

The Effect of Using the SQ4R Strategy on Tenth Graders' English Reading Comprehension

Shoma Hussein Al-Alwan^{1*} Prof. Mahmoud Sulaiman Bani Abdelrahman²

1. Teacher at the Ministry of Education, PO box 1646, Amman, Jordan

2. Faculty of Educational Sciences, Al-Hussein Bin Talal University, PO box 20, Ma'an, Jordan

* E-mail of the corresponding author: shomaalabbadi@gmail.com

Abstract

This study investigated the effect of using the SQ4R strategy on tenth graders' English reading comprehension during the academic year 2022/2023. The study is quantitative and employs a quasi-experimental design. The school was purposefully selected on convenient grounds. Fifty EFL female students participated in the study at Um Jouzah Secondary School for Girls and were distributed into 25 students for the experimental group and 25 students for the control group, assigned by draw. To achieve the aim of the study, the instrument was used: pre-post-tests on reading comprehension in both groups. All the text topics were chosen from the Action Pack10 textbook for the first semester, the reading comprehension test was developed, content validated, and piloted as appropriate. The computed reliability for internal consistency for the comprehension test was 0.82. The results showed the positivity of the SQ4R strategy on improving reading comprehension for the sample of the study, the study found a significant difference between the experimental and control groups, with the experimental group scoring 15.36 and the control group scoring 11.08. The researcher recommended that further research to integrate technology into SQ4R to enhance engagement and accessibility to learners, as she recommended that regular curriculum updates, and fostering a collaborative environment are crucial for successful implementation, so the Ministry of Education should incorporate SQ4R into the curriculum to promote collaborative learning.

Keywords: Reading comprehension, the SQ4R strategy

DOI: 10.7176/JEP/15-1-06

Publication date: January 31st 2024

1. Introduction

Language serves a variety of purposes both in the life of the individual and in society; it allows people to interact with one another, share experiences, express their thoughts and feelings, persuade, and influence others, and even develop their ability to think for themselves. Language is an important tool for social interaction in society and plays a crucial role in preserving the cultural and civilizational heritage of a society. Furthermore, language enables individuals to transmit knowledge and information across generations, ensuring the continuity of traditions and customs.

English is one of the most widely used and spoken languages in the world. It is also an international language. Almost everyone in the world speaks English, and they do so to share information, ideas, experiences, and perspectives as well as to convey meaning. English, like any other language, has four language skills: listening, speaking, reading, and writing. These skills work together as a linguistic system to support proper linguistic development. As a result, everyone is dependent on language learning, research, cognitive development, active linguistic communication, problem-solving, and enjoyment. (Ruddell & Ruddell, 1994).

These skills are essential for effective communication in English, enabling individuals to understand and be understood in various contexts. Moreover, developing these language skills also enhances critical thinking abilities and opens opportunities for personal and professional growth. Therefore, it is crucial to foster a comprehensive approach to language learning that encompasses all four skills.

The Ministry of Education (MOE) in Jordan places a focus on teaching English as a foreign language from elementary school through university. In junior high school English, the student should learn the four language skills listening, speaking, reading, and writing (Depdiknas, 2006). Reading is one of the most crucial abilities to master. Word recognition is a step in the reading process that helps students develop their reading comprehension. The goal of reading instruction is to improve students' ability to read English texts quickly and accurately. According to Suparman (2005), reading must be meaningful as well as efficient and effective, whether it is for enjoyment or information. The role of the text reader is one that students assume in a reading comprehension class. Students must therefore be able to understand reading material that is displayed as written text. When reading and learning new material, students must be able to use their acquired reading skills. Skills must be clearly applicable. Students must be conscious of their reading abilities (Simanjuntak, 1988).

In addition, The English language curricula's General Guidelines and General and Specific Outcomes (MOE, 2006) made the most of students' comprehension of written English in a variety of straightforward, real-world informational and literary texts. In both printed and digital forms, reading is the primary method of learning, according to (Balqees, 2002). Most learners' future careers and education may depend on having this linguistic

ability (Almanza, 1997; Erliana, 2011 & Nassir, 2014). In addition, it is considered an excellent source of language exposure (Hedgcock & Ferris, 2009).

