

Transforming Imaginative Narrative Reading Learning by Literacy Cloud-Assisted PQ4R Model

A Case Study of 2nd-grade Students

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ARTICLE INFO

Article history

Received 19 May 2025

Revised 28 June 2025

Accepted 5 July 2025

ABSTRACT

This study explores how the PQ4R learning method (Preview, Question, Read, Reflect, Recite, and Review) and digital media by Literacy Cloud can help second-grade students better at reading imaginative stories. This study used a pretest-posttest control group design using a quasi-experimental method. There were two groups: an experimental group and a control group. The sample consisted of two classes with 26 students in each class, so there were 52 students in total. The researchers tested imaginative narrative reading skills before and after the learning activities to collect data. The experimental group learnt utilizing the PQ4R method, supported by Literacy Cloud, while the control group used the usual learning method. After analyzing the data, the results showed that both groups enhanced their average reading scores. The experimental group's average score improved by 5.15 to 8.00, while the control group's score went up by 4.85 to 6.27. A paired t-test showed a significant difference between the scores before and after learning in both groups ($p = 0.000$). An independent t-test also showed a clear difference between the post-test scores of the two groups ($p = 0.000$), with the experimental group scoring 1.731 points higher on average than the control group. Based on the results, it can be concluded that the PQ4R learning model, supported by Literacy Cloud, is effective in helping second-grade elementary students improve their ability to read imaginative stories.

Keywords

Imaginative Narrative
Text
Learning to Read
Learning Transformation
Literacy Cloud
PQ4R
Primary School

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Introduction

Reading is one of the most essential skills for learning in elementary school, especially for students in the lower grades, like 2nd-grade students [1]. In Indonesian language learning, reading imaginative stories is an integral part of the lesson because it helps students build imagination, creativity, and good character through stories that contain moral and cultural values [2]. However, several studies have revealed that students' reading comprehension skills in Indonesia, especially in comprehending narrative texts, are still relatively low [3]. This happens because of several factors, such as learning methods that are not varied, limited use of interesting learning media, and students not being actively involved during the learning process [4].

One learning method that has been revealed to enhance reading comprehension is the *PQ4R* strategy [5]. This model focuses on clear steps that help students comprehend, remember, and think more deeply about what they read [6]. Studies around the world and in our country have revealed that utilizing the *PQ4R* model can help students improve their reading comprehension, whether they are reading stories or other kinds of texts [7]. In addition, *PQ4R* is also able to enhance students' motivation and interest in reading because it actively involves them in every stage of learning [8].

By the ongoing advancement of technology, incorporating digital media into reading lessons has become an essential part of the learning process [9]. One example of digital media that can be used is Literacy Cloud, a platform that gives a large selection of engaging and accessible digital storybooks for children [10]. The use of Literacy Cloud in learning imaginative stories can make reading activities more enjoyable, expand students' access to a variety of storybooks, and support the development of digital reading skills [11]. Several studies have revealed that digital media such as Literacy Cloud can enhance students' interest in learning, give access to quality reading materials, and promote an inclusive learning environment. This study investigates the effectiveness of the *PQ4R* learning strategy (Preview, Question, Read, Reflect, Recite, and Review) combined with Literacy Cloud digital media in improving second-grade students' ability to read and understand imaginative stories.

Literature Review

Changing the way students learn to read imaginative stories by utilizing the PQ4R method, with the help of Literacy Cloud, can be a new and helpful way to solve issues students face in comprehending what they read [12]. The PQ4R model gives a systematic framework of thinking, while Literacy Cloud gives a varied and engaging reading resource [13]. Combining learning strategies by digital media is believed to make learning more effective, help students comprehend ideas better, and grow their interest in reading from an early age [14].

Many studies have revealed that the PQ4R method helps elementary school students improve their reading comprehension [15]. One study found that utilizing PQ4R significantly impacted how well second graders did in reading comprehension. Another survey by Panungkas et al. [16] also showed that Students who learnt utilizing the PQ4R method could comprehend the stories they read better than those who learnt by regular methods. In addition, the use of the Literacy Cloud platform can significantly enhance the reading interest as well as the reading comprehension skills of elementary school students [17].

Learning strategies that help students think about their thinking, like PQ4R, are beneficial for improving reading comprehension, mainly when they are supported by fun and interactive digital media [18]. It is essential to use technology in reading lessons to help students have learning experiences that match the needs of the 21st century [19].

