without applying the RADEC model. Pretest aims to determine the initial ability of control class students. Results data of pretest the control group is presented in Table 4.

Table 4. Pretest Results of Control Group

Value	Category	Number of Students	Percentage (%)
90 – 100	Very High	1	3.7
80 – 89	High	1	3.7
70 – 79	Moderate	6	22.2
60 – 69	Low	10	37.0
≤ 59	Very Low	9	33.3

Based on data from pretest results of control group is presented in Table 4, it can be concluded that the results of pretest the explanatory text writing skill of the control class is in the low category, this can be seen based on the average value (mean) of the explanatory text writing skill of the control class as a whole which amounts to 65.04.

Data Description of Posttest Experimental Group

Posttest intended to determine the explanatory text writing skill of the experimental class after receiving treatment in the form of applying the RADEC model. Results data of posttest experimental class can be seen in Table 5.

Table 5. Posttest Results of Experimental Group

Value	Category	Number of Students	Percentage (%)
90 – 100	Very High	3	11.1
80 – 89	High	9	33.3
70 – 79	Moderate	8	29.6
60 – 69	Low	7	25.9
≤ 59	Very Low	0	0

Based on data from posttest results of experimental group is presented in **Table 5**, it is known that the results of posttest the explanatory text writing skill of the experimental group is in the medium category, this can be seen based on the average value (mean) of the the explanatory text writing skill of the experimental class as a whole which amounts to 77.33.

Data Description of Posttest Control Group
The learning that was carried out in the control class was learning that applied conventional models, namely the delivery of material by means of lectures and assignments by the teacher. Posttest conducted to determine the explanatory text writing skill of control group after being given learning without using the RADEC model. Results data of posttest the control group can be seen in **Table 6**.

Table 6. Posttest Results of Control Group

Value	Category	Number of Student	Percentage (%)
90 – 100	Very High	0	0
80 – 89	High	3	11.1
70 – 79	Moderate	11	40.7
60 – 69	Low	11	40.7
≤59	Very Low	2	7.4

Based on data from posttest results of control group is presented in Table 6, it is known that the results of posttest the explanatory text writing skill of the control group is in the low category, this is reviewed based on the average value (mean) of the explanatory text writing skill of the control class as a whole which amounts to 69.33.

Normality test
The normality test aims to determine whether the data is normally distributed. Normality test data obtained from the results of pretest and posttest the explanatory text writing skill of the experimental and control groups. Normality test is done with the help of the program IBM SPSS Statistics version 25. The requirement of normally distributed data is the total of Asymp. Sig. (2- tailed) is higher than 0,05. The normality test results of experimental and control class could be seen in Table 7.

Table 7. The Normality Test Results of Experimental and Control Group

Data	Asymp. Sig. (2-tailed)	Explanation
Pretest of Experimental Class	0.200	0.200 > 0.05 = normal
Posttest of Experimental Class	0.200	0.200 > 0.05 = normal
Pretest of Control Class	0.085	0.085 > 0.05 = normal
Posttest of Control Class	0.092	0.092 > 0.05 = normal

Based on data from the normality test results of experimental and control group is presented in **Table 7** shows that the result pretest and posttest of experimental and control groups are normally distributed. Based on the results of the normality test on these data values are obtained Asymp. Sig. (2- tailed) more than 0,05. Thus, it can be concluded that the distribution of experimental and control class data is normally distributed.

Homogeneity Test
The homogeneity test aims to determine whether the data from the two samples is homogeneous. The data tested for homogeneity is the result of pretest experimental and control classes and results of posttest experimental and control group. Homogeneity test is done with the help of the program IBM SPSS

Statistics version 25. The data is said to be homogeneous if the sig. value is higher than 0,05. Based on data from the homogeneity test results of experimental and control group revealed that the homogeneity test results of pretest experimental and control groups as well posttest the experimental and control groups are said to be homogeneous because of the value Sig. both are higher than 0,05. Pretest of Experimental and Control Group results show sig. of 0,075 while the Posttest of Experimental and Control Group results showed a sig. of 0,258.

Hypothesis Test Results

Determination of the hypothesis test is determined by the results of the assumption test, based on the results of the normality test it is known that the experimental and control group data are normally distributed and the results of the pretest homogeneity test of the experimental and control group as well as the posttest of the experimental and control groups show homogeneous data. Thus, the hypothesis test used is a parametric test with a t-test which includes independent sample t-test and paired sample t-test.

Independent Sample t-Test of Pretest Experimental and Pretest Group

Independent Sample t-Test conducted to test two samples that are not related to each other. This analysis was carried out by testing the results of pretest experimental group and pretest control group using the help of the program IBM SPSS Statistics version 25. The requirement of significant data is the total of Sig. (2-tailed) is lower than 0.05. This test aims to determine differences in the explanatory text writing skill between the experimental and control group before being given treatment. The test result is show in **Table 8**.

