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The Comparison between Using SQ4R and Jigsaw Techniques Toward the Students' Reading Comprehension

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ABSTRACT

This research examines how effective the SQ4R and Jigsaw techniques are in helping students understand what they read. This research aims to find out whether there is a significant difference in students' reading comprehension between those who are taught with SQ4R and the Jigsaw technique. This research used a quasi-experimental design. The sample was selected through simple random sampling. The subject of this research was XI AK 3 consisting of 31 students and XI AK 4 consisting of 29 students. They were taught by using SQ4R technique for experimental class 1 which is the XI Accounting 3 and Jigsaw technique for experimental class 2 which is the XI Accounting 4. The data was gathered through pre-test and post-test conducted in both experimental classes. The researcher implemented the treatment over three sessions for each class. In analysing the data, the mean pre-test score for the experimental class 1 (using the SQ4R technique) was 68,71, while the mean post-test score was 87,58. The mean score of the students' pre-test experimental class 2 (Jigsaw technique) was 68,44 and the mean score of post-test was 80,34. The results of Mann Whitney U test indicated that $P_{value} < 0,005$ ($0,002 < 0,005$) leading to the rejection of the null hypothesis (H0) and the accepteance of the alternative hypothesis (Ha). Therefore, it can be concluded that there was a significant difference in the reading comprehension of students in the experimental class 1 taught using the SQ4R technique compared to those in the experimental class 2 taught using Jigsaw technique.

KEYWORDS: SQ4R Technique; Jigsaw Technique; Students' Reading Comprehension; Teaching Learning Activity

1 INTRODUCTION

Reading offers numerous benefits for language learners, including acquiring information, learning materials, and reading for pleasure. According to Suyarov (2022), learners may read to gain knowledge or critique a researcher's ideas and writing style. Harmer, as cited by Herljimsi et al. (2014), asserts that reading models good writing, grammar, vocabulary, and punctuation, providing real examples of sentence, paragraph, and passage structures. Reading skills are foundational in education, enhancing language proficiency, vocabulary, grammar, and comprehension, which are essential for accessing

knowledge, ideas, and solutions. Lianah and Sari (2020) emphasize that reading comprehension is crucial for students' academic engagement and success.

Mastering reading is essential for students to develop a good command of language, vocabulary, grammar, and the conveyed messages. However, the students needed some effort to motivate their learning because they assumed that English Grammar is complex (Puspitasari, 2023). The difficulty in understanding it causes not a few of the students to finally give up learning English (Puspitasari et al., 2023). According to Mikulecky and Jepris in Ismail, (2017), reading introduces new ideas, facts, knowledge, experience, enjoyment, and problem-solving skills, making it highly beneficial. All of these objectives require sufficient reading skills. Effective reading comprehension relies on cognitive abilities, background knowledge, vocabulary, and understanding text complexity and types. According to Mikulecky and Jepris in Ismail, (2017), a statement through reading people can find out new ideas, facts, knowledge, experience, enjoyment, and even problem-solving. Therefore, the ability to read tests in any form will bring great benefits to the reader. However, English reading can be challenging for EFL students, as evidenced by Indonesia's low ranking in the PISA 2022 assessment and the 2022 English Proficiency Index by Education First, where Indonesia scored 469, ranking 79th out of 113 countries. Indonesian students struggle with reading and understanding English texts, often due to inadequate teaching techniques. Harmer in (Ardiansyah & Jaya, 2020) suggests that repeated reading enhances comprehension. Yet, Indonesian students face difficulties such as summarizing main points and slow reading due to reading aloud and using fingers to follow text, as noted by Smith (2012).

Effective teaching learning techniques are necessary to improve reading comprehension. According to Ginting, et al (2021), teachers must understand and choose appropriate methods, strategies, or learning approaches that will be used. In addition, increasing the stimulation and motivation of language learning for students by utilising new pedagogical strategies rather than teacher-centred strategies that are more common in traditional classrooms can also affect student achievement (Wijanarko et al., 2017). Therefore, the use of teaching learning techniques is important to give understanding material to students. Having reflective thinking skills is vital for enhancing their learning capacity (Yuniasti et al., 2024).