Furthermore, students should be able to apply different reading strategies depending on the purpose of their reading, such as skimming for general information or scanning for specific details. Additionally, students need to develop critical thinking skills while reading, allowing them to analyze and evaluate the content they encounter.

Reading is perceiving a written text to understand its contents or saying a written text a loud (Richards & Schmidt, 2002:443). Goodman (1970: 5) defined reading as “a complex process by which a reader reconstructs, to some degree, a message encoded by a writer in graphic language.” It can be entertaining, motivating, and a powerful tool for changing experiences if written messages can be understood. Because of this, texts can present contrasting viewpoints on the world and encourage students to think more creatively. We need to return to the significance of reading for meaning in this context. Reading is a key component of teaching and learning because it considers the conditions under which a developing child is required to extrapolate and apply meaning from the text.

Tracey and Morro (2017) stated constructivism theory is the foundation for reading learning. They claimed that when constructivism theory is used in reading lessons, metacognition contributes to the development of a constructive comprehension of the content that has been accessed and read. Students can actively create knowledge and concepts with the information learned during reading and comprehension lessons through constructivist reading lessons as well. with the obtained information during reading and comprehension lessons. Students can develop understanding through reflection on their interactions with the objects and concepts presented in the texts (Yahya, Ghazali, Shamsudin & Roselan, 2008).

Reading comprehension skills make up a significant portion of language production and are a key component of other language skills according to (Megawati, 2017). It also helps learners understand other subjects. Helping students develop their knowledge and abilities is an important goal of reading comprehension instruction if they are to become proficient readers. Concern should be expressed if you find it difficult to understand the meaning of a text. In addition, reading comprehension is crucial for academic success because it helps us increase our vocabulary, spell better, and write better. It also helps us remember grammar rules. Thus, reading is a fundamental and incredibly useful skill at every level of learning, both inside and outside of the classroom. Reading is done in class regardless of the subject matter, including the arts and sciences.

Each level of reading comprehension is different. Barrett (1972) distinguished four types of them: Literal, recognition (recall), inferential, and appreciative. Shastri (2010) states there are five different levels of reading comprehension: global, local, referential, inferential, and evaluative. In addition, Richards and Schmidt (2010) introduced the literal, inferential, critical (or evaluative), and appreciative levels of reading comprehension.

Reading comprehension is not only important for academic success but also for personal growth and development. It allows us to explore different perspectives, learn about various topics, and enhance critical thinking skills. Moreover, reading helps improve our overall communication skills as it exposes us to different writing styles and techniques. Therefore, cultivating strong reading comprehension skills is essential for lifelong learning and success in all areas of life.

Students must comprehend, evaluate, and apply the knowledge they learn from reading to achieve academic success. Furthermore, the amount of written material in all academic fields of study increases significantly as students move to different locations. For students to meet the requirements and learning goals required in the classroom, they must, therefore, be proficient in reading comprehension. For example, learning text-based information helps students quickly identify information that is relevant to the text, filter out unnecessary information, and decide which important information to focus on. (Clarke, Truelove, Hulme, & Snowling, 2013)

Reading comprehension was described as "the process of obtaining and producing meaning through contact with and participation in written language" (RAND Reading Study Group, 2002, p. 11). Additionally, since the goal is to understand the text rather than derive meaning from specific words or sentences, comprehension necessitates that the reader be familiar with the abilities necessary to identify words and expressions in a text, determine the relationship between the paragraphs and ideas of the text being read, and connect the author's ideas (Texas Educational Agency, 2002).

