Effectiveness of PBL Learning Model with Letter Card Interactive Media Approach in Improving Reading Skills of Grade II Learners in Elementary School

Tasya Nur Azzahra[1], Arum Fatayan[2]

[1,2] Elementary School Teacher Education (Faculty of Teacher Training and Education)

Corresponding Author: *tsynurazzahr.13@gmail.com*

Abstract

Elementary schools still have many problems, such as the need for more effectiveness in using models and media to improve reading skills. This study aims to determine the efficacy of a problem-based learning model with a letter card interactive media approach in enhancing the reading skills of grade II students. Type of research: Pre-experiment with a quantitative approach. The research design is One Group Pretest-Postest. The population of this study was all grade II students; 28 students of class II A were selected using the nonprobability sampling technique, a purposive sampling approach. Pre-tests and post-tests were given to determine the level of reading skills. The data collected was processed by paired sample t-test and effect size because the data was expected. This study concludes that using a problem-based learning model with a letter card interactive media approach is practical enough to improve reading skills in grade II. The sig value. 0.000 <0.05 indicates a difference before and after treatment, and the effect size test result is 0.298 with a reasonably effective category. Therefore, it is stated that the initial hypothesis is rejected, and the alternative hypothesis is accepted.

INTRODUCTION

Shaping human personality to have a good character, intelligence, responsibility, creativity, or broad insight to support their lives requires meaningful learning. Meaningful learning can be obtained through education. Education is a tool to create a quality society or generation of nations. To make it happen, the first thing that must be considered is to improve the quality of learning at school. Learners can increase their potential with good learning. The potential of learners can be in the form of skills or insights. Elementary school is the first level of education that plays an initial role in developing students' potential. Primary school is the initial stage for all learners to develop their skills. The initial skills that need to be created by learners at the primary stage are language skills, which include reading, listening, writing, and speaking. In developing knowledge at school, primary school students should have reading skills. Reading is one of the indicators of success in education. (Dhari et al., 2022; Utami & Yanti, 2022)

To create good reading skills, it must be developed from the beginning of entering grades I and II of elementary school. With

ideal conditions according to Jeanne Chall (Olivia & Komalasari, 2023) revealed the stages of reading development that grade I and II children have are at the Chall 1 stage: Decoding, and Chall II stage: Confirmation and Fluency. Children aged 6-7 years at the Chall I stage can already recognize the relationship between letters and theirsounds and unite letter sounds to form a word. At the Chall II stage, aged 7-8 years, children can read and recognize words more accurately and understand the content of reading.

Based on the reality in elementary schools, many grade II students cannot read, which is influenced by students still not knowing letters well. The second problem is the need for more habituation to reading practice. The third problem is that classroom learning needs to use models and media that make learning more interactive by involving students; the learning model used fails to encourage students to participate actively in the learning process. The causal factors described align with Anwar's opinion (Novelita et al., 2023) which states that the factors that influence the development of students' reading skills are learning provided by teachers, social environment, student's background, and supporting facilities. Lack of reading skills can produce sustainable negative consequences for social life, such as learners having difficulty communicating with the surrounding environment. Then, learners will experience problems in the academic process of acquiring knowledge. Rahmatika (Novelita et al., 2023)

Researchers limit the problem to 'The Effectiveness of PBL Learning Model with Letter Card Interactive Media Approach in Improving Reading Skills of Grade II Learners in Elementary Schools' In this study, researchers want to know the effectiveness of interactive media in improving students' reading skills.

Problem-Based Learning (PBL) is a learning model that prioritizes learning based on problems, and students are actively involved in solving these problems. (Alfrid Sentosa & Norsandi, 2022; Sulaiman et al., 2023) In addition, this model has characteristics. Namely, a problem is presented in learning; the learning encourages students to participate actively. In addition, this learning model encourages learners to interact with friends, teachers, and their environment (Widiasworo (Ardianti et al., 2022; Hadi (Hayanah et al., 2019). The PBL model has the advantage of honing critical thinking skills in solving existing problems, and students can apply the results of solving these problems in the real world. (Sanjaya (Hotimah, 2020); Masrinah (Fadilah et al., 2023)). As for implementing the Problem-Based Learning model, 1) Problem orientation to students. 2) Organising students. 3) Guiding individual or group investigations. 4) Presenting results. 5) Evaluating the process and the results of problem-solving. (Trianto (Hotimah, 2020); Gallagher (Manggalastawa & Nugraha, 2020)

In solving these problems, students will be directed to read various learning sources and think critically to analyze problem-solving (Fadilah et al., 2023) In addition to using learning models, another thing that can support the improvement of reading skills is the use of interactive learning media. The use of interactive learning media is a variation in increasing motivation, enthusiasm, and interest in learning, and learning media also aims to clarify the information provided so that it can achieve learning objectives maximally. (Dhari et al., 2022; Kustandi & Daddy, 2020; Rosi'a & Al Ghozali, 2021.)

