

The Effects of Local Culture-Based SQ3R Method on Ecological Wisdom-Themed Reading Literacy Ability

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ABSTRACT: Reading skills among junior high school students in Indonesia are categorized as low to medium according to PISA 2018 data. The Ministry of Education and Culture's 2022 survey shows that Indonesian students do not understand the content of the texts they read. This makes research on strategies to improve reading literacy important. This study aims to determine the difference in reading comprehension skills on the theme of ecological wisdom between students taught with the SQ3R method and the conventional (direct) method. This research is quantitative research with a quasi-experimental pretest-posttest non-equivalent control group design. The population of this study were seventh grade students of SMP Karanganyar Regency Rural Area. The samples of this study were students of grade 7-D SMP Negeri 1 Karangpandan and 7-B SMP Negeri 2 Karangpandan as the experimental group and students of grade 7-F SMP Negeri 1 Karangpandan and 7-C SMP Negeri 2 Karangpandan as the control group. The sampling technique used two-stage cluster random sampling, which is group sampling in stages. The data collection technique was carried out with an instrument of reading comprehension ability on the theme of ecological wisdom developed by the researcher. Data analysis techniques include descriptive data analysis, analysis requirement test, and inferential analysis. The results showed that the ability to read comprehension on the theme of ecological wisdom between students taught by the SQ3R method was better than students taught by the direct method. The effect size test results show the amount of the method's influence is 33.6% or has a large effect. Comparison of the average scores of the initial test and the final test showed that the increase in the scores of students taught with the SQ3R method was 9.33%, while the increase of students taught with the direct method was 4.15%. The results of this study are expected to contribute to Indonesian language teaching strategies especially in the area of improving reading literacy and reading comprehension skills among students of other Rural Area Junior High Schools.

KEYWORDS: SQ3R, local culture, reading literacy, ecological wisdom, rural junior high school in Indonesia

I. INTRODUCTION

Reading skills are important for students to support learning success (Frans et al., 2023). This is because in reading literacy, students can explore the information and knowledge outlined in their writing (Husni, 2024). The advanced level of reading literacy is known as reading comprehension. In reading comprehension, the role of the teacher is needed to provide guidance and direction to students to better understand the reading at hand. In line with the literacy development program, the learning aspect emphasizes more on the textual approach (Rosita & Parozak, 2023). This means that to understand many things that happen in the student's environment begins with understanding the text. By reading comprehension, students are expected to be able to dive into the intentions and ideas expressed by the author in his writing. Thus, students are considered to have been able to absorb information and knowledge from the reading material they read. With the knowledge and insight gained from reading activities, students can develop other language skills, the closest of which is writing skills (Safitri & Dafit, 2021).

However, it is known that the competence of reading comprehension skills in secondary school students in various regions is predominantly in the low and medium categories, for example, the reading skills of junior high school students in Jambi Province, Indonesia are in the low category (Fatimah et al., 2024). A survey conducted by the OECD found that 16% of OECD member countries have 15-year-old children with reading levels below basic proficiency, 20% fall into the basic proficient category, and more than 50% of children in Kyrgyzstan and Qatar do not reach basic proficiency (OECD, 2022). The World Bank survey also shows that 90% of children in poor countries cannot read comprehensively (Rizaty, 2022).

Reading comprehension levels in Indonesia also show poor conditions. Data from the Ministry of Education and Culture of Indonesia shows that 70% of Indonesian children are known to be able to read, but not understand what they read (Wuryanto & Abduh, 2022). The community literacy index survey also shows that Indonesian children's comprehension of reading is only 15%. This means that there are 85% of Indonesian children who do not understand what they read (Fauziah, 2024; Putra, 2023). The results of the Indonesian National Assessment (AN) show that Indonesian students have not yet achieved literacy competencies

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above the minimum standard (Kemdikbud, 2023; Kurniawan et al., 2023). Students' literacy skills at all levels of education, including understanding various types of texts to solve problems, are still in the medium category. The national assessment (AN) results also show that 61.53% of primary school students have above minimum competencies, 59% of junior high school students and 49.26% of senior high school students (Napitupulu, 2023). Based on the AN results 2021, Indonesia is experiencing a literacy emergency, where one in two students from elementary to high school have not reached the minimum literacy competency (Napitupulu, 2023; Putra, 2023). This low student literacy has resulted in Indonesia's human productivity being very low compared to other countries (Anisa et al., 2021; Badan Bahasa, 2021).

