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The Effect of the SQ3R (Survey, Question, Read, Recite, Review) Learning Model with the Word Square Game on the Intensive Reading Ability of Fourth-Grade Students at MIT Meunara Baro

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Article Info	Abstract :
Article Information Received : 20-08-2026 Revised : 22-08-2026 Accepted : 26-08-2026 Keywords: SQ3R learning model; Word Square game; intensive reading ability; elementary school	Intensive reading is a fundamental skill fourth-grade students must master in Indonesian language learning, as it requires an in-depth understanding of a text's meaning rather than mere word recitation. However, field observations at MIT Meunara Baro show that students' intensive reading ability remains low, with most students' scores falling below the minimum mastery criterion (KKM). This problem is presumably caused by instruction that remains conventional, in which teachers simply hand out a reading text and have students directly answer questions without a systematic reading process, leaving students passive and under-trained in constructing deep meaning from texts. This gap between the demands of intensive reading competence and actual conditions in the field is what underlies the need for an alternative learning model. This study examined the effect of the SQ3R (Survey, Question, Read, Recite, Review) model combined with the Word Square game on intensive reading ability, using a quasi-experimental Nonequivalent Control Group Design (experimental n = 11; control n = 13). The Welch t-test showed the experimental group's posttest mean (88.18) was higher than the control group's (43.46), Sig. (2-tailed) < 0.001, with a very large effect size (Cohen's d = 4.60), confirming a significant effect.

INTRODUCTION

Indonesian language is a subject that plays an important role in shaping the literacy skills of elementary school students, one of which is through reading skills.



Through reading, students not only learn to recognize letters and words but also build critical thinking skills and broaden their knowledge (Rusman, 2021). Among the various reading skills, intensive reading holds an important position because it requires students not only to sound out letters, words, or sentences, but also to understand the meaning of a text carefully, thoroughly, and in depth (Dalman, 2021). Based on the Phase B Indonesian Language Learning Outcomes, fourth-grade students are expected to be able to understand the main and supporting ideas of informative texts and explain the problems faced by characters in narrative texts, so that reading instruction in fourth grade emphasizes not only reading fluency but also a thorough understanding of the text's content. However, actual conditions in the field are not yet fully in line with this expectation. Based on interviews with fourth-grade teachers at MIT Meunara Baro, many students show little enthusiasm for reading activities, get bored easily, lack focus, and have difficulty identifying main ideas, distinguishing supporting ideas, and answering questions based on the text accurately. Most students' scores still fall below the minimum mastery criterion (KKM) of 70. This problem is compounded by instruction that remains dominated by the conventional model, in which teachers do most of the explaining while students tend to listen passively, leaving students insufficiently engaged in understanding the text.

One learning model that can be used to address this problem is the SQ3R model, a reading model consisting of five systematic stages: Survey, Question, Read, Recite, and Review. Through these stages, students are guided to gain a general overview of the text, formulate questions, read carefully to find answers, retell the content of the text in their own words, and review their understanding, so that students read with a clear purpose and actively comprehend the content of the text. A study conducted by Hakiki et al. (2025) showed that the SQ3R strategy is effective in improving elementary school students' reading comprehension because it encourages students' active engagement in understanding texts. A similar finding was reported by Subekti (2024), who showed that the use of the SQ3R method has an effect on the reading comprehension skills of fourth-grade elementary school students.

In an effort to make intensive reading instruction more engaging and less monotonous, the SQ3R model can be combined with the Word Square game. The Word Square is an educational game in the form of letter grids that students use to

find key words related to the learning material. A number of studies assert that Word Square is a word game (a word game) that contains a playful element of searching for and matching words within a letter grid, rather than being merely a learning model (Syahadati et al., 2019; Berta & Swarniti, 2020; Kusumaningrum et al., 2022). This game can train students' accuracy, concentration, and active participation, and helps students recall vocabulary and important information from texts they have read. Shaltina et al.'s (2026) study showed that applying the Word Square game effectively improves fourth-grade students' reading ability because instruction becomes more active, engaging, and student-centered, while Azizah et al. (2022) found that the Word Square game has a positive effect on learning outcomes because students become more active and engaged in the learning process.