Letter cards are a medium that helps with learning. The card contains symbols of each alphabet or letter. Letter cards make it easier for students to recognize letter shapes, remember letters, and distinguish each letter (Salawati & Suoth, 2020; Hasan (Tobing et al., 2022); Ulfa, 2023). Letter cards can be found and made easily, namely by using small paper, making it easy for learners to arrange each letter to form the desired vocabulary, and letter cards can be used anytime (Subli, 2021;Ariyanti & Pradana, 2023; Wen et al., 2020). Letter cards as learning media have benefits that not only help students' intellectual intelligence, such as remembering letters, distinguishing the shape of each letter, improving students' reading skills, and adding vocabulary. However, letter cards provide problem-solving benefits and can build active and interactive learning activities. (Ulfa, 2023; Satriana (in Mau et al., 2022); Samekto S. Sastrosudirjo (Mardi et al., 2022)).

Reading is the skill of understanding every letter, word, and sentence in writing to produce a meaning that can solve problems and provide information as a form of communication. (Rafika & Madiun, 2020; Subli, 2021) Reading can improve speaking skills because reading can increase vocabulary, expand understanding of concepts, knowledge, and information, and increase creativity in learning or other things in everyday life (Romero-González et al., 2021; Syamsuddin, 2021).

In conducting research, the author has things that will be differentiated from previous research. The subject to be used is Pancasila education, the independent variable used is the problem-based learning model assisted by letter card interactive media, the dependent variable used is reading skills, the sample used by the author is grade II students, and the location used.

In addition, the implementation of this study will be supported by relevant research from previous researchers who stated that the use of letter card media in learning could improve students' reading skills (Andriana et al., 2022). In line with other research, there is a large increase in students' reading ability at the end of cycle III (Subli, 2021). Other research also supports this, stating that letter card media can increase enthusiasm for learning and learning outcomes (Winarni, 2022). In addition, problem-based learning models are more effective in honing critical thinking skills (Poerwanti et al., 2022). Other research states that applying the PBL model has a positive impact. Students can be actively involved in solving each problem, and using this model can improve students' skills and understanding of learning (Ahmad et al., 2023). Other researchers also stated that problem-based learning models effectively increase student participation and can achieve better learning outcomes (Paratiwi & Ramadhan, 2023).

The research that the author wants to carry out aims to know the effectiveness of the PBL learning model with an interactive letter card media approach in improving the reading skills of grade II students. This research is expected to provide benefits in improving reading skills, becoming a model and reference media that can be used effectively in improving reading skills.

RESEARCH METHOD

This study used a quantitative approach, pre-experiment type, with one group pretest-posttest design. This design has only one experimental group without a control group. The group will be given a pretest to determine the initial state and a posttest to measure the final state after treatment.

The study population was all grade II, and sampling was done using a non-probability sampling technique, a purposive sampling approach. The sample taken was class II A, with 28 students. The instrument used to measure reading ability is an Essay test. The test will be conducted in two stages: pretest and posttest. The instrument will pass the Pearson Product Moment validity test, and reliability will be assessed using the Cronbach Alpha Coefficient assisted by Microsoft Excel.

Data analysis techniques in this study used descriptive and inferential statistical tests. Before testing the hypothesis, a data normality test is carried out, which helps see whether the data used by researchers is normal. Statistical hypothesis testing in the study will use a paired sample test assisted by the *IBM SPSS 25* application. This test is used to conclude the formulation of the problem. After carrying out the t-test, the effect size test will be applied to measure the effectiveness of using interactive learning media letter cards.