However, utilizing the PQ4R method with the help of Literacy Cloud still has some challenges. These include limited internet access, teachers not being fully ready to teach with technology, and the need for training so both teachers and students can use digital tools better [20]. This challenge is also revealed in research, which says that many teachers struggle to use thinking strategies like PQ4R with digital tools because they do not fully comprehend how to use the technology. In addition, based on research [21]. The digital literacy skills of elementary school students can also be a challenge. When there is not enough support from people around them, it can make learning online with story texts less effective.

Therefore, cooperation between schools, teachers, parents, and the government is essential to support this learning change, so it can be effective and continue in the long term [22]. Schools must make good plans to help children by reading and utilizing technology. These plans should include providing tools, internet access, and teacher training based on what is needed in the classroom [23]. In primary education, Yunita and Taufik also pointed out that parents play an essential role in helping their children use digital media like Literacy Cloud. Their support is especially helpful in building good reading habits, like thinking about what they read and staying engaged at home [24]. This matches the results showing that the PQ4R method helps students link their knowledge with new ideas, making it easier to comprehend and learn better [25].

Utilizing the PQ4R method has been revealed to help students comprehend what they read in Indonesian language lessons much better [26]. A classroom action research done in two cycles showed that the PQ4R method helps students learn reading materials better and become more interested during lessons. This method encourages students to be active by asking questions and thinking carefully while reading. It also helps them remember what they have read more clearly [12]. Implementing the PQ4R strategy (Preview, Question, Read, Reflect, Recite, Review) aims to enhance students' reading comprehension skills. Zan [27] describes how the PQ4R strategy guides students through a step-by-step reading process. Reading imaginative stories, such as fairy tales or fantasy, helps students picture new worlds in their minds. This creative activity builds their imagination and helps them think more deeply and carefully [28]. The use of Literacy Cloud to help improve students' interest in reading and their comprehension of stories has been studied in elementary schools [29]. This platform makes students more interested in reading and helps them comprehend and enjoy the stories better.

Based on the explanation above, utilizing the PQ4R method with the help of Literacy Cloud to teach imaginative story reading seems helpful and suitable. This method may help second-grade students comprehend what they read more easily. This study aims to determine how well the technique improves reading skills and what supports or makes it harder to use in the classroom.

Materials and Methods

This study used a quantitative approach by a special type of experiment called a "Nonequivalent Control Group Design." In this setup, there were two groups of students: one group was the experimental group, and the other was the control group. However, the students were not chosen randomly. This study aimed to determine how well the PQ4R learning method, supported by Literacy Cloud, could help improve the imaginative narrative reading skills of 2nd-grade students. The students in the experimental group learnt by utilizing the PQ4R method. This method has steps that help students read in a more organized and meaningful way. It was also combined by Literacy Cloud, a digital platform that offers hundreds of picture storybooks that match the students' age. This media was used to make reading more interesting and to help students become more familiar by utilizing digital tools for learning.

The study included 52 second-grade students from two different classes at a public elementary school in Central Java. Each class had 26 students. One class, called the experimental group, was taught utilizing the PQ4R method with the help of Literacy Cloud. The other class, the control group, continued learning regularly through traditional teaching methods. The learning activities were done in several planned lessons. A reading test on imaginative stories was given to see how well the learning worked. The test included multiple-

choice questions and short-answer questions. Experts checked it to ensure it was good, and its reliability was tested using the Alpha-Cronbach formula. The data were first checked utilizing normality and homogeneity tests to study the results. After that, a paired sample t-test was used to see if there were any changes in each group's scores before and after the lesson. An independent sample t-test was also used to compare the scores between the two groups. All the data was analyzed utilizing the latest version of the SPSS program to ensure the results were correct. Through this method, the study hopes to give helpful information about how well digital-based reading lessons work in elementary schools.

Results

Two second-grade classes conducted the study. One class used a new way of learning (the experimental group), while the other continued using the regular method (the control group). The learning activities in both classes were carefully observed step by step. The observations included all parts of the lesson, from the beginning activities to the main lesson and the closing. The researcher paid attention to how involved the students were during learning, such as how well they listened to the teacher, how often they asked questions, and how they responded to the materials used to help them learn.

The data results show the learning conditions for imaginative narrative reading in 2nd-grade students and explain the steps used in the PQ4R learning method. The study focuses on schools in South Jakarta and will be analyzed using descriptive and statistical methods.

