

The Effect of the RADEC (Read-Answer-Discuss-Explain-Create) Learning Model on the Reading Comprehension Skills of the Fifth Grade Elementary School Students

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Abstract. The problem that occurs in the process of reading comprehension is the lack of precise application of the learning model. The purpose of this study was to determine the differences in the learning outcomes of students' reading comprehension skills using the RADEC model. This study uses a quantitative approach to the pre-experimental method, one group pre-test post-test design. In this study involved 18 students who were taken by random sampling. Data collection is done by providing a test instrument. The post-test data in this study was not normal, so using the Wilcoxon test, the result was that the Asymp sig (2 tailed) value was 0.000 < 0.05. The conclusion is that there is an effect of using the RADEC learning model on reading comprehension skills.

Keywords: Reading Comprehension, RADEC Learning Model, Elementary School.

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INTRODUCTION ~ The era of the Industrial Revolution 4.0 has progressed a lot, especially in the field of ICT (Information and Communication Technology) which is very useful in improving the quality of education (Ustundag & Cevikcan, 2018). This is marked by the change of the 2013 curriculum that leads to 21st century skills, namely training students to be able to think critically, creatively, and innovatively. According to Daryanto and Karim (Fitriani & Hartati, 2020) competencies that must be achieved in the 21st century are the ability to think critically, solve problems, and collaborate. In line with that, Satria & Sopandi (2019) said the same thing that the skills that must be possessed in the 21st century are critical thinking skills, creative thinking, collaboration, communication, and problem solving skills. Therefore, education in the 21st

century requires teachers, students, especially parents to be technology literate and use communication media efficiently, think critically, be able to solve problems and be able to work together. This can prepare a generation of Indonesians who master information and communication technology in social life. The implication is that schools in Indonesia require that all education providers must be able to master ICT literacy (Syahputra, 2018) because education is an opportunity to overcome imbalances in life (OECD, 2017).

As we know, 21st century skills can be realized if the Indonesian generation is able to develop interest and talent in reading. Reading is a language skill that is very important for us to master, by reading we can add insight and information globally. According to Rahman, et al (2020) reading is a very

effective effort in increasing knowledge. Reading activities can shape personality if the material we read can be understood. Slavin, et al (2014) explained that reading is a very important process in learning activities because student success in school begins with student success in reading. However, the facts found are that there are still students who cannot read. This has been studied by Pratiwi & Ariawan (2017) which proves that students find it difficult to read properly. Furthermore, research on the level of difficulty in reading comprehension in students is that students are unable to understand reading material and the meaning and meaning of something as well as difficulty in remembering the contents of Tusfiana & Tryanasari (2020). Based on the results of the OECD survey on PISA (2018), it says that 30% of Indonesian students who are proficient in reading are at level 2 with an OECD average of 77%. The indicator in the assessment is that at least the student can find information based on explicit criteria, identify the main idea in the reading text. Meanwhile, there are students who reach level 5 or 6 in the OECD average of 9%. At this level, students are able to understand abstract concepts, students can understand long texts. Indonesia scored 371 in the reading aspect with an average of 487 from 72 countries.

As explained by Kim & White (2011) problems that arise in the reading process are caused by school programs that do not adapt to the environment, the lack of appropriate and interesting books and the occurrence of socio-economic inequalities. Another opinion was also expressed by Boonen, et al (2016) which stated that the problems in using inappropriate strategies and difficulties

in interpreting the meaning of words in reading texts. One way to solve this problem is to apply a contextual approach. The researchers explain that traditional societies conceptualize reading only as a cognitive process limited to the ability to decode symbols and construct meaning. However, when viewed in another context, reading skills present very broad information. Reading when viewed in a social context, presents a form of habit formation. It can be said that when students are forced to read, they stay away from it, but when it becomes a habit, they are willing to read as much as possible (Singh, n.d.)