Several ways have been done to overcome this condition, for example the school literacy movement, the addition of libraries, reading books, and literacy facilities (Batubara & Ariani, 2018; Mawardani & Prajawinanti, 2023). Other efforts include the development of schools to foster literacy in senior high schools (Nurwidodo et al., 2020; Syah et al., 2021). Literature learning for sustainable education (Myren-Svelstad, 2020), and short story literacy-based learning (Juanda et al., 2024). These strategies are implemented to improve students' reading skills and competencies.

However, reading comprehension competence among students still shows an inadequate level. The PISA survey in 2022 showed that the reading cognitive level of Indonesian students was categorized as low. This ranks Indonesia 70th out of 80 countries. Indonesian students' reading score was 359 points, while the average score of OECD member countries was 472-480 points (OECD, 2022). The score makes Indonesia's PISA score in the low category in the ASEAN region. The PISA score also shows that Indonesian students are in reading level 1a, which is the second lowest level in the PISA reading level.

The PISA 1a score can be interpreted as follows. (1) Indonesian students can understand the literal meaning of sentences or short paragraphs. (2) Indonesian students recognize the main theme of simple texts that are explicit, and make simple connections between some information around the text. However, reading level 1a is not yet able to understand long texts, where the information is implicit, abstract, or compares the perspective of one text with another.

Thus, it is important to conduct research on efforts to improve reading comprehension skills among Indonesian students. This is because reading comprehension competence will determine students' success at school and become an important asset for student development. This reading comprehension ability also supports the formation of a young generation able to understand texts, readings, and information contained in reading.

One of the alternatives to solve the low reading comprehension competence in Indonesian students is through reading learning with the SQ3R method. The SQ3R learning method is a reading method that is done by surveying, questioning, reading, reciting, and reviewing (Sulistyaningsih, 2008). SQ3R is an approach in reading learning developed in the field of cognitive psychology to encourage the improvement of reading learning (Lu et al., 2020; MIUC, 2020). The SQ3R method encourages comprehensive reading skills by conducting an overview and applying questions about what information to look for (Asiri, 2017).

This SQ3R learning method was chosen with consideration of obtaining general information from the text to be read, knowing what information to look for, reading quickly, having notes based on reading activities, and the review process strengthens understanding (Sulistyaningsih, 2008). The application of SQ3R is expected to improve students' skills in reading information (Wei et al., 2012). The application of the SQ3R method is also expected to have an impact on improving reading comprehension skills, increasing high curiosity, and providing an easier discourse comprehension experience (Wahyuningsih et al., 2023). With the application of the SQ3R method, it is expected to improve reading comprehension skills among students.

The application of the SQ3R method is intended to improve reading comprehension skills on the theme of ecological wisdom. Ecological wisdom is part of local wisdom that contains elements of nature, environment, and ecology. The meaning of local wisdom means a science, strategy, and outlook on life in the form of activities carried out by the community in answering problems and meeting needs (Njatrijani, 2018). Local wisdom becomes a local wealth in the form of knowledge, beliefs, norms, customs, culture, insights, and behaviors that are maintained, and become a guide for community life (Utari et al., 2016). The existence of this local wisdom becomes a way of life for the community and is intended to manage the environment sustainably (Undang-Undang Nomor 32 Tahun 2009 Tentang Perlindungan Dan Pengelolaan Lingkungan Hidup, 2009).

Relevant research on strengthening reading comprehension skills has been conducted by Barberà & Josep (2024) with the title the implementation of learning and knowledge technologies in order to improve the level of reading comprehension in the Catalan language. The study of this research is the implementation of LKT (learning and knowledge technologies) and its impact on reading comprehension skills. The results showed that (1) second and third grade students in elementary schools experienced reading comprehension improvements of up to four levels. (2) Digital technology and LKT are effective teaching resources applied to students and facilitate learning in the aspects of learning and evaluation.