RESULT AND DISCUSSION
Initial Test Result

Before carrying out the treatment, the researcher distributed a pre-test. The pre-test was given to measure students' reading skills. The pre-test results of class II A students can be seen in Table 2

Table 2. PreTest Data

Score	Frequency	Category
85-100	5	Very High
75-84	9	High
65-74	9	Moderately Low
45-64	4	Low
0-44	1	Very Low

Based on the pre-test data in Table 2, it can be seen that students with scores 0-44 in very low category have a frequency of 1. 45-64 scores in the low category have a frequency of 4. 65-74 scores in the moderately low category have a frequency of 9. 75-84 scores in the high category with a frequency of 9. 85-100 scores in the very high category with a frequency of 5.

After giving treatment, the researcher distributed posttest questions. Posttests are given to measure students' reading skills after treatment with a problem-based learning model assisted by letter card interactive media. The posttest results of class II A can be described in Table 3.

Table 3. Post Test Data

Score	Frequency	Category
85-100	21	Very High
75-84	7	High
65-74	0	Moderately Low
45-64	0	Low
0-44	0	Very Low

Based on the post-test results data in Table 3, it can be seen that students with scores 0-44 in the very low category have a frequency of 0. 45-64 scores in the low category have a frequency of 0. 65-74 scores in the moderately low category have a frequency of 0. 75-84 scores in the high category have a frequency of 7. 85-100 scores in the very high category have a frequency of 21.

The mean value of Pretest is 73.79. The standard deviation value (Std. deviation) is 12.115. The minimum and maximum values are 40 and 93, and the variance is 146.767. For the Posttest, the average value is 89.96. The standard deviation value (Std. deviation) is 4.483. The minimum and maximum values are 76 and 100, and the variance is 42.036. The average value of the Pretest is 73.79 < Posttest was 89.96, so descriptively, it can be concluded that there is a difference in the average outcomes of the Pretest and Posttest.

After data collection, researchers carried out a prerequisite test in the form of a normality test. This test determines whether the data comes from a normally distributed population. This is a determinant for continuing the test with parametric statistics. Normality testing on this data uses Shapiro-Wilk because the sample used does not have more than 30 samples. Data is normally distributed if the significance > 0.05; if the importance < 0.05, the data is not normally distributed. The normality test is shown in Table 4.

Table 4. Normality Test

		Shapiro Wilk		
		statistic	df	Sig.
Reading PreTest	Skill	,959	28	,333
Reading PostTest	Skill	,931	28	,065

Based on table 4. The normality test results show the pretest significance value of 0.333 (0.333> 0.05) and posttest 0.065 (0.065> 0.05). It can be concluded from the sample data obtained that the distribution is normal because the significance level is> 0.05. So, after fulfilling the prerequisite test, researchers used a parametric test in the form of a paired sample test to test the hypothesis.

Final Test Result

Furthermore, researchers conducted a t-test hypothesis test. This test was carried out to see whether the PBL learning model with an interactive media approach to letter cards

effectively improved the reading skills of grade II students in elementary schools.

As for the basis for decision-making, if the significance value (Sig.) <0.05, then H0 is rejected, and Ha is accepted. If the significance value (Sig.) > 0.05, then H0 is accepted, and Ha is rejected. In addition, the basis for decision-making can be seen through the t-count value with the t-table. If the calculated t value is> than the t table value, hypothesis o (Ho) is rejected. If the calculated t value is < than the t table value, hypothesis o (Ho) is accepted. The t-test results are attached in Table 6.

Table 6. Paired Samples Test

	Mean	df	Sig. (2-tailed)
PreTest			
	-16,179	27	,000
PostTest			

Based on Table 6 of the Paired Sample T-Test results, it is known that the significance value is 0.000. According to the decision-making provisions, if the significance of 0.000 <0.05, Ho is rejected, and Ha is accepted. So, there is a significant difference between the test results before and after using the PBL learning model and the letter card interactive media approach.

In addition, decision-making can be seen by comparing the value of the t count with the t table. Table 6 shows the value of the t count (8.580) and the t table (2.051). So, it can be concluded that (8.580) > (2.051), meaning that there is a significant difference in test results before and after using the PBL

learning model with an interactive media approach to letter cards.

Researchers also conducted an effect size test, which helps know how effectively using a problem-based learning model (PBL) with an interactive media approach to letter cards improves the reading skills of grade II students. The result obtained is 0,298. The resulting effect size is included in the moderate category if given a category based on the classification table.

This discussion will describe the results of data analysis, namely the normality test, pretest and posttest results, and paired t-test, as well as the results of the instrument

test obtained after testing validity and reliability. The instrument used in the study was an essay test question with 15 questions. Ten questions were declared valid after carrying out the validity test, so the researchers used these ten questions for the pretest and posttest. Researchers also conducted a question reliability test, and the results obtained from the test were in the high category, namely 0.782; this value exceeded the decision-making provisions of 0.600. The research instrument is reliable or meets the requirements.