Whereas reading comprehension is a skill that students struggle to learn. They struggle with vocabulary development and comprehension. Because they don't comprehend the meaning of the content, they occasionally make mistakes when they impart information to others from the sources they obtain. The meanings of the challenging words, sentences, idioms, and phrases are not clarified because they only read the textbook, this appears to be the result of extremely limited traditional communication techniques that make it difficult for them to communicate effectively (Chen-Hong Li, Min-Hua Wu, & Wen-Ling Lin, 2019; Baptist, 2018; Meyers & Jones, 1993). Several local studies, including Bataineh & Al-Sakal, 2021; Assaf, Al-Jamal, & Rababeh, 2020; and Al-Qatawneh, 2005, highlighted the significance of improving the EFL context learning process quality in Jordan. For instance, Jordanian EFL learners are anticipated to make determined attempts to enhance their linguistic competence through language reading comprehension skills (Assaf et al., 2020).

Therefore, it is essential to use various strategies in the educational sector to develop reading performance skills, and the upgrading of students' levels has become a major goal of the reading process. As a result, improving student levels and developing reading performance skills have emerged as two of the process' main objectives. The main goal of teaching reading is to give students the skills they need to use it as a tool for learning, understanding, and comprehension, as well as to gain lifelong experiences and develop self-interest and tendencies. This will help them become readers who are active, vital, self-organized, and independent (Greenway,2002): Due to this, there is increasing interest in conducting research and studies in the area of reading education, as well as developing teaching strategies and practices, to effectively contribute to the development of reading skills and their various levels, such as (Hidayati & Harnadi, 2020; Alzu'bi, 2020).

Metacognitive strategies aim to enhance learners' acquisition of various learning processes, give them the ability to take charge of and exert control over the cognitive processes involved in learning, support the active construction of knowledge, and motivate learners to reflect on their own thought processes. Metacognitive strategies are concerned with the learner's capacity to plan, monitor, control, and carry out his own learning. Students who engage in metacognitive processes become effective, independent, and purposeful learners by developing their own independent thinking, decision-making, and problem-solving abilities (El-Sayed, 2002). Metacognition helps learners develop their critical thinking skills. This strategy involves moving all the learner's cognitive activities, drawing on his prior knowledge, and combining it with the new information the learner gained from the text he had just read to create a new experience that the learner can apply to his practical scientific life. His strategy for thinking is working towards the goal, or it needs to be changed, according to his plan. (Abu Riyash, 2007)

Vercellotti (2018) states effective learning processes enable students to increase their achievement, this is what is meant by active learning. SQ4R is one of the active learning strategies that call for students to think critically and creatively. Additionally, it uses a student-centered approach (Abdel-Jawwad, 2018). Thus, every aspect of cognitive theory and schema theory forms the theoretical basis for the SQ4R strategy.

These theories emphasize the importance of engaging students in the learning process and connecting new information to their existing knowledge. By incorporating SQ4R into their study routine, students are encouraged to actively participate in reading, summarizing, and questioning the material, which helps them construct meaningful connections and deepen their understanding. This active engagement ultimately leads to improved learning outcomes and retention of knowledge.

To minimize reading challenges and maximize comprehension in their students, teachers of reading comprehension must research and employ efficient metacognitive reading strategies that can increase students' reading comprehension because they have the major goal of minimizing reading difficulties and maximizing comprehension. The SQ4R strategy is one of the strategies for understanding reading that involves several logical steps. In this case, students can add new vocabulary to the text in addition to reading it.

The SQ4R strategy consists of six steps: survey, question, read, recite, reflect, and review (Halik et al., 2022), which suggests that a reader must follow a set of systematic steps in the SQ4R strategy to better understand the reading's content. Teaching reading in schools requires the use of reading strategies, especially SQ4R (Hidayani et al., 2022). This makes students more engaged in the reading process, following systematic steps to help students more easily comprehend the reading content. Reading while using SQ4R is thought to be more satisfying because this strategy can encourage a person to better understand what he is reading by focusing on a text's or book's main idea or contents, both implicit and explicit. On top of that, the strategy's steps describe a scientific procedure, so it is hoped that any knowledge learned can be properly stored in one's long-term memory system (Wahyuningsih; Suhaili & Suryana, 2021).