The combination of the SQ3R model with the Word Square game is expected to serve as a solution to the intensive reading problems of fourth-grade students at MIT Meunara Baro, helping students understand texts gradually and enjoyably, so that students are able to identify main ideas and supporting ideas, master key vocabulary, and draw accurate conclusions from a text. Although previous studies have discussed the use of the SQ3R model and the Word Square game separately in reading instruction, research that specifically combines the two to improve the intensive reading ability of fourth-grade elementary school students still needs further investigation. Based on this description, this study aims to determine the effect of the SQ3R learning model with the Word Square game on the intensive reading ability of fourth-grade students at MIT Meunara Baro, with the research hypothesis that the SQ3R learning model with the Word Square game has an effect on the intensive reading ability of fourth-grade students at MIT Meunara Baro (H_a), as opposed to the null hypothesis stating that there is no effect (H_o).

RESEARCH METHOD

This study used a quantitative approach with a quasi-experimental method, a research method used to examine the effect of a particular treatment on another variable, with a sample that is not selected randomly but instead uses groups that have formed naturally (intact group) (Sugiyono, 2022). The research design used was a Nonequivalent Control Group Design, involving an experimental group and a control group selected based on certain considerations (purposive sampling), rather than

randomly, because both groups were classes that had already formed naturally at the school. Both groups were given a pretest to determine the equivalence of their initial abilities; the experimental group was then given treatment in the form of instruction using the SQ3R model and the Word Square game, while the control group was not given this treatment. After the treatment, both groups were given a posttest to determine the final results.

The population of this study consisted of all fourth-grade students at MIT Meunara Baro. The sample was selected using a purposive sampling technique, based on the equivalence of initial ability, the same teacher, and a relatively balanced number of students between classes. Based on these considerations, class IV A was designated as the control class with 15 students, and class IV B as the experimental class with 16 students. The study was conducted at MIT Meunara Baro, Miruk Village, Krueng Barona Jaya District, Aceh Besar Regency. However, at the time the pretest and posttest were administered, the number of students who were present and completed the entire research process was 13 students in the control class and 11 students in the experimental class, so the data analyzed in this study totaled 24 students (control = 13, experimental = 11), consistent with the figures stated in the abstract.

Data were collected through a validated essay-type test, administered as a pretest before the treatment and a posttest after the treatment for both groups. The test instrument was developed based on indicators of intensive reading ability, namely the ability to determine the main idea of a text, identify supporting ideas or important information, understand the meaning of words or terms, answer questions based on the text's content, and summarize the content of the text (Wahyuni et al., 2021; Anitra, 2022).

Instructional treatment was given in two meetings of action for each group, with one additional meeting for the pretest and one for the posttest, for a total of four research meetings. Each meeting lasted 2 x 35 minutes. In the experimental group, the SQ3R model with the Word Square game was applied over two meetings, while in the control group, conventional instruction was also given over two meetings with the same duration and time allocation. In the core learning activities of the experimental group, the SQ3R syntax was integrated in stages as follows: (1) Survey, students were asked to skim the title, subheadings, and first paragraph to gain a general overview of

the text; (2) Question, students formulated their own questions based on the results of the survey (for example: "Which villages might be mentioned in this text?" or "Which dance made those villages famous?"); (3) Read students read the text carefully and thoroughly to find answers to the questions they had formulated; (4) Recite, students retold the content of the text in their own words without looking at the text (done in pairs); and (5) Review students reviewed all of their answers and the overall conclusions of the text. At the end of the Read stage in each meeting, students individually worked on the Word Square game, which involved searching for and matching key vocabulary from the reading text within a provided letter grid. Meanwhile, in the control group, the teacher carried out instruction following the routine procedure typically applied in the classroom, namely by handing out a reading text, explaining its content in general terms, and having students individually answer the questions provided at the end of the text.