Basically, success in reading comprehension skills is determined by various factors in the process of learning to read, for example the application of good reading methods so that they can understand every word that is read. Therefore, teachers must play an active role in applying reading comprehension skills (Nurfitriana & Heryatun, 2018). There are many efforts that we can do so that students are active in reading, namely designing learning strategies by approaching students (McKeown, et al, 2009). According to (McLaughlin, 2012) teachers must be able to teach students to become active readers and successfully understand texts. There is a lot of knowledge that a teacher must know about how to act according to the demands of the curriculum (objectives, materials, processes, and evaluation of learning), both regarding the planning, implementation and evaluation of learning). Likewise, many skills must be mastered in order to be skilled at acting as a teacher. Another important thought is the need for the attitude of a teacher to be willing to apply the knowledge and skills

he has mastered in carrying out his duties as a teacher. Learning strategies and activity designs can be given concretely to improve students' meaning construction skills. Teachers can also involve students in knowing reading comprehension skills according to strategies, making approaches, asking questions, and providing support for individual students (Kırıkkale University & Kuşdemir, 2020).

The low level of teacher conceptual knowledge about innovative learning and assessment as well as how to teach well shows that teacher implementation in

LITERATURE REVIEW

Reading Comprehension

Mc Master, Espin, & Van den Broek (2014) explain that reading is a process to gain insight and knowledge of meaning dynamically that involves the reader being able to understand the content of the reading. Furthermore, reading comprehension is a process of understanding the content in the reading (Nurazizah et al., 2019). Reading comprehension skills are very important in every subject so that students are able to understand the contents of the reading and get information on the books they read (Pohan, et al., 2021). In the process of learning to read, there are several standards that must be studied according to Abidin et al., 2021, namely the standard of main ideas and explanations, works and designs, consolidation of concepts and insights as well as the range and level of reading difficulty. The purpose of reading comprehension according to Samsu Somadoyo (2011) is to obtain details and information, main ideas,

designing learning is not optimal. Although teachers claim to have attended training and are able to apply it in lessons, they tend not to reflect pedagogical principles (Sopandi & Handayani, 2019). Teachers should also be able to try various learning models in applying reading comprehension skills, one suitable model is the RADEC learning model that meets 21st century skills, namely students can think critically and creatively, communicate, collaborate and be able to solve problems. The syntax of the RADEC model is very easy to apply in learning activities because the syntax is very easy to understand.

conclusions, reading structure, grouping and to compare. Thus it can be interpreted that reading comprehension is a reading activity that aims to understand the content, meaning, concepts and information contained in the reading.

According to Rahman (2020) there are three important elements in reading comprehension, namely: Knowledge of the world to understand new things, recognizing various structures of the text being read, actively seeking the meaning of the text. Furthermore, there are three main components of reading comprehension (Rahman, 2020) namely explaining reading, lexical access (giving meaning to printed words that someone thinks about, and reading organizations to get a bigger meaning from small units, for example in one word.

There are four levels of reading comprehension according to Dalman (Rahman, 2020) namely literal

understanding which is the first level of understanding in understanding clear and not difficult information, inferential understanding which understands information in reading that is conveyed indirectly, critical understanding is understanding skills in evaluating material in reading, and creative understanding is the last level of understanding which is a reading skill at the highest level that involves the reader to use his imagination in obtaining new ideas or ideas after reading.

According to (McLaughlin, 2012) there are 10 principles that can be applied by teachers in the process of learning reading skills, among others, teachers must know the nature of reading comprehension which is socially constructivist, understand the role of students in the process of reading comprehension, teachers must read professionally in order to influence the process of learning to read. students, motivating and involving students, teaching reading comprehension, vocabulary development, providing various kinds of reading according to the type and level of students, asking students to respond to readings, evaluating student work, and teaching students to critically understand reading according to reading level.

Based on the explanation above, it can be concluded that reading comprehension is a skill process in understanding reading to obtain information, knowledge and experience, ideas, meanings of words that are difficult to understand, and can conclude a reading.