Another relevant research in the field of literacy improvement was also conducted by (Myren-Svelstad, 2020) who studied sustainable literary competence: connecting literature education to education for sustainability. This research proposes the idea of improving sustainable literacy with literature education. This is based on the similarities between literary texts and environmental conditions. This concept is reflected through ecocritical studies that contain ecological criticism through literary works. The reading of ecocritical texts is expected to change students' attitudes and actions towards the environment, and form sustainable citizens.

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Relevant research on can also be done through the adiwiyata school strategy. This is known through the research of Rahmi & Marnola (2020) with the title of improving students' reading comprehension skills through the cooperative integrated reading and compotion (CIRC) learning model. This study found that the use of the CIRC type cooperative approach in reading comprehension learning is effective in improving reading comprehension skills. This can be seen from the students' scores obtained from cycle I, which is the average student score of 7.09, while in cycle II the average student score is 8.55. From the results of this study, it can be concluded that learning to read comprehension using the CIRC type cooperative approach can improve student learning outcomes.

Research on the effect of digital short story literacy on the character competence of caring for the environment was conducted by Juanda et al., (2024) who found that concern for the environment is carried out in the form of participation, social donations, animal protection, ecosystems, and the application of local wisdom or religious values. The findings of this study contribute to educational institutions to implement literature and environmental learning (ecocriticism) in schools.

Thus, the novelty of this research compared to previous research is (1) the object of research, namely the object studied in the form of a group of junior high school students in rural areas. (2) Novelty in the method, namely using the SQ3R method applied to ecological local culture-based reading learning. Novelty of this research is expected to make a significant contribution to the field of Indonesian language education and improve the reading comprehension skills of junior high school students.

Based on the above background, this research is focused on knowing the effect of applying the local culture-based SQ3R method on reading comprehension skills with the theme of ecological wisdom. This research is expected to contribute to the science of reading literacy, reading comprehension, and ecological local wisdom-based learning.

II. THEORETICAL FRAMEWORK

The SQ3R learning method is a reading learning strategy to improve reading comprehension and retention (Stahl & Armstrong, 2020). The SQ3R method is a good reading method for intensive and rational reading (Sulistyaningsih, 2008). The SQ3R reading method links the commands and information in the reading with the tasks to be completed (Robinson & McCollom, 1934). Reading with SQ3R is intended so that students can face and understand the various kinds of reading they learn at school (Robinson & Hall, 1941), and are expected to form active and critical readers to understand the content of reading.

The SQ3R method stands for survey, question, read, recite, and review (Sulistyaningsih, 2008). According to Robinson (1934), the SQ3R reading method means reading by finding main and supporting ideas to strengthen the memory of the information read. The use of this method pays attention to the following things. (1) Before reading, the reader needs to do a survey of what he is reading, for example understanding the beginning and end of a reading. Components that can be surveyed include the book title, author, summary, table of contents, and bibliography. (2) Formulating questions, i.e. questions that you want to know the information in the book you are reading. (3) Reading, i.e. intensive reading to understand and find information in the reading. (4) Retelling, which is the process of telling in one's own language about the information understood based on the book read. (5) Re-reading parts of the reading that are considered important and need to be reviewed. The SQ3R reading method can be depicted in the following flowchart.

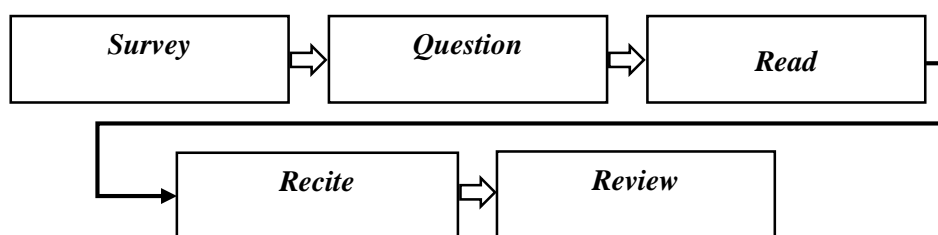


Figure 1. Flowchart of The SQ3R Method

Relevant research on the application of SQ3R to improve metacognitive abilities was conducted by Rada & Jayanti (2022) with the title The Effect of SQ3R Learning Model on Students' Metacognitive Ability in the Topics of Ecosystem. In this study, it was found that the SQ3R learning model had an effect on students' metacognitive abilities in all indicators. The SQ3R method has the advantage of improving complex problem solving on the topic of ecosystems.