The data obtained were analyzed using quantitative analysis techniques with the help of SPSS Statistics version 25. A normality test was conducted using the Shapiro-Wilk test, with data declared normally distributed if the significance value was > 0.05 . A homogeneity test was conducted using Levene's test, with data declared homogeneous if the significance value was > 0.05 . Hypothesis testing was then conducted using an independent samples t-test to determine whether there was a difference in effect between the posttest results of the experimental group and the control group. The null hypothesis (H_0) was rejected and the alternative hypothesis (H_a) accepted if the significance value (2-tailed) was < 0.05 , meaning that the SQ3R learning model with the Word Square game has an effect on the intensive reading ability of fourth-grade students at MIT Meunara Baro.

RESULTS AND DISCUSSION

Research Results

Descriptive Statistics

Description of Intensive Reading Ability Data

Data on students' intensive reading ability were obtained through tests administered before treatment (pretest) and after treatment (posttest). The mean pretest and posttest scores of students in the control class and experimental class are presented in Table 1.

Table 1. Mean Pretest and Posttest Scores

Class	Mean Pretest	Mean Posttest
Control	41.92	43.46
Experimental	47.73	88.18

Based on Table 1, it is known that the mean pretest score of the control group was 41.92 and increased to 43.46 on the *posttest*. Meanwhile, the mean *pretest* score of the experimental group was 47.73 and increased to 88.18 on the *posttest*. These results indicate that the improvement in intensive reading ability in the experimental group was higher than in the control group after the SQ3R learning model with the *Word Square*.

To further clarify the comparison of mean *pretest* and *posttest* for both groups, the descriptive results are presented in Figure 1.

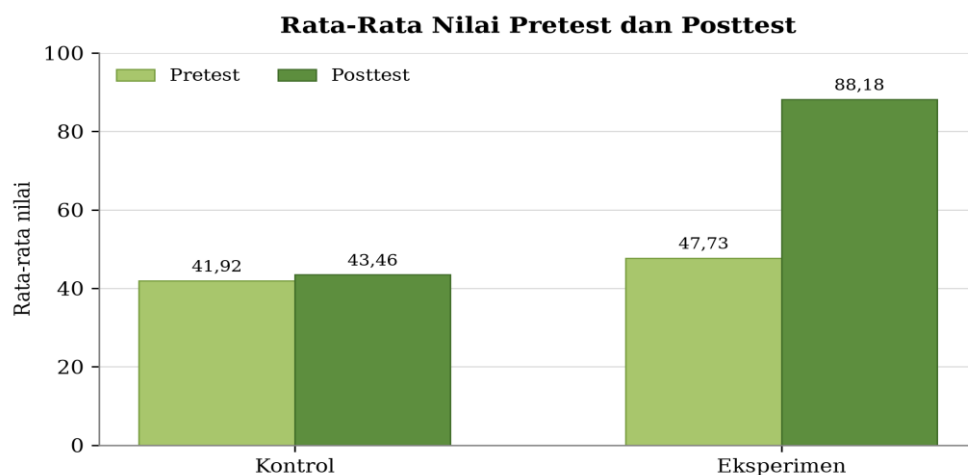


Figure 1. Mean Pretest and Posttest Scores of the Control and Experimental Groups

Based on Figure 1, the increase in *posttest* scores in the experimental group appears much larger than in the control group. The mean *posttest* score of the experimental group reached 88.18, while the mean posttest score of the control group was only 43.46.

Normality Test

The normality test was conducted using the Kolmogorov-Smirnov and Shapiro-Wilk tests with the help of SPSS. Because the sample size of each group was fewer than

50, the normality decision in this study was based on the Shapiro-Wilk significance value. The normality test results are presented in Table 2.

Table 2. Normality Test Results

Tests of Normality							
Kelas		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Hasil	Pretest A (Kontrol)	.192	13	.200 [*]	.892	13	.103
	Posttest A (Kontrol)	.174	13	.200 [*]	.909	13	.175
	Pretest B (Eksperimen)	.238	11	.081	.861	11	.060
	Posttest B (Eksperimen)	.173	11	.200 [*]	.889	11	.135

*. This is a lower bound of the true significance.