Table 8. Independent Sample t-Test of Pretest between Experimental Group and Control Group

Data	Sig. (2-tailed)	Explanation
Pretest of Experimental Group and Pretest of Control Group	0.962	0.962 > 0.05 = not significant

Based on data from independent sample t-test of pretest between experimental group and control group is presented in Table 8, the value is known that Sig. (2-tailed) value is higher than 0.05. This shows that there is no significant difference in the explanatory text writing skill between the experimental and control group before being given treatment. It can be concluded that the explanatory text writing skill between the experimental group and the control group before learning is at the same level of ability. The experimental and control groups should ideally have the same characteristics before conducting research or being given treatment, both the experimental group and the control group had the same writing skills pretest, even if it seems that students have differences but these differences are not significant. This finding indicates that students have the same level of understanding or skills before the treatment.

Paired Sample t-Test between Pretest and Posttest of Experimental Group

Paired Sample t-Test aims to test two samples of data that are interconnected or paired. This analysis was carried out to determine differences in the explanatory text writing skill before and after being given treatment in the form of the RADEC model to the experimental group with the help of the program IBM SPSS Statistics version 25. The requirement of significant data total of Sig. (2-tailed) is lower than 0,05. Following are the results of Paired Sample t-Test of pretest and posttest of experimental group.

Table 9. Paired Sample t-Test Results between Pretest and Posttest of Experimental Group

Data	Sig. (2-tailed)	Explanation
Pretest and Posttest of Experimental Group	0.000	0.000 < 0.05 = significant

Based on data from paired sample t-test results between pretest and posttest of experimental group is presented in **Table 9**, it can be seen the value of Sig. (2-tailed) is lower than 0,05, so it can be concluded that there is a significant difference of the explanatory text writing skill before and after being given treatment in the form of implementation of the RADEC model. This shows that there is an increase in the explanatory text writing skill after applying the RADEC model.

Paired Sample t-Test between Pretest and Posttest of Control Group

This analysis was conducted to determine differences of the explanatory text writing skill of control group. This analysis examines the results of pretest and posttest control group with the help of the

program IBM SPSS Statistics version 25. The requirement of significant data total of Sig. (2-tailed) is lower than 0,05. The results of Paired Sample t-Test pretest and posttest control group is show in Table 10.

Table 10. Paired Sample t-Test Results between Pretest and Posttest of Control Group

Data	Sig. (2-tailed)	Explanation
Pretest dan Posttest of Control Group	0.130	0.130 > 0.05 = no significant

Based on data from paired sample t-test results between pretest and posttest of control group is presented in **Table 10**, it can be seen that the value of Sig. (2-tailed) is higher than 0,05. This shows that there is no significant difference of the explanatory text writing skill before and after being taught in the control group. Thus, it can be concluded that the explanatory text writing skill of the control group both before and after learning with conventional learning methods did not experience a significant increase in ability.

Independent Sample t-Test of Posttest Experimental and Posttest Group
This analysis aims to determine differences of the explanatory text writing skill between groups that take part in learning by applying the RADEC model and groups that take part in learning without applying the learning model. This analysis was carried out by testing the results of posttest experimental group and posttest control group. This analysis is carried out with the help of the program IBM SPSS Statistics version 25. Data are said to be significant when the value Sig. (2-tailed) is lower than 0,05. The results of Independent Sample t-Test of posttest experimental group and posttest control group is show in **Table 11**.

Table 11. Independent Sample t-Test of Posttest between Experimental Group and Control Group

Data	Sig. (2-tailed)	Explanation
Posttest of Experimental Group and Posttest of Control Group	0.000	0.000 < 0.05 = significant

Based on data from independent sample t-test of posttest between experimental group and control group is presented in **Table 11**, it can be seen that the value of Sig. (2-tailed) is lower than 0,05. This shows that there is a significant difference of the explanatory text writing skill between the groups that take lessons using the RADEC model and the groups that take lessons with conventional methods. Thus, it can be concluded that there is a difference in the explanatory text writing skill between the group learning using the RADEC model and the group using the conventional method.

Discussion
Implementation of RADEC (Read, Answer, Discuss, Explain, Create) model is expected to be able to improve students' explanatory text writing skill. The background to the implementation of this model is the lack of explanatory text writing skill of fifth grade at SDN 1 Kalipang. There are several steps in the implementation of this model including (1) read, students read using various sources to gather information relevant to learning material, in this activity students are given pre-questions that require students to apply High Order Thinking Skill (HOTS); (2) answer, students answer questions related to information obtained through reading activities, in this activity students are trained to be independent in answering pre-questions that have been asked before, students can also identify difficulties in answering questions; (3) discuss, students discussing pre-question answers in groups, in this activity students are trained to work collaboratively; (4) explain, students explaining the answers that have been discussed, in this activity students are trained to actively convey ideas; and (5) create, students produce a product in the form of written explanatory text in the form of students' ideas (Birhan, 2018; Kotronoulas et al., 2023).
The RADEC model was chosen because of its ease of application and the results obtained. The RADEC model is a learning model that is easy to understand and its application can help students acquire 21st century attitudes, knowledge, and various skills (Sopandi, 2019; Sopandi & Handayani, 2019). In addition, the RADEC model is in accordance with the current learning characteristics that require high order thinking processes and the use of various learning resources. The application of the current curriculum wants a learning process that is able to develop all the abilities and potential of students that are useful for a better life including affective, cognitive, and psychomotor. Furthermore, there are various kinds of sources of information that can be used both in the form of print and digital media (Haerazi & Haerazi, 2020; Ramadini et al., 2021). The sample of this study consisted of two groups, SDN 1 Kalipang as an experimental group with a total of 27 students and SDN Jatirejo as a control group with a total of 27