Another relevant research was conducted by Dewi et al., (2021) who examined the effectiveness of the direct reading thinking activities strategy on improving reading comprehension skills in elementary schools. The results of this study indicate that the direct reading thinking activities strategy is proven to be able to improve students' reading comprehension skills in Indonesian Language Lessons. Thus, it is concluded that the SQ3R learning method is a reading learning method aimed at improving comprehension and retention of information by doing it intensively and rationally. This SQ3R method stands for survey, question, read, recite, and recall. The SQ3R method is focused on encouraging the achievement of students' deep understanding of the books they read.

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III. RESEARCH METHODOLOGY

This research is quantitative research with a quasi-experimental pretest-posttest non-equivalent control group design (Sugiyono, 2017). The research was conducted on the group treated with SQ3R learning method (experimental group or T1) and the group treated with direct or conventional method (control group or T2) (Arikunto, 2016). The research design can be observed in table 1 below.

Table 1. Pretest-Posttest Non-Equivalent Control Group Design

Group	Pretest	Treatment	Posttes
Experimental	O ₁	T ₁	O ₂
Contol	O ₃	T ₂	O ₄

The variables of this study are the application of the SQ3R reading method as the independent variable and the ability to read literacy with the theme of ecological wisdom as the dependent variable.

The population of this study was 7th grade students of Rural Junior High School in Karanganyar Regency, Central Java. The sample of this study was 128 students consisting of 64 students treated with the application of the SQ3R learning method and 64 students treated with the direct reading method. The experimental group taught with the SQ3R method were 7-D students of SMP Negeri 1 Karangpandan and 7-B students of SMP Negeri 2 Karangpandan. The control group taught with direct method were students of grade 7-F of SMP Negeri 1 Karangpandan and students of grade 7-C of SMP Negeri 2 Karangpandan.

The sampling technique used two-stage cluster random sampling, which is sampling with tiered random group samples. The first level is taking school elements in rural areas in Karanganyar Regency, namely SMP Negeri 1 Karangpandan and SMP Negeri 2 Karangpandan. The second level is the sampling element, namely grade 7-D and 7-F students from SMP Negeri 1 Karangpandan, and grade 7-B and 7-C students from SMP Negeri 2 Karangpandan. The data collection technique was carried out with a reading comprehension instrument with the theme of ecological wisdom. The instrument was developed by the research and has been tested for content validity, construct validity, and empirical validity. The instrument was also tested for reliability. The test results showed that the instrument was declared valid with an Aiken's V value of $0.828 > 0.80$. Empirical validity test shows that $R\text{-count} > R\text{-table}$ on the instrument developed. The Cronbach's Alpha reliability test results showed a score of $0.841 > 0.70$ which means that the instrument is declared to have very high reliability. Data analysis techniques are carried out with descriptive statistical tests, analysis requirements tests, and inferential statistical tests. The analysis requirement test includes normality test and homogeneity of variance. The inferential statistical test used one-way anova test and partial eta squared effect size test.

IV. RESULT AND DISCUSSION

In this section of the results and discussion, the results of data collection obtained based on quantitative data analysis are presented, including descriptive statistics (data description), requirements testing, inferential statistical analysis, and continued with a discussion of the research results. The data processing was carried out with SPSS 26 and Microsoft Excel 16. The requirement tests carried out include data normality test, variance homogeneity test, balance test. The balance test was applied to the pretest data with the objective of ensuring the comparison of the two groups had the same and equal levels of initial ability. Thus, if there is an increase in post-treatment ability, it is solely due to the application of the learning method. The following is presented descriptive statistics in table 2. Below

Table 2. Statistic Descriptive

Group	Mean	Std. Deviation	N
SQ3R (T ₁)	85.23	5.142	64
Control (T ₂)	78.11	5.183	64

The reading comprehension literacy skills on the theme of ecological wisdom of students taught with the SQ3R reading method had an overall score range of 69 to 97. The reading comprehension skills on the theme of ecological wisdom of students taught with the SQ3R method had an average score (mean) of 85.23. The mode score is 85, the median score is 85, the variance is 26,436, and the standard deviation is 5,142. The frequency distribution data of reading comprehension ability scores on the theme of ecological wisdom for students taught with the SQ3R method can be seen in table 3 below.