An interview with an English teacher and students at SMKN 2 Pacitan revealed students' low reading achievement and difficulties in interpreting words, finding key points, and understanding narrative texts. Interviews with students showed that the learning strategy used was still Conventional Learning Strategy with lecture technique. So that when researchers observed students' mastery of the material many of them did not understand well. Therefore, the selection of learning techniques to be used by teachers is one of the most important ways to improve the learning process. To overcome this, it is essential to implement techniques that actively engage students in learning English, particularly in improving their reading comprehension of narrative texts, and one such technique is the SQ4R technique, which involves Survey, Question, Read, Recite, Record, and Review steps. According to Basar & Gurbuz (2017: 133), the SQ4R technique can be utilized to enhance students' cognitive abilities by improving reading comprehension, maintaining full concentration, and honing their skills in guessing and critical thinking through six steps (Survey, Question, Read, Recite, Record, and Review). In the initial step, survey, Coon and Mitterer (2013: 2) explain that students will engage in skimming. The next step, question, involves students formulating questions to gain a deeper understanding before they begin reading. Following this, students read the entire text to find answers to their questions. The process continues with the step of recite, where students can reread to check for any missed answers. After reciting and answering the questions in their own words, students summarize the text. Subsequently, students engage in self-reflection and critical thinking. The final step is review where students revisit the questions and answers they have formulated.

Another effective method is the Jigsaw technique, which promotes collaborative learning. Coetzee (2008: 108) in Sihombing (2022), describes it as a team approach where each group member is responsible for a part of the task, contributing to the group's success. This research aims to compare these two techniques to determine which one is more helpful for students in their reading comprehension. Jigsaw technique is regarded as collaborative learning technique, where students work collectively to achieve a shared learning objective and complete specific tasks and assignments together. Therefore, this

research investigates the differences in learning results between the SQ4R and Jigsaw techniques. The researcher is motivated to investigate this because there is a lack of research directly comparing these two techniques in teaching reading. This research aims to compare these two techniques to determine which one is more helpful for students in their reading comprehension.

2 METHOD

This research used a quasi-experimental design, which means that it cannot control all aspects that may affect the experiment's implementation. This research has two variables, namely the independent variable (X) learning technique using SQ4R technique (X_1) and learning technique using Jigsaw technique (X_2), while the dependent variable (Y) is the student's reading skill learning outcomes. Data were collected through a learning outcome test designed to compare the effectiveness of these learning techniques. The tests included a pre-test and post-test for each experimental group. Both experimental classes received a pre-test before any treatment was applied, and a posttest was administered after the instructional intervention was completed. This test was conducted after the narrative text learning was completed. The research's target population were all grade XI students in SMK Negeri 2 Pacitan. The target population was all students of class XI AK SMKN 2 Pacitan in the even semester of the 2023/2024 academic year. The selection of classes using random sampling is using class XI AK 3 and XI AK 4 with each class totalling 31 students and 29 students. The data obtained will be tested and analysed using statistical tests, through prerequisite tests, namely normality tests using the Kolmogorov-Smirnov test and a homogeneity test using Lavene's test, both at a significant level of $\alpha = 0.05$. following these, the data were further analysed using non-parametric statistical analysis, through the Mann-Withney U test, also at a significant level of $\alpha = 0.05$.

3 RESULT AND DISCUSSION

3.1 Result

3.1.1 The Descriptive Statistics Test

The pre-test and post-test results for the experimental groups serve crucial roles in this research. The pre-test establishes the average score of each experimental group before any instructional treatment is applied. In contrast, the post-test measures the average score after the treatment has been administered. By comparing these scores, the research assesses the impact of the SQ4R technique and the Jigsaw technique on the students' reading skills, providing insight into the effectiveness of each instructional technique in improving student outcomes.