students. The experimental group is a group that receives treatment in the form of teaching using the RADEC model. While the control group is a group that is taught using conventional methods. The pretest is given to find out the students' initial explanatory text writing skill then after that students are given learning by applying the RADEC model. In the next stage, students are given a posttest to find out the students' explanatory text writing skill after being given treatment. Based on the descriptive analysis, it is known that the pretest result of the explanatory text writing skill of the experimental group is in the low category. While the posttest results of the explanatory text writing skill the experimental group is in the medium category. This indicates that there is an increase in the explanatory text writing skill after the implementation of the RADEC model to the experimental group (Ramadini et al., 2021; Setiawan et al., 2019).

As a comparison, pretest and posttest also given to the control group to determine the explanatory text writing skill of students who apply conventional learning with the lecture method. Pretest is given to determine the students' initial ability, then posttest is given to determine the students' explanatory text writing skill after teaching. The results obtained from descriptive analysis are pretest results of the explanatory text writing skill of the control group was in the low category, while the posttest results of the explanatory text writing skill of the control class was in the low category. This indicates that the students' explanatory text writing skill using conventional methods does not experience a significant increase of skill. Based on the results of hypothesis testing, it is known that the implementation of the RADEC (Read, Answer, Disscuss, Explain, Create) learning model can improve the students' explanatory text writing skill. This is based on the results of the analysis of the explanatory text writing skill of the group that applied the RADEC model which experienced an increase while the group that applied the conventional method did not experience a significant increase of the explanatory text writing skill. So that the implementation of the RADEC model can be used as an alternative learning model that can be applied to write explanatory texts. The implementation of the RADEC model has several advantages including the RADEC model being able to increase students' learning interest in participating in the learning process. In addition to increasing the explanatory text writing skill, the implementation of the RADEC model can also improve students' critical thinking skill as the results of research conducted by previous study state that the implementation of the RADEC model is able to increase the students' critical thinking skill in science learning (Pratama et al., 2019; Satria & Sopandi, 2019).

In practicing, the RADEC model is able to improve students' high-level thinking skills. The implementation of the RADEC model was able to increase students' High Order Thinking Skill (Handayani et al., 2019; Lestari et al., 2021). Critical thinking skill is one of the five skills needed in 21st century learning including critical thinking, collaboration, communication, creativity, and character (Haerazi & Haerazi, 2020; Motallebzadeh et al., 2018). Mastery of 21st century learning skills is absolutely essential at this time along with the massive development of information technology. The achievement of learning objectives is influenced by many factors including internal factors and external factors. The interest factor plays an important role in determining the achievements in learning. Interest in reading is one of the factors that influence students' writing skill and critical thinking. Previous research findings show that the RADEC model can improve students' writing skills of explanatory text (Nurzaiyanah et al., 2021). These results are in accordance with the results of this study which show that the application of the RADEC learning model can improve the skills of writing explanatory texts of fifth grade elementary school students.

The implication of this research is to contribute knowledge related to the application of the RADEC learning model in improving the explanatory text writing skills of fifth grade elementary school students. In addition, this study also provides a comparison of the skills of writing explanatory texts of elementary school students applying the RADEC learning model and learning using conventional methods in the form of lecture methods. Although the application of the RADEC learning model has the potential to improve students' explanatory text writing skills, there are several limitations that need to be considered in research, namely research related to the application of the RADEC learning model is still limited in number. Although there are several studies showing positive results, more extensive and in-depth research is needed to confirm the effectiveness and generalization of this model. More research is needed involving a larger and more diverse sample so as to provide a better understanding of the extent to which the RADEC learning model can improve students' writing skills of explanatory text. This study only focuses on improving students' writing explanatory text skills without paying attention to external factors that can influence. It is important to consider external factors in further research by taking into account the relevant control variables. The advantage of this research is that it uses a varied sample consisting of groups with different cultural backgrounds. In addition, this study used a Quasi-Experimental Design approach, type Nonequivalent Control Group Design, which consisted of two groups, namely the

experimental group and the control group as a comparison so that researchers could carry out evaluations by carefully measuring the dependent variable.

4. CONCLUSION

The explanatory text writing skill is one of the essential skills that needs to be mastered by students at the elementary school level because by mastering this skill, students will be able to develop metacognitive abilities. One model that can be applied to improve students' explanatory text writing skills is a model RADEC (Read, Answer, Disscuss, Explain, Create). Based on the analysis of the students' explanatory text writing skill, it is known that the implementation of the RADEC model has implications for the learning process including (1) the RADEC model is able to improve the students' explanatory text writing skill, (2) the RADEC model can develop students' higher order thinking skills.

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