The normality test used the Shapiro-Wilk test, which is appropriate for small samples ($n < 50$). The test results show that the significance value for all data groups was above 0.05, namely the *pretest* of the control group (Sig. = 0.103), *posttest* of the control group (Sig. = 0.175), *pretest* of the experimental group (Sig. = 0.060), and *posttest* of the experimental group (Sig. = 0.135), so all data were declared normally distributed.

Homogeneity Test

The homogeneity test was conducted to determine the equality of the posttest data variance between the experimental group and the control group. The homogeneity test results are presented in Table 3

Table 3. Homogeneity Test Results

Test of Homogeneity of Variance					
		Levene Statistic	df1	df2	Sig.
Nilai	Based on Mean	7.548	1	22	.012
	Based on Median	6.263	1	22	.020
	Based on Median and with adjusted df	6.263	1	17.359	.023
	Based on trimmed mean	7.751	1	22	.011

The homogeneity test for the posttest data variance was conducted using Levene's test. The test results show a significance value based on the mean of 0.012 ($F = 7.548$; $df1 = 1$; $df2 = 22$), which is below 0.05, and is consistent with testing based on the median (Sig. = 0.020), the median with adjusted degrees of freedom (Sig. = 0.023),

and the trimmed mean (Sig. = 0.011). Thus, the variance of the data *posttest* for the control group and the experimental group was declared not homogeneous, so subsequent hypothesis testing used the t-test results in the *Equal Variances Not Assumed* row (Welch correction).

Hypothesis Test (t-test)

Hypothesis testing was conducted using an independent samples t-test to determine the difference in posttest results for intensive reading ability between the experimental group and the control group. The hypothesis testing results are presented in Tables 4 through 6.

Table 4. Group Statistics

Group Statistics					
Kelas		N	Mean	Std. Deviation	Std. Error Mean
Nilai	Posttest_Kontrol	13	43.46	12.142	3.368
	Posttest_Eksperimen	11	88.18	5.600	1.689

Table 5. Independent Samples Test

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
Nilai	Equal variances assumed	7.548	.012	-11.219	22	<.001	-44.720	3.986	-52.987	-36.453
	Equal variances not assumed			-11.871	17.467	<.001	-44.720	3.767	-52.652	-36.788

Table 6. Independent Samples Effect Sizes

Independent Samples Effect Sizes					
		Standardizer ^a	Point Estimate	95% Confidence Interval	
Nilai	Cohen's d	9.730	-4.596	-6.151	-3.012
	Hedges' correction	10.078	-4.437	-5.939	-2.908
	Glass's delta	5.600	-7.985	-11.512	-4.446

Hypothesis testing was conducted using an independent samples t-test to determine whether there was a difference in effect between the *posttest* results of the experimental group and the control group. Because the data variance was not homogeneous, the results used were from the *Equal Variances Not Assumed* row, which showed $t = -11.871$ with $df = 17.467$ and $\text{Sig. (2-tailed)} < 0.001$. This result is supported

by Welch's test in the one-way ANOVA analysis, which produced $F = 140.913$ ($df_1 = 1$; $df_2 = 17.467$) with $\text{Sig.} < 0.001$, consistent with the t-test results. A Sig. (2-tailed) value smaller than 0.05 indicates that H_0 was rejected and H_a was accepted, meaning that the SQ3R learning model with the *Word Square* game has an effect on the intensive reading ability of fourth-grade students at MIT Meunara Baro. The *mean difference* between the two groups was -44.72, with a 95% confidence interval from -52.65 to -36.79, which does not include zero, further strengthening the conclusion of a significant difference.

The magnitude of the effect was calculated using Cohen's d and yielded a value of 4.60 with a 95% confidence interval (3.01–6.15). This Cohen's d value far exceeds the threshold generally set for a large-effect category, which is ≥ 0.8 . This finding indicates that the difference in mean *posttest* scores between the experimental and control groups (88.18 vs 43.46) is not only statistically significant but also carries very strong practical meaning. In other words, the SQ3R treatment combined with the *Word Square* game made a substantial contribution to improving intensive reading ability compared with the conventional method. This *effect size* result further strengthens the conclusion that the treatment effect is very large and consistent across the entire study sample.