Table 1. The Descriptive Statistics Test Result

	N	Range	Min	Max	Mean	Std. Deviation
Pre-test Experimental Class 1	31	35	50	85	68,71	10,035
Post-test Experimental Class 1	31	25	70	95	87,58	7,173
Pre-test Experimental Class 2	29	35	50	85	68,44	10,009
Post-test Experimental Class 2	29	35	60	95	80,34	7,760
Valid N (listwise)	29					

From the table above, it is evident that the mean pre-test score for experimental class 1, consisting of 31 students is, 68,71, with a maximum score of 85 and a minimum score of 50. The mean post-test score for this class is 87,58, with a maximum score of 95 and a minimum score of 70. So, the result

indicates a significant different between the pre-test and post-test scores for experimental class 1. Meanwhile, in experimental class 2, the mean pre-test score is 68,44, with a maximum score of 85 and a minimum score of 50. The mean post-test score for this class is 80,34, with a maximum score of 95 and a minimum score of 60. Similarly, there is a significant different between the pre-test and post-test scores for experimental class 2.

3.1.2 The Validity Test Result

The test was valid as it provided sufficient evidence correlating with the ability being assessed. The validity was calculated using the following formula:

$$r_{xy} = \frac{n\sum X_1 Y - (\sum X_1)(\sum Y)}{\sqrt{\{n\sum X_1{}^2 - (\sum X_1)^2\}\{n\sum Y^2 - (\sum Y)^2\}}} \quad (1)$$

$$= \frac{(31)(188025) - (2130)(2715)}{\sqrt{\{(31)(149150) - (2130)^2\}\{(31)(239275) - (2715)^2\}}} =$$

$$r_{xy} = \frac{n\sum X_1 Y - (\sum X_1)(\sum Y)}{\sqrt{\{n\sum X_1{}^2 - (\sum X_1)^2\}\{n\sum Y^2 - (\sum Y)^2\}}}$$

$$= \frac{(31)(188025) - (2130)(2715)}{\sqrt{\{(31)(149150) - (2130)^2\}\{(31)(239275) - (2715)^2\}}} =$$

$r_{xy} = 0,72$

Table 2. Interpretation of Validity

r_{xy}	**Validity specification**
0,00-0,20	Very Low
0,20-0,40	Low
0,40-0,60	Fair
0,60-0,80	High
0,80-1,00	Very High

According to the data, the researcher concludes that the mean of validity test is 0,72, which falls under the "high" category based on the criteria. Therefore, the test is considered **valid**.

3.1.3 **The Reliability Test** Result

In this research, the reliability of the test was calculated using the following formula:

$$r_{xx} = \frac{2(r_{xy})}{1 + r_{xy}} \quad (2)$$

Where:

r_{xx} = the reliability of the test

r_{xy} = correlation coefficients between the two tests

$$r_{xx} = \frac{2(r_{xy})}{1 + r_{xy}}$$

$$r_{xx} = \frac{2X0,72}{1+0,72} = 0,83720 = \frac{2X0,72}{1+0,72} = 0,83720$$

$r_{xx} = 0,84$

Table 3. Interpretation of Reliability

r_{xx}	Reliability specification
0,00-0,20	Very Low
0,20-0,40	Low
0,40-0,60	Fair
0,60-0,80	High
0,80-1,00	Very High

From the data calculated above, the researcher obtained a reliability test of 0,84. This indicates a very high level of reliability, confirming that the test used in the research is indeed **reliable**.

3.1.4 The Normality and Homogeneity Test Results

After administering the test and obtaining the results, the students' pre-test and post-test scores will be analysed using normality and homogeneity tests.

Table 4. The Normality Test Result

	Class	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Reading Comprehension Learning Outcomes	Pre-test Experiment Class 1 (SQ4R)	0,153	31	0,062	0,919	31	0,022
	Post-test Experiment Class 1 (SQ4R)	0,210	31	0,001	0,870	31	0,001
	Pre-test Experiment Class 2 (Jigsaw)	0,158	29	0,061	0,916	29	0,024
	Post-test Experiment Class 2 (Jigsaw)	0,258	29	0,000	0,905	29	0,013
a. Lilliefors Significance Correction							

According to the results of the Kolmogorov-Smirnov normality test presented in the table above, the pre-test data for experimental class 1 has a significance (Sig.) value of 0.062, while the post-test has a Sig. value of 0.001. In addition, the pre-test for experimental class 2 has a Sig. value of 0.061, and the post-test has a Sig. value of 0.000. Because the Sig. value is less than 0.05, it can be concluded that the normality assumption is not accomplished.