Table 3. Frequency Distribution SQ3R Group

Interval	f	Percentage (%)	
		Relative	Cumulative
61-65	0	0	0

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66-70	1	1.6	1.6
71-75	2	3.1	4.7
76-80	6	9.4	14.1
81-85	26	40.6	54.7
86-90	20	31.3	85.9
91-95	7	10.9	96.9
96-100	2	3.1	100.0
Total	64	100.0	

The reading comprehension ability on the theme of ecological wisdom of students taught with direct reading method as a whole has a score range of 62 to 93. The reading comprehension ability on the theme of ecological wisdom of students taught with direct method (conventional) has an average value (mean) of 78.11. The mode score was 79, the median score was 79, the variance was 26,861, and the standard deviation was 5,183. The frequency distribution data of the score of reading comprehension ability on the theme of ecological wisdom of students taught by direct method can be seen in the following table 4.

Table 4. Frequency Distribution Direct Group

Interval	f	Percentage (%)	
		Relative	Cumulative
61-65	1	1.6	1.6
66-70	3	4.7	6.3
71-75	16	25.0	31.3
76-80	25	39.1	70.3
81-85	14	21.9	92.2
86-90	4	6.3	98.4
91-95	1	1.6	100.0
96-100	0	0	100.0
Jumlah	64	100.0	

This study conducted inferential analysis testing in the form of an one-way anova test.. Inferential analysis with parametric statistics requires an analysis requirement test, which includes the randomness of the research sample data (random), the data has a normal distribution, the data comes from a homogeneous population, and the data being compared is balanced. This analysis requirement test is carried out as a condition for inferential statistical testing and to ensure that the data obtained is normally distributed, the samples obtained come from a homogeneous population, and the data is taken from two balanced groups.

The randomness of this research sample data was not carried out by statistical testing (formal). However, it is based on the assumption that the research samples in each treatment group were randomly selected from the research population. In this study, the research samples were selected by twostage cluster random sampling, i.e. tiered random sampling with rural cluster selection in the first step and school element sampling in the second step. This makes the requirement test regarding the assumption of data randomness fulfilled.

The data normality test is an inferential analysis requirement test which means that the data follows a normal distribution curve. In this study, the normality test was conducted using the Kolmogorov-Smirnov test technique. Then, to ensure that the data came from a homogeneous population and the sample data in the two sample groups were homogeneous or not significantly different, a homogeneity test was conducted with Levene's test. The following is a detailed description of the results of the normality test of data distribution (posttest data), the homogeneity test of the variance of the research data (posttest data), and the initial balance test between the compared groups (pretest data).The data normality test in this study was conducted on two groups of data, namely (1) data on reading comprehension ability on the theme of ecological wisdom for students taught with the SQ3R reading method, and (2) data on reading comprehension ability on the theme of ecological wisdom for students taught with the direct reading method. The normality test was carried out with the help of SPSS 26 software. The data normality test can be observed in table 5 below.

Table 5. Tests of Normality

	Group	Kolmogorov-Smirnova			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Literacy Score	SQ3R Method	.084	64	.200*	.982	64	.477
	Direct Method	.101	64	.172	.976	64	.259

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Normality test on the score of reading comprehension ability on the theme of ecological wisdom for the group of students taught with the SQ3R method and the group of students taught with the direct method (conventional). The normality test on the SQ3R group (T1) conducted on N=64 with a significance level of $\alpha=0.05$ (5%) resulted in a significance value of $0.200 > 0.05$. This means that the group taught with the SQ3R method had normally distributed reading scores. The normality test on the direct group (conventional or T2) was conducted on N=64 with a significance level of $\alpha=0.05$ (5%) resulting in a significance value of $0.172 > 0.05$. This means that the group taught with the direct method has normally distributed reading scores.

Table 6. Test of Homogeneity (Levene's Test of Equality of Error Variances)

		Levene Statistic	df1	df2	Sig.
Literacy Score	Based on Mean	.074	1	126	.787
	Based on Median	.043	1	126	.837
	Based on Median and with adjusted df	.043	1	125.992	.837
	Based on trimmed mean	.065	1	126	.799

The homogeneity of variance test was conducted to test the similarity of variance in the score/value of reading comprehension ability on the theme of ecological wisdom in clusters or groups of students taught with the SQ3R method and students taught with the direct method. The total N was 128 students. The statistical test used is Levene's test. The test criteria are if the calculated significance value > 0.05 , the data is declared to have a homogeneous variance. The results of the variance homogeneity test can be observed in table 6 below.