RADEC Learning Model

In 2017 at an international conference in Kuala Lumpur, Malaysia Prof. Dr. Paed Wahyu Sopandi, M. A first introduced the RADEC learning model which stands for Read, Answer, Discuss, Explain, and Create (Rohmawatiningsih et al., 2021). The development of this model is in accordance with environmental conditions in Indonesia.

Radec learning was developed based on Vygotsky's theory of social constructivism which is the center of the cognitive approach and theoretical basis, especially in terms of intelligence and social development (Heo et al., 2011).

According to Pratama, et al (2019), this theory is known by actual terms such as the level of development, the level of potential development and the Zone of Proximal Development (ZPD).

The implementation of the stages of the RADEC learning model according to (Sopandi, 2017) are:

Table 1 RADEC Syntax

Number	RADEC syntax	Activity
1	Read (R)	Students are given information about the learning topics that will be discussed, then students are asked to look for other learning materials outside the material that the researcher has provided. Students can search for it from other books or the internet.
2	Answer (A)	At the Pre-Learning stage students are given five questions related to the material to be studied and then students answer the questions that have been given. The questions are given in stages from LOTS (Lower Order Thinking Skill) questions to HOTS (Higher Order Thinking Skill).
3	Discuss (D)	Students in groups discuss the results of the answers to pre-learning questions that they have answered in the ongoing learning activities. The discussion was monitored by the researcher assisted by the class teacher concerned. In this stage students can complement each other and exchange information about the right answer.
4	Explain (E)	Students make group presentations regarding their understanding of the material presented based on the pre-learning questions that have been given. Presentation activities are represented by one group member who already has a good understanding of the ongoing learning context regarding the material being discussed, namely reading texts. Other students in the group can add other explanations about the topic being discussed. This is done so that all group members can actively participate in presentation activities. Then students from other group members are given the opportunity to ask questions, add to or refute statements from the group presentations that have made presentations. If necessary, at this stage the teacher provides explanations or reinforcement of material regarding things that are not or are still difficult for students to understand.
5	Create (C)	Students are given the opportunity for students to create a work on the material that has been discussed. At the create stage, students are invited to be able to think creatively in <u>making their own work.</u>

In Table 1.1 are the stages of learning the RADEC model carried out by researchers in the process of learning activities. Students are also able to practice in developing reading skills to understand reading content through the RADEC model. With the Discuss and Explain stages in the syntax of the RADEC learning model, students will try to think critically according to the context and are also able to develop reading comprehension

understanding. This can be observed in the learning activities that have been carried out and the researchers made direct observations when students had group discussions which were then continued at the Explain stage through presentations. The existence of the development of student interest in reading, this was also reinforced by the statement of the class teacher who stated that with the Discuss and Explain stages

in the RADEC learning model students were able to communicate the results of discussions in the context of presentations with high confidence. Even though in learning activities.

METHOD

This study uses a quantitative approach with a pre-experimental method which is a design of one class group that is given a pre-test and post-test. This one group pre-test post-test design was carried out without a control group or without a comparison group.

This study involved 18 students of class V SDN Paya Keutapang, Sungai Raya District, East Aceh Regency, which were taken by random sampling. In this study,

there are two variables, namely the dependent variable (reading comprehension ability) and the independent variable (RADEC model). Data collection is done by giving a test in the form of a description question that contains five questions. At the pre-test stage, the teacher gave five questions to determine the extent to which students were able to understand the reading before being given treatment. After being given treatment using the RADEC model, students were given a post-test to determine the level of success of students in reading comprehension skills. The questions are made according to the reading comprehension indicator. The indicators as follows:

Table 2 Indicators of pre-test and post-test

Number	Reading Comprehension Indicators	Question of numbers
1	Understand and pronounce vocabulary correctly	1
2	Name the characters in the reading correctly	2
3	Use the right choice of words and do not contain double meanings	3
4	Making the gist of the reading text	4
5	Retelling the content of reading	5

RESULTS

Based on the results of the pre-test analysis in class V obtained an average value of 66.11. These results indicate that the initial state of students before being given treatment had less ability, meaning that students had not been able to understand the reading. Furthermore, a posttest was given to determine the level of students' understanding in the process of reading comprehension using the

RADEC model. Based on the post-test results, it was found that there was an increase in reading comprehension skills. This can be seen from the average post-test score in class V of 81.39. From these results, we can see that there is an increase in students' abilities in the learning process of reading comprehension using the RADEC model.