A. An Example of Using Literacy Cloud as a Digital Reading Platform in the Classroom

Literacy Cloud is an online platform offering illustrated storybooks for children in many languages, including Indonesian. This platform is a digital reading tool used to help teach imaginative narrative skills in second-grade classrooms. The design is simple and easy for children to use, making it easier for teachers and students to choose and read stories. The stories are grouped by age and theme, which supports using the PQ4R method to improve students' comprehension of narrative texts. This study examines how the PQ4R learning method is combined with digital media, as illustrated in Fig. 1.



Fig. 1. Utilizing Literacy Cloud in the Classroom

B. Stages of Learning by the PQ4R Model Supported by Literacy Cloud

The imaginative narrative reading lesson utilizing the PQ4R model by Literacy Cloud is done in six straightforward steps. Table 1 outlines the six steps of the PQ4R learning method as applied in the classroom using Literacy Cloud. Each step is designed to guide students through previewing, questioning, reading, reflecting, reciting, and reviewing imaginative narrative texts, with the support of digital media to enhance comprehension and engagement.

Table 1. Steps of the PQ4R Method Using Literacy Cloud

No	Step	Remarks
1	Preview	The teacher introduces the topic and title of the story using Literacy Cloud. Students look at the title and pictures to help them remember what they already know and to guess what the story might be about.
2	Question	Students are guided to make questions based on the title and pictures of the story. These questions help to spark their curiosity before they start reading.
3	Read	Students read the imaginative narrative text by Literacy Cloud, independently or together as a class, using digital devices or a screen projector.
4	Reflect	After reading, the students and the teacher discuss the story together. They discuss the characters, where and when the story takes place, the main events, and the moral lessons that can be learnt.
5	Recite	Students are asked to tell the story again, utilizing their own words, either by speaking or writing, to help them comprehend the story better.
6	Review	The class discusses the story together and returns to the questions asked at the beginning. The teacher also explains any parts that the students did not comprehend clearly.

This learning activity is planned to help students stay involved and improve their reading skills by utilizing the PQ4R method and digital tools clearly and organized.

C. Assessment Instrument for Imaginative Narrative Reading Comprehension

The tool used in this study was made to measure how well students comprehend imaginative narrative texts. It included multiple-choice questions based on the learning goals and what students were expected to achieve in the lessons. The criteria and indicators used to evaluate students' reading comprehension skills are detailed in Table 2.

Table 2. Assessment Instrument

No	Indicator	Question Format	Question Number	Score
1	Explain the content of the story.	Multiple Choice	1	1
2	Identify the main characters in the story.	Multiple Choice	2	1
3	Explain why Tia planted red beans.	Multiple Choice	3	1
4	Relate events in the story to everyday experiences.	Multiple Choice	4	1
5	Determine the moral message contained in the story.	Multiple Choice	5	1
6	Analyze Tia's attitude changes throughout the story	Multiple Choice	6	1
7	Compare Tia's methods of caring for plants.	Multiple Choice	7	1
8	Analyze the factors that influence the growth of Tia plants.	Multiple Choice	8	1
9	Analyzing the importance of patience and care in planting plants.	Multiple Choice	9	1
10	Evaluating lessons that can be applied in daily life.	Multiple Choice	10	1

D. Descriptive Statistics of Students' Creative Reading Skills Implementing the PQ4R

Descriptive analysis is used to give a general picture of the different variables in the study. This analysis explains how well students in both the experimental and control groups can read imaginative stories in elementary schools in East Jakarta. To comprehend the details of each variable, you can refer to Table 3.

Table 3. Descriptive Statistics

	N	Minimum	Maximum	Mean	Deviation
Pretest – Experimental Group	26	2.00	9.00	5.1538	2.14834
Posttest – Experimental Group	26	5.00	10.00	8.0000	1.23288
Pretest – Control Group	26	2.00	9.00	4.8462	2.05314
Posttest – Control Group	26	4.00	10.00	6.2692	1.51149

In this study, the experimental and control groups were given a pretest to measure their starting ability to read imaginative texts. The experimental group was then taught utilizing a special method, while the control group continued with regular or traditional teaching methods. After the learning activity, both groups took a posttest. The Pretest – Experimental Group shows the first scores of students in the experimental class before they received the special teaching method. The Posttest – Experimental Group shows their scores after the teaching was completed. The Pretest – Control Group shows the starting scores of students who learnt the usual way in the control class. The Posttest – Control Group shows their scores after the same period, devoid of the special treatment.