After the research data is obtained, the researcher conducts a data normality test to determine whether the sample data is usually abnormally distributed.

Researchers conducted a normality test using the Shapiro-Wilk test because the sample was less than 30. The results obtained from the normality test are normally distributed data, so researchers can continue testing with parametric statistics to provide answers to the formulation of the problems given.

Based on the research results at the elementary school in class II A, there was a significant difference before and after the treatment, as seen through the average value of the pre-test reading skills of 73.79 and the post-test of 89.96.

A paired sample t-test was conducted to test the research hypothesis. This test helps answer the research hypothesis: "There is a significant difference or not between the test results before and after the use of the PBL learning model with the letter card interactive media approach." The t-test found that Ho was rejected, so the alternative hypothesis, Ha, was accepted. This proves a significant difference between the test results before and after using the PBL learning model with an

interactive media approach to letter cards. This is also supported by the t-count value of 8.580> 2.051 (t table); it can be concluded that Ho is rejected. Based on the results of the hypothesis test, using the PBL learning model with an interactive media approach to letter cards effectively improves the reading skills of grade II students in elementary schools.

The effect size test shows that the use of the PBL learning model with an interactive media approach to letter cards improves reading skills by 0.29 based on the classification table in the medium category. Thus, the use of the PBL learning model with an interactive media approach to letter cards is convincing enough to improve the reading skills of grade II elementary school students.

The improvement of reading skills is seen through several aspects of assessment, which are a reference in the pretest and posttest assessments given to students. The first assessment aspect is seen based on the skills of students stringing letters, words, and sentences to form writing that has meaning; the second assessment aspect is seen based on the skill of understanding the meaning of a story or reading, and students can answer questions correctly, and the third assessment is seen through the skills of students in recognizing letter patterns, both the difference between one letter and another, to the sound of each letter, and can know the correct and appropriate use of each punctuation mark. Through research that refers to these aspects of assessment, it can be concluded that if students can string letters into syllables to sentences, understand the meaning of the story or reading they read, and know letter patterns and punctuation when reading, it indicates that students have good reading skills.

In providing treatment in this study, researchers used learning media that could cover all these assessment indicators, namely letter card media. Using this media in learning can make learners recognize letter patterns and distinguish letter shapes, letter sounds, and string letters into words and sentences, and learners can also know the true meaning of the letters they arrange. This is in line with the findings, which state that using letter block media that functions to arrange letters can improve students' reading skills, with this media arranging letters making children learn while having fun (Andriana et al., 2022). Another study revealed that letter card media can increase students' enthusiasm for learning and learning outcomes (Winarni, 2022). In addition, this media is combined with a problem-based learning model. Students are actively involved in groups so that learning in the classroom becomes interactive. This problem-based learning model is effective in improving reading skills. This aligns with the findings, which state that problem-based learning models positively impact learner participation and can improve learner skills and understanding in implementing learning (Ahmad et al., 2023). Other findings also state that this problem-based learning model can be an innovative alternative model in learning (Poerwanti et al., 2022).

Based on the result of research analysis supported by previous research, the problem-based learning model, with the help of interactive media letter cards, can significantly improve the reading skills of grade II students in elementary schools. The following shows the learning process using the problem-based learning model with the help of interactive media letter cards.

Picture 1. Learning activities with problem-based learning models assisted by letter card interactive media.

The following researchers also display the letter card interactive media used in the study.

Picture 2. Interactive Media Letter Cards

CONCLUSION

Using the PBL learning model with the help of letter card interactive media is quite effective in improving the reading skills of grade II students in elementary schools. This is evidenced by the paired sample test, which shows the sig value. 0,000 < 0,05. The magnitude of the effectiveness of using this model and media can be seen through the results of the effect size test, which is 0.298; the value is in the sufficient category. The test results indicate that the achievement of all indicators of reading skills assessment, namely stringing letters, words, and sentences, then understanding the meaning of the text content, as well as recognizing letter patterns and punctuation marks, seen through an increase in the results of the pre-test and post-test in class II A in learning Pancasila Education. Thus, the PBL learning model and letter card interactive media can be used as an alternative learning resource to improve student's reading skills in class II.

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