The test results in both groups, with df (degree of freedom 1 and significance level $\alpha=0.05$ (5%) show the calculation results of $0.787 > 0.05$ (based on the average), $0.837 > 0.05$ (based on the median value), $0.837 > 0.05$ (based on the median value and degrees of freedom), $0.799 > 0.05$ (based on the trimmed average). Thus, it can be concluded that the two groups being compared are declared to come from a homogeneous population or the variance of the two groups is declared the same.

The balance test was conducted to test whether the groups being compared were balanced between the experimental and control groups. This balance test is carried out to ensure that the groups being compared have equal or the same initial ability. This is to ensure that if an experiment/treatment is carried out on the compared groups, then it is solely due to the provision of treatment, and not due to other factors or different abilities between groups. This balance test was conducted on the pretest data through a statistical test in the form of an independent t-test. The following are the results of the calculation of the balance test between the two groups in table 7 below.

Table 7. Balance Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
Balance Test	Equal variances assumed	3.184	.077	-1.075	118
	Equal variances not assumed			-1.075	113.736

The results of the balance test (independent t-test) on the experimental group and control group with the N value of the experimental group of 64 and the N control group of 66 with a significance level of $\alpha = 0.05$ (5%) show a value of $0.077 > 0.05$. This means that the experimental group and control group are declared balanced or have the same initial average value and the two groups can be compared. This means that the experimental and control groups are declared balanced or have the same initial average value and the two groups can be compared.

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Table 8. One-Way Anova test (Tests of Between-Subjects Effects)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1624.500 ^a	1	1624.500	60.960	.000	.326
Intercept	853797.781	1	853797.781	32039.170	.000	.996
Group	1624.500	1	1624.500	60.960	.000	.326
Error	3357.719	126	26.649			
Total	858780.000	128				
Corrected Total	4982.219	127				

Then, after fulfilling the analysis requirements test, hypothesis testing is carried out with the one-way anova test. Hypothesis testing with inferential statistics is a test to determine whether the proposed null hypothesis (Ho) is accepted or rejected. Hypothesis testing is done by one-way anova test.

The one-way anova test was used to determine the difference in reading comprehension ability between students taught with the SQ3R method and students taught with the direct method. Then, the partial eta squared effect size test was also conducted to determine the amount of influence of the application of learning methods on reading comprehension literacy skills. The results of the one-way anova test can be observed in table 8 below.

Based on the calculation of one-way analysis of variance in table 8 above, the F-count is 60.960 with a significance value of 0.000, which means that the applied learning method has a significant difference/influence on the score of reading comprehension ability on the theme of ecological wisdom. Thus, the research hypothesis (H0) which states that “there is no significant difference in reading comprehension ability on the theme of ecological wisdom between students taught with the SQ3R method and the conventional (direct) method,” is rejected, so the alternative hypothesis (H1) which states that “there is a significant difference in reading comprehension ability on the theme of ecological wisdom between students taught with the SQ3R method and the conventional (direct) method,” is accepted.

Then, the effect size test was conducted to determine the magnitude of the effect of the application of the reading method. The effect size test was conducted with the partial eta squared test which showed a score of 0.326 which means that the amount of influence of the application of the method on reading comprehension ability with the theme of ecological wisdom was 32.6%. This effect size test shows that the effect of the applied method treatment has a large contribution/effect on students' reading comprehension ability. Based on the average value of the final test minus the initial test, in the groups taught with the SQ3R and direct reading methods, it is known that students taught with the SQ3R method have a percentage increase in value of 9.33% and students taught with the direct method have a percentage increase of 4.15%. Thus, it is concluded that the SQ3R method is declared to have a greater effect/influence than the direct method in influencing reading comprehension ability.

The findings of this study are in line with the findings of Aramide & Abimbola (2021) who found the effectiveness of the SQ3R method as a reading alliteration resolution strategy in senior high schools in Nigeria. The study found that there was a negative attitude of students towards reading activities. This is reflected through the low desire of students to read. The research conducted by Aramide & Abimbola (2021) was aimed at examining the application of the SQ3R method in increasing students' interest in reading. The results of this study showed that there was a significant decrease in alliteration among high school students.