One of the best strategies for remembering textbook material is SQ4R. The acronym SQ4R stands for six reading-related activities: survey, question, read, reflect, recite, and review. These activities are made to help you think about the information you read more deeply (Bernstein; Louis; Alison & Edward, 2008).

Vercellotti (2018) states effective learning processes enable students to increase their achievement, this is what is meant by active learning. SQ4R is one of the active learning strategies that call for students to think critically and creatively. Additionally, it uses a student-centered approach (Abdel-Jawwad, 2018). Thus, every aspect of cognitive theory and schema theory forms the theoretical basis for the SQ4R strategy.

These theories emphasize the importance of engaging students in the learning process and connecting new information to their existing knowledge. By incorporating SQ4R into their study routine, students are encouraged to actively participate in reading, summarizing, and questioning the material, which helps them construct meaningful connections and deepen their understanding. This active engagement ultimately leads to improved learning outcomes and retention of knowledge.

To minimize reading challenges and maximize comprehension in their students, teachers of reading comprehension must research and employ efficient metacognitive reading strategies that can increase students' reading comprehension because they have the major goal of minimizing reading difficulties and maximizing comprehension. The SQ4R strategy is one of the strategies for understanding reading that involves several logical

steps. In this case, students can add new vocabulary to the text in addition to reading it.

According to the assertion, SQ4R is a strategy used to aid reading activities in the learning processing class and aid students in understanding and retaining information from their textbooks. By following the steps of surveying, questioning, reading, reflecting, reciting, and reviewing, students engage with the material in a more active and meaningful way. This strategy encourages critical thinking and helps to solidify knowledge for long-term retention, remembering what they read.

The SQ4R learning model can be used to describe learning through experiences for a variety of purposes. According to Khusniyah (2017), the SQ4R strategy consists of six meaningful ways. This strategy encourages critical thinking and helps to solidify knowledge for long-term retention, students remember what they read through its systematic steps, where they must ascertain the type of text they are reading. Before coming up with questions that include the words why, what, where, when, who, and how. After reading the whole text, they try to remember the main point and subject. Then, after going over any relevant supporting information and challenging words, students explain the text's meaning to others.

The Jordanian educational system aims to advance students' command of the English language through the adoption of curricula and textbooks in classrooms to enhance their language skills, which include listening, speaking, reading, and writing, as well as to foster students' confidence, competence, and self-reliance in preparation for future careers and employment (MOE, 1991). The text is one of the most important elements of the reading activity because readers can interact with it and the author to understand the intended message through reading (Erliana, 2011).

In addition to curricula and textbooks, teachers play a crucial role in facilitating language learning by providing guidance and creating a supportive classroom environment. They can encourage students to actively engage with the text by asking thought-provoking questions and promoting discussions that deepen their understanding of the author's message. This interactive approach not only enhances language skills but also fosters critical thinking and analytical abilities, preparing students for success in their future endeavors. Hence the significance of the current study is to identify the effect of using the SQ4R strategy on tenth graders' English reading comprehension.

1.1 Statement of the Problem

According to the researcher's experience as an EFL teacher, reading comprehension is difficult for EFL students in Jordanian schools at the elementary and secondary levels. Students struggle to comprehend the written material, making it difficult for them to comprehend questions about literal, inferential, critical, and creative reading.

A further issue is that English and Arabic have different linguistic systems, which makes it difficult for our students to comprehend texts written in English, as the researcher has observed throughout her extensive career in education. Finding the text's or paragraph's main idea is a frequent area where they make mistakes.

Numerous modern education models offer educational strategies to help with learning the English language, especially reading comprehension. As a result, the researcher selected SQ4R as an efficient strategy for teaching reading comprehension. SQ4R offers students a simple, clear, and organized model in six discrete steps that have been designed and organized using logic, psychology, and science to help anyone who wants to learn to facilitate the process of permanent and continuous reading comprehension through self-learning for the reader.