Based on the data presented in Table 3, the students' ability to comprehend imaginative stories showed notable differences between the experimental and control groups. In the experimental group, which consisted of 26 students, the pretest mean score was 5.15 with a standard deviation of 2.15. Scores ranged from a minimum of 2 to a maximum of 9. After implementing the PQ4R learning method using Literacy Cloud, the posttest results showed a clear improvement. The mean score increased to 8.00, with a reduced standard deviation of 1.23, indicating more consistent student performance. The highest score achieved was 10, while the lowest was 5. In contrast, the control group comprising 26 students had a pretest mean score of 4.85 and a standard deviation of 2.05, with scores ranging from 2 to 9. In the posttest, this group demonstrated a more modest improvement, with the average score rising to 6.27 and a standard deviation of 1.51. The highest and lowest scores in the posttest were 10 and 4, respectively. These results suggest that the instructional approach used in the experimental group may have contributed to more substantial gains in reading comprehension.

There was a clear difference in the imaginative narrative reading scores between the pretest and posttest for the experimental and control groups. In the experimental group, the average score increased by 5.153 in the pretest to 8 in the posttest. Similarly, the control group

also showed improvement, with their average score rising from 4.84 in the pretest to 6.269 in the posttest.

Based on the explanation above, we have only looked at a summary of the collected data. It has not yet shown the actual research results. A hypothesis test will utilize a t-test with a 5% margin of error or a 95% confidence level to determine the real results. However, before using parametric statistics like the t-test, we first must ensure the data meets specific requirements, such as being normally distributed and having equal variance.

E. Assessment of Students' Reading Proficiency in Imaginative Narratives

This test is used to check whether the data follows a regular pattern. If it does, one of the main requirements for utilizing parametric statistical analysis is met. The test was done using the Kolmogorov-Smirnov method. We compare the significance value (p-value) with 0.05 to decide the result. If the p-value is greater than 0.05, we accept H₀, which means the data is usually distributed. The results of this test can be seen in Table 4.

Table 4. Normality Test Results

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistics	Df	Sig.	Statistics	Df	Sig.
Pretest – Experiment Group	.153	26	.119	.923	26	.054
Posttest – Experiment Group	.192	26	.014	.925	26	.060
Pretest- Control Group	.161	26	.083	.931	26	.080
Posttest – Control Group	.161	26	.083	.933	26	.089

a. Lilliefors Significance Correction

Based on Table 4, the significance (sig.) value for the experimental group was 0.054 in the pretest and 0.060 in the post-test. Since both values are greater than 0.05, H₀ is accepted. This means that the data meets the normality assumption. In other words, the experimental group's imaginative narrative reading scores are normally distributed. The significance value (sig.) for the control group was 0.080 in the pretest and 0.089 in the post-test. Since both values are greater than 0.05, H₀ is accepted. This means the data from the control group is considered to be normally distributed.

F. Test Homogeneity Assessment of Creative Narrative Comprehension Skills

Before doing the t-test, the data for each group was checked for homogeneity utilizing Levene's test. This test helps to see if the data has the same variety or variance level. Table 5 shows the results of this homogeneity test.

The test showed that the Levene's test value for imaginative narrative reading ability was 0.930, with a significance value of 0.339. Since the significance value is greater than 0.05, the result is insignificant, so H₀ is accepted. This means that the reading ability data by the control and experimental groups had a similar or equal variance, also called homogeneous variance.

Table 5. Homogeneity Test Results

			Levene Statistics	df1	DF2	Sig.
Imaginative ability	narrative	Based on Average	.930	1	50	.339
		By Median	.566	1	50	.456
		Based on Median and by adjusted df	.566	1	46.963	.456
		Based on the trimmed average	.769	1	50	.385

G. Testing Differences in the influence of imaginative narrative reading

To determine whether there was a difference between the pretest and post-test results, the writer used a paired sample t-test, since both tests were administered to the same group of students and thus were related (dependent samples). The decision to accept or reject the null hypothesis (H_0) was based on comparing the t-statistic (also called the calculated t-value) with the critical value from the t-distribution table (t-table value). If the calculated t's absolute value is greater than the t-table value, or if the p-value is less than 0.05, then the difference is considered statistically significant. The data were analyzed using SPSS version 26.00, and the results are presented in Table 6.