Another study by Katsara (2023) which examined multicultural values as a source of language diplomacy also found that the SQ3R method can be used as a strategy in increasing students' understanding of multicultural topics and their relevance in cultural diplomacy. Setyaningsih's research (2019) used SQ3R as an approach to form students who are skilled in critical literacy. This research combined the SQ3R framework with the FRF framework. The results showed that critical literacy can be integrated in English language learning for non-native speakers.

In addition to the effectiveness of the SQ3R method in learning, Kusumawati, (2019) research describes students' perceptions of the application of the SQ3R method. The results showed that the application of technology-assisted SQ3R method was beneficial for students in achieving students' reading comprehension goals. Taslidere & Eryilmaz (2012) conducted a study on the combined or partial effects of applying KWL and SQ3R reading methods, as well as material on conceptual physics approaches, on students in Ankara, Turkey. The results of this study showed that there was a combined effect of integrated reading strategies (SQ3R and KWL) and conceptual physics approach giving a significant effect together in improving students' learning outcomes compared to individual reading methods.

Reading with SQ3R has a better level of effectiveness to improve students' understanding and train the brain to process information efficiently so as to encourage students to be academically successful (Ahad et al., 2024). This is because the SQ3R reading method

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plays a role in directing the direction of reading activities in a purposeful manner so that students are active in their information acquisition efforts (Malhotra & Mehta, 2015). Almakahleh & Alramamneh (2019) also proved the effectiveness of the SQ3R method in learning to read for students with special needs. The experimental results showed that students who were taught with the SQ3R reading method were found to have higher reading comprehension scores than those taught with other methods.

Dionisio Murakami (2024) conducted a comparative study on the SQ3R method and the SOAR reading method. The sample of this study was one hundred high school students from three different fields of study. The results showed that students preferred to use the SOAR method for their academic needs. Artis (2008) research also found that the SQ3R method is not a method that can be applied to every type of reading or book. The SQ3R method tends to be more suitable for social sciences than exact sciences such as statistics, finance, and accounting. This is because reading in the exact sciences requires a collapsed and problem-solving-based reading strategy. Thus, the SQ3R method is not an appropriate method.

The results of Sugiharti et al., (2020) research show that the application of SQ3R in reading learning can also be done in elementary school students. Sugiharti et al., (2020) research showed that students who were taught with the SQ3R method had a significant increase in their reading ability. This is known from the results of the pretest scores which show that students passed the initial test by 33.33% and after being treated, students who passed the test were 100%. This shows that at the elementary school level, SQ3R has good effectiveness.

Other research findings by Sudarsono & Astutik (2024) also showed the successful application of the SQ3R reading method to students' reading scores. The application of SQ3R also shows a positive response and increases students' learning motivation. Students' activeness in learning English also increases through the application of the SQ3R method, as well as adding valuable insights in the learning process. Adila (2019) research also confirmed that SQ3R has a significant impact on the reading comprehension skills of junior high school students in Indonesia.

V. CONCLUSIONS

There is a difference in reading comprehension ability on the theme of ecological wisdom between students taught with the SQ3R method and those taught with the conventional (direct) method. The result of one-way anova test shows that $F\text{-count} > F\text{-table}$ with a value of $60.690 > 2.45$ at a significance level of $0.000 < 0.05$. The score shows that there is a significant difference between the experimental group (SQ3R) and the control group (direct). Then, the test results of the effect size test with the partial eta squared test showed a score of 0.326. The score can be interpreted that the amount of influence of the application of learning methods on reading comprehension skills with the theme of ecological wisdom is 32.6% or in the category of having a large effect. Based on the comparison of the average value of the final test minus the initial test, in the groups taught with the SQ3R and direct reading methods, it is known that students taught with the SQ3R method have a percentage increase in value of 9.33% and students taught with the direct method have a percentage increase of 4.15%. It can be concluded that the SQ3R method is stated to have a greater effect/influence than the direct method in influencing students' reading comprehension ability. Therefore, the alternative hypothesis which states that the ability to read comprehension on the theme of ecological wisdom between students taught with the SQ3R method is better than students taught with the conventional method (direct) is accepted.

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