3.1.5 Testing the Hypothesis

	Reading Comprehension Learning Outcomes
Mann-Whitney U	244,000
Wilcoxon W	679,000
Z	-3,117
Asymp. Sig. (2-tailed)	0,002

a. Grouping Variable: Kelas

To compare the samples that are not normally distribution, specifically post-test result of students' reading comprehension between Experiment class 1 and Experiment class 2, the Mann-Whitney U Test was applied. The test results showed an Asymp. Sig. value of 0.002, which is smaller than 0.05 (<0.05). Since the p-value is below 0.05, the null hypothesis is rejected, indicating a statistically significant difference in the post-test scores between the SQ4R and Jigsaw groups. This indicates that the SQ4R technique is more effective than the Jigsaw technique in enhancing students' reading comprehension learning outcomes in class XI AK students of SMK Negeri 2 Pacitan.

3.2 Discussion

The findings of this study reveal that both the SQ4R and Jigsaw techniques are effective in enhancing students' reading comprehension, but the SQ4R technique appears to be more effective. The significant improvement in the post-test scores for the SQ4R group suggests that this technique better supports students in comprehending narrative texts.

The result of this study provides insightful comparisons between the SQ4R and Jigsaw techniques in enhancing students' reading comprehension. By analysing the pre-test and post-test scores, several key points can be drawn about the effectiveness of each technique.

3.2.1 Effectiveness of the SQ4R technique

The SQ4R (Survey, Question, Read, Recite, Record, Review) technique showed significant effectiveness in improving students' reading comprehension scores. The structured approach of this technique ensures that students engage with the text at multiple levels, facilitating deeper comprehension and retention. Here are the important aspects that contribute to the success of the SQ4R technique:

1. Engagement with the Text
   The SQ4R method encourages students to survey the text and ask questions before diving into the reading in detail. This preparatory stage helps students determine the purpose of reading and stimulates curiosity.
2. Active Reading
   During the reading stage, students actively seek answers to their questions, which improves focus and comprehension. This method ensures that students engage in the learning process, rather than merely being passive recipients of information..
3. Recitation and Note-taking
   Reciting and recording information helps to reinforce what has been read. These steps require students to articulate their understanding, which helps in memory retention and comprehension.
4. Review
   The final review stage consolidates learning. By revisiting the material, students reinforce their knowledge and fill in gaps in understanding.

3.2.2 Effectiveness of the Jigsaw Technique

Although the Jigsaw technique also showed positive results, it was less effective than the SQ4R technique in this study. The Jigsaw method's focus on collaborative learning and information sharing provides some benefits, but also has limitations:

1. Collaborative Learning
   The Jigsaw technique fosters a collaborative learning environment where students rely on each other to understand different parts of the text. This peer teaching method can increase engagement and motivation.

2. Diverse Perspectives
   Through collaboration, students gain exposure to diverse perspectives, which can enhance critical thinking and broaden their understanding of the text.
3. Reliance on Group Dynamics
   The effectiveness of the Jigsaw technique depends largely on the dynamics and abilities of the group members. If some students are less engaged or less able to explain their part, this can negatively impact the understanding of the group as a whole.
4. Focus on Segments
   As students focus on a particular segment of the text to teach their peers, there is a risk that they may not gain a comprehensive understanding of the entire text.

3.2.3 Comparative Analysis

The comparative analysis showed that although both techniques improved reading comprehension, the SQ4R technique gave higher results overall. The structured and individual-centred nature of SQ4R likely contributed to its higher effectiveness. By requiring students to engage deeply with the entire text on multiple levels, SQ4R ensures a more thorough understanding and retention of information.