In this study, the researcher used the normality test as a prerequisite test for

determine the achievement of the objectives in this study. The following

are the results of the normality test in this study:

Table 3 Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
Pre-test	.228	18	.014	.857	18	.011
Post-test	.169	18	.189	.937	18	.253

Lilliefors Significance Correction

Table 4 Test Statistics^a

	Post-test - Pre-test
Z	-3.536 ^b
Asymp. Sig. (2-tailed)	.000

Wilcoxon Signed Ranks Test Based on negative ranks.

H₀ is accepted if the sig value of both classes is > 0.05. Based on the table above, the value. Criterion H₀ is accepted if the value of sig > 0.05, based on the table above the value of sig = 0.00 < 0.05 then H₀ is rejected, meaning that there is an effect of the RADEC model on the reading comprehension ability of grade V students. of sig = 0.011 < 0.05 and 0.253 > 0.05 because one of them < 0.05 then H₀ is rejected, meaning that the data is not normally distributed. Because the data distribution is not normal, the researchers used the Wilcoxon test.

Test Hypothesis

H₀ = There is no effect of the RADEC model on the students' reading comprehension ability in class V

H₀ = There is an effect of the RADEC model on the students' reading comprehension ability in grade V

DISCUSSION

The use of the Radec learning model gives good results in the development of learning in students. This can be seen in the steps of the RADEC learning model which is designed to create students who are able to think critically in answering questions, confident in conveying ideas or ideas and active students can create good social interactions between teachers and students and students with students. This can be seen from the research researched by Fadhil Khaerul, 2018 entitled "The Influence of the Radec Model on Reading Comprehension in Class IV Students of Sdn Ballewe, Balusu District, Barru Regency" obtained the results that the application of the RADEC learning model was very effectively used to improve students' understanding.

Furthermore, the results of another study on the "RADEC Learning Model in the Perspective of Vygotsky's Constructivism.

Philosophy" showed that constructivism theory was in accordance with the syntax of the RADEC learning model, namely the occurrence of a cognitive maturation process which is a student learning stage starting from Read, Answer, Discussion,

Explain, and Create. which serves to increase knowledge and make it easier for students to adapt to the environment (Kusumaningpuri, R. A & Fauziati Endang, 2021

Table 5

	N	Mean Rank	Sum of Ranks
Post-test - Negative Ranks	0a	.00	.00
Pre-test Positive Ranks	16b	8.50	136.00
Ties	2c		
Total	18		

- a. Post-test < Pre-test
- b. Post-test > Pre-test
- c. Post-test = Pre-test

CONCLUSION

Dr. Paed Wahyu Sopandi, M. A. is a lecturer at the Indonesian Education University who has developed the RADEC learning model as a learning model which in its development pays attention to several aspects, one of which is the socio-cultural aspect. The RADEC model which in its learning stage focuses on students and makes the teacher a facilitator and inspiration in generating ideas to create interactions between teachers and students. The RADEC learning model is expected to be able to compete in 21st century skills so that it can improve the quality and quantity and realize the ideals of Indonesian education. From the findings of the implementation of the RADEC model in Indonesian subjects for fifth grade students at SDN Paya Keutapang, Sungai Raya Regency, it can be said that the RADEC learning model is effective in training students' reading comprehension skills.

With the increase in students' reading comprehension skills, this proves that the requirements of 21st century learning have been maximally fulfilled, where learning is student-centered. Based on the results of the study, researchers expect teachers to try to apply the RADEC model in learning activities. The RADEC model can be applied to a variety of subjects.

In this study, the number of samples was insufficient in implementing the RADEC learning model that had been carried out,, the conclusions that exist cannot be generalized. So that further research is needed so that the results of implementing RADEC can be further validated.

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