The results showed that the intensive reading ability of students in the experimental group, who were given treatment using the SQ3R learning model with the *Word Square* game, increased significantly compared with the control group, which only used conventional instruction. The mean *posttest* score of the experimental group at 88.18 was well above the minimum mastery criterion (KKM) of 70, while the mean *posttest* score of the control group at 43.46 remained below the KKM. This finding confirms that the treatment given was able to shift students from an initial condition in which they struggled to identify main ideas and supporting ideas and to answer questions based on the text, toward a more focused and systematic understanding of the text. This improvement is consistent with the characteristics of the SQ3R model, which guides students through the *Survey*, *Question*, *Read*, *Recite*, and *Review* stages, so that students read with a clear purpose and actively engage in constructing the meaning of the text, rather than simply reciting words one by one. This finding reinforces the results of Hakiki et al. (2025) and Subekti (2024), which showed that the

SQ3R strategy is effective in improving elementary school students' reading comprehension because it encourages students' active engagement in understanding texts. In addition, combining the SQ3R model with the *Word Square* game also gives students the opportunity to practice finding and matching key vocabulary from the text through an enjoyable play-based activity, keeping the learning atmosphere from becoming monotonous and making students more enthusiastic. This is consistent with the findings of Shaltina et al. (2026) and Azizah et al. (2022), which showed that the *Word Square* game is effective in improving learning outcomes because students become more active and engaged in the learning process, as well as the views of Syahadati et al. (2019), Berta and Swarniti (2020), and Kusumaningrum et al. (2022) that the playful element in *Word Square* keeps students from feeling tense and makes them more enthusiastic about completing reading tasks.

The magnitude of the *effect size* (Cohen's $d = 4.60$) indicates that the difference in achievement between the two groups was not due to chance, but was genuinely caused by the treatment given. The relatively homogeneous distribution of scores in the experimental group within the high range (80–95) also shows that the treatment had an even impact on almost all students, not just a subset of them. In contrast, the wider distribution of scores in the control group (30–65) indicates that, without specific treatment, students' achievement in intensive reading comprehension varies considerably and tends to remain low. Thus, the results of this study provide empirical evidence that combining the SQ3R learning model with the *Word Square* game can serve as a solution to the problem of low intensive reading ability among fourth-grade students, while also enriching the body of research on integrating systematic reading models with word-based educational games in Indonesian language instruction at the elementary school level.

The small increase in scores in the control class (from 41.92 to 43.46) indicates that the conventional method applied was less effective in developing intensive reading ability. In conventional instruction, teachers tend to hand out a reading text and immediately ask students to answer questions without going through stages of gradually building understanding. As a result, students read without a clear purpose and focus only on finding instant answers rather than fully grasping the content of the text. In addition, the absence of the *Recite* and *Review* stages caused newly read

information to quickly fade from students' memory, since there was no repetition or reinforcement. Another observed obstacle was the lack of variety in media and activities, which made students bored, passive, and unable to maintain concentration. This was compounded by the absence of any playful or healthy-competition element that typically sparks students' learning motivation. Thus, the very small increase in scores in the control class demonstrates that, without specific treatment in the form of a systematic model and educational games, students find it difficult to achieve a significant improvement in reading comprehension.

CONCLUSION

Based on the results of the data analysis and discussion, it can be concluded that the SQ3R learning model with the Word Square game has a significant effect on the intensive reading ability of fourth-grade students at MIT Meunara Baro. This is evidenced by the results of the independent samples t-test (Equal Variances Not Assumed), which showed a Sig. (2-tailed) value < 0.001 (< 0.05), so H_a was accepted and H_o was rejected. The mean posttest score of the experimental group (88.18) was much higher than that of the control group (43.46), with a very large effect size (Cohen's $d = 4.60$), indicating that the effect of the treatment was not only statistically significant but also practically substantial. This finding indicates that applying the SQ3R model combined with the Word Square game can be recommended as an alternative for intensive reading instruction in elementary schools. Future research is encouraged to test the effectiveness of this combination at other grade levels or with different reading materials, and to expand the research sample size so that the results can be generalized more broadly.

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