In contrast, the Jigsaw technique's emphasis on teamwork and focus on specific sections, while beneficial for collaborative skills and motivation, may not always guarantee thorough understanding. Reliance on group dynamics and individual student performance within the group may lead to variability in results.

4 CONCLUSION

In conclusion, this research shows that the SQ4R technique is more effective than the Jigsaw technique in improving students' reading comprehension of narrative texts. The structured, multi-step approach of SQ4R encourages deep engagement and critical thinking, leading to significant improvements in comprehension. However, the Jigsaw technique remains valuable for its collaborative learning benefits and can be used effectively in different educational contexts. Educators are encouraged to apply the SQ4R technique to achieve better academic outcomes, while considering the strengths of the Jigsaw technique for collaborative learning and peer interaction.

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REFERENCES

Ardiansyah, F., & Jaya, A. (2020). Extending the Students' Narrative Text Comprehension through Reading SMART Protocol. *Esteem: Journal Of English Study Programme*.

Aronson, E. (2000). Jigsaw Classroom. Retrieved from: http://www.jigsaw.org/.

Başar, M., & Gürbüz, M. (2017). Effect of the SQ4R technique on the reading comprehension of elementary school 4th grade elementary school students. *International Journal of Instruction*, 131–144. doi:10.12973/iji.2017.1029a

Coon, D. & Mitterer, J. O. (2013). Psychology: A Journey. *Belmont: Cengage Learning*.

Herljimsi, B., Siti, N., & Ginting, A. (2014). Lexical Density of English Reading Texts for Senior High School. Improving the Students' Reading Skill through Translation Method.

Ismail, Hijril., et al. (2017) Improving the Students' Reading Skill through Translation Method. *Journal of English Education JEE*. Vol. 2, No. 2

Lianah, M., & Sari, N. J. (2020). Improving Students' Reading Comprehension by Using Concept Oriented Reading Instruction (CORI) Strategy. *Linguistic, English Education and Art (LEEA) Journal*, 4(1), 142–149. https://doi.org/10.31539/leea.v4i1.1480

OECD. (2023). PISA 2022 Results (Volume 1): The State of Learning and Equity in Education. *PISA. OECD Publishing, Paris*. https://doi.org/10.1787/53f23881-en.

Puspitasari, I. (2023). Groundbreaking Techniques to Assist Students in Learning Grammar. Jurnal Penelitian Pendidikan, 15(2), 96–105. https://doi.org/10.21137/jpp.2023.15.2.3

Puspitasari, I., Nadira, M., Pureka, Y., & Azizah, N. (2023). Integrating ICT: EFL Students' Challenge in Learning Grammar.

Richardson, J. & Morgan, R. (1997). Reading to learn in the content qreas. *Belmont. CA: Wadsworth, Publishing Company.*

Sihombing, N, et al. (2022). The Effect of Using Whispering Technique and Jigsaw Technique in Teaching English Vocabulary in The Fourth Grade of The Elementary School. *Scientia journal*. Vol.11 No.1

Smith, Frank. (2012). Understanding Reading: A Psycholinguistics Analysis of Reading and Learning to Read. Routledge. *Third Avenue. New York*

Suyarov, A. (2022). Goals and Techniques. *Texas Journal of Multidisciplinary Studies Teaching Reading*. https://zienjournals.com

Wijanarko, D., Hadi, S., Puspitasari, I., PGRI Pacitan, S., Cut Nyat Dien No, J., Kebon, -a, Pacitan, K., & Pacitan, K. (2017). The influence of playing digital game in distance learning towards students' speaking skill. / Journal of English Language Teaching, 6(1). http://journal.unnes.ac.id/sju/index.php/elt

Yuniasti, I., Puspitasari, Y., & Kusuma, D. I. (2024). CULTIVATING REFLECTIVE THINKING SKILLS THROUGH GAMIFICATION IN STUDENT TEAMS ACHIEVEMENT DIVISION (STAD). 10(2). https://doi.org/10.32682/jeell.v10i2.3499

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