The researcher also decided that it was necessary to research the impact of the SQ4R strategy on school students' reading comprehension because there are so few Arabic and local studies on the role of the strategy in learning English language skills in general and reading comprehension in particular, particularly in the Directorate of Salt. As a result, the researcher examined the effect of using the SQ4R (Survey, Question, Read, Recite, Reflect, and Review) strategy on tenth graders' English reading comprehension at Um Jouzah Secondary School in Salt Directorate of Education in Jordan.

1.2 Questions of the Study

The upcoming question is tackled in the following question: -

Are there any statistically significant differences at the level of significance ($0.05 \geq \alpha$) between the average scores of the experimental group and the controlled group on the post-test of the English Reading Comprehension scale attributable to using the SQ4R strategy vs. the conventional method?

1.3 Purpose of the Study

This study aimed to determine the effect of using the SQ4R (Survey, Question, Read, Recite, Reflect, and Review) strategy on tenth graders' English reading comprehension levels (literal, inferential, critical, and creative. pointed out in the following:

Identifying the differences between the average scores of students in the experimental group and the controlled group on the post-test of the English reading comprehension scale attributable to using the SQ4R strategy vs. the conventional method.

2. Literature Review

Siregar (2023) conducted a study aimed at improving students' reading skills in understanding argumentation texts and applying the SQ4R strategy to other texts or discourses by students at State High School 1 Dolok Panribuan. The research method used is the experimental method. In particular, the research was carried out in fifth grade. The empirical research design was a group pre-test and post-test design. The research instrument used is a test. The results mean that the average value of student learning outcomes in the experimental class was less or low before being given treatment and increased after being given treatment. This indicates an increase in student learning outcomes after being given treatment.

Wanissa (2023) examined the effect of the SQ4R strategy on students' reading comprehension of recount texts and what aspect of reading improved the most after implementing the SQ4R strategy. This study used quantitative research involving a sample of 30 students in eighth grade at State Junior High School 6 Natar. The data were collected using a reading test and analyzed using a paired sample t-test. The results showed that there was a significant effect on students' reading comprehension from the pretest (47.3) to the post-test (66.4). The aspect of reading that improved the most was specific information. SQ4R was likely effective for teaching reading.

Al-Borini (2022) conducted a study aimed at identifying the effectiveness of the six-step (SQ4R) strategy in the development of reading comprehension and analytical thinking skills in the English Language among basic-stage students. The quasi-experimental design was used. The study sample was (45) male and female students from the seventh grade at "Hawa and Adam Primary Mixed School" in Jerash Governorate in the second semester of 2021/2022. The experimental group consisted of (22) students, and the control group consisted of (23) students, who were given two tests; One to measure reading comprehension skills consisted of (3) questions distributed into three domains: literal, deductive, and critical comprehension skills, and the other to measure analytical thinking skills consisting of (15) questions. Its validity and reliability were verified. The teacher's guide was prepared. The result showed that a statistically significant effect at ($\alpha=0.05$) of the teaching strategy (SQ4R) in developing reading comprehension skills as a whole, and in the literal and critical comprehension skills, furthermore it was not statistically significant in the deductive comprehension skill. Also, it showed a statistically significant effect on developing analytical thinking skills as a whole.

Halik & Erawaty (2022) conducted a study aimed at applying of Survey Learning Model, Question, Read, Reflect, Recite, Review (SQ4R) to Improve Learning Outcomes in Reading Comprehension fifth-grade Students of "local Technical Implementation Unit of Public Elementary School 150 Barru", to achieve the purpose of the study, they used a qualitative classroom action research (CAR) study on fifth-grade students in Public Elementary School 150 Barru. The approach used is qualitative with the type of classroom action research (CAR). The study involved 20 students, 9 boys and 11 girls. The results showed an increase in teacher observations and student observations, with the first cycle reaching 72.22% and the second cycle reaching 88.88%. Students' reading comprehension achievement also improved, reaching 70% in the first cycle and 85% in the second cycle. The SQ4R learning model was found to be effective.