Table 6. Paired sample t-test results for imaginative narrative reading ability

Pair	Mean Difference	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	T	df	Sig. (2-tailed)
Pair 1: Pretest (Experiment) – Posttest (Experiment)	-2.84615	2.23951	0.43920	-3.75071 to -1.94160	-6.480	25	0.000
Pair 2: Pretest (Control) – Posttest (Control)	-1.42308	1.72448	0.33820	-2.11961 to -0.72654	-4.208	25	0.000

The results show that for the experimental group, the t-statistic is -6.480 with a p-value of 0.000. The critical t-value at 25 degrees of freedom (df) and a 5% significance level ($\alpha = 0.05$) is ± 2.059 . Since the absolute value of the t-statistic ($|-6.480| = 6.480$) is greater than the critical t-value and the p-value is less than 0.05, we reject the null hypothesis. This indicates a statistically significant improvement in the students' ability to read imaginative narratives after applying the PQ4R learning method.

Similarly, for the control group, the t-statistic is -4.208, and the p-value is 0.000. With the same critical t-value of ± 2.059 , we again reject the null hypothesis. This suggests a significant difference in the control group's reading ability between the pretest and post-test, although the magnitude of change is smaller than that of the experimental group.

H. Comparison of control groups and experiments

Based on Table 7, the independent t-test used the value from the 'Equal variances assumed' section because the data had a homogeneous variance. The test showed a t-value of 4.524 when comparing the control and experimental groups, with a significance value (p) of 0.000. Since the calculated t-value (4.524) is higher than the critical value (2.008) and the significance (0.000) is less than 0.05, we reject the null hypothesis (H_0).

Table 7. Independent test results: *Test Control and Experiment*

		F	Sig.	T	Df	Sig. (2 tails)	Average Difference	Std. Error Difference	95% Confidence Interval of Difference	
										Lower Above
Imaginative narrative ability	The same variance is assumed	.930	.339	4.524	50	.000	1.73077	.38253	.96243	2.49911
	Equal variance is not assumed			4.524	48.059	.000	1.73077	.38253	.96166	2.49988

There was a difference between the control and experimental groups in improving imaginative narrative reading skills through the PQ4R learning model at an elementary school in the Ciracas sub-district, East Jakarta. The t-test results also showed that the experimental group had a higher ability to read imaginative narratives than the control group, by a score difference of 1.731.

Discussion

The findings of this study demonstrate that the implementation of the PQ4R learning model, supported by the Literacy Cloud platform, significantly improved 2nd-grade students' imaginative reading abilities. The experimental group showed greater gains than the control group, as indicated by the significant difference in the post-test scores ($p = 0.000$). This aligns with previous studies that confirm the effectiveness of PQ4R in enhancing reading comprehension through structured, reflective reading strategies [5],[6],[9].

The success of this intervention is closely tied to the stages of the PQ4R model, which promote active engagement, questioning, and deep processing of reading content. These steps encourage students to read, internalize, and reflect upon the material, resulting in better comprehension and retention [7],[8]. Moreover, the PQ4R model particularly benefits young learners in improving critical and reflective reading skills [2].

In addition, integrating the Literacy Cloud platform contributed positively to students' reading outcomes. The platform provided age-appropriate, culturally relevant, and visually engaging stories that stimulated students' interest and motivation [9],[11]. Previous studies

also reported that digital reading media like Literacy Cloud can enhance vocabulary acquisition and comprehension skills, especially when combined with interactive pedagogical strategies [17],[29].

The synergy between the structured cognitive steps of the PQ4R method and the appealing content of the Literacy Cloud platform made reading activities more meaningful and relevant to students' daily experiences. This combination helped bridge cognitive strategies with emotional engagement, leading to sustained improvement in reading skills. These findings support earlier research that emphasized the role of multimedia and metacognitive strategies in fostering literacy development [1],[4].

Based on these results, the PQ4R model, enhanced by digital tools such as Literacy Cloud, is recommended for wider use in elementary classrooms to improve students' ability to read and comprehend imaginative texts. Its structured yet student-centered approach aligns well with modern educational goals to improve literacy through active, reflective, and enjoyable learning processes.

Conclusion

Based on the research findings, using the PQ4R learning model and the Literacy Cloud platform was proven to help improve second-grade students' ability to read imaginative stories. This was revealed by the experimental group's average scores increasing more than the control group's. The statistical results also confirmed that this difference was significant ($p = 0.000$). The success of this learning model is closely connected to the PQ4R steps, which help students read more actively and think more deeply about what they read. The use of Literacy Cloud as a digital reading tool also improves learning results by offering stories that are interesting, suitable for their age, and related to their learning. This combination makes reading activities more interactive, meaningful, and relevant to students' lives. Because of this, the PQ4R model by Literacy Cloud support is recommended as a good option for teaching reading in elementary school, especially to improve students' skills in reading imaginative stories.

Conflict of Interest

The author declares no conflict of interest related to this research.

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