Alzu'bi (2020) investigated the effect of the SQ4R strategy on English language reading comprehension for English freshmen students at Al-Balqa Applied University. The study is quantitative and employed one of the true experimental designs, which is a pretest-posttest control group design, and the instrument of the study was a reading comprehension test. 89 EFL learners participated in the study at Ajloun College and were distributed into an experimental group of 45 students and a control group of 44 students. To achieve the aim of the study, the researcher applied pre- and post-tests to both groups. The results showed the positivity of the SQ4R strategy in improving reading comprehension for the sample of the study.

Hidayati & Harnadi (2020) examined the implementation of the SQ4R strategy in teaching reading comprehension to improve students' reading abilities. The researcher used exposition text as the material for learning. This research is an implementation of the SQ4R model by using descriptive and qualitative methods to analyse the data. The data has been analysed through several instruments, including observation, tests, and interviews. The research was conducted at Pasundan 8 Senior High School, which consists of 33 students. The result of the research shows improvement after using the SQ4R strategy. There are 3–8% of students who improve their reading ability in exposition texts.

Mohammed (2020) investigated the effect of the SQ4R Strategy on Developing EFL Reading Comprehension Skills among Secondary School Students in Qesna Formal Language School. The participants included (30) First Year Secondary School Students in Qesna Formal Language School, Qesna, Menoufia, Egypt. They were assigned to two groups. i.e., one experimental group and a control group. To achieve the aim of the study, the researcher designed a reading comprehension skills checklist and a pre/ post-test reading comprehension test. The t-test was used for the statistical analysis. The SQ4R strategy proved to be effective in enhancing First Year Secondary School Students' reading skills. Thus, the suggested strategy was effective in developing EFL reading comprehension skills among First Year Secondary School Students in Qesna Formal Language School.

3. Methodology

The study uses a quasi-experimental approach to investigate the effect of the SQ4R strategy on tenth-grade students' English reading comprehension compared to the conventional method. It employs a one-group pre-/post-test design. The dependent variable is students' reading comprehension, while the independent variable is SQ4R. The study design includes a one-group design and a linear ordering to control teacher effects and ensure internal validity. The participants of the study consisted of two tenth-grade sections, fifty females enrolled in Um Jouzah Secondary School for Girls, with twenty-five each, during the scholastic year 2022/2023. The school was purposefully selected on convenient grounds. The two tenth-grade classes in the school were assigned to the levels of treatment by draw.

3.1 Instruments

A reading comprehension test was developed to assess students' comprehension before and after treatment. The test, consisting of 20 multiple-choice items, each one with four options, one of them is correct to avoid bias from the test scorers themselves. The test was used to compare performance between the two groups. The texts were chosen from the latest edition of Action Pack 10, English Course for Jordan, focusing on equivalence and student appropriateness. The content of the comprehension test was validated by a panel of experts from the English Language Department and the Curriculum and Instruction Department at Jordanian public universities, as well as experts from the Department of Examinations and local English supervisors and teachers in the Ministry of Education and the Directorates of Salt, al-Tafila, and Ma'an.

3.2 Data Analysis

The following study issues were addressed through data analysis using the Statistical Package for the Social Sciences (SPSS) version 23 program:

1. To investigate the effect of SQ4R on four reading comprehension levels, a One-Way Multivariate Analysis of Covariance (One-Way MANCOVA) was performed.
2. The effect of the SQ4R strategy on overall reading comprehension levels was investigated using a one-way univariate analysis of covariance (One-Way MANCOVA).
3. The students' attitudes were based on the means and standard deviations to assess the value and efficacy of SQ4R as a strategy.

3.3 Procedures for the study

1. The researcher reviewed relevant literature to create the theoretical and practical background for the study.
2. The researcher conducted a content analysis of the module to determine the number and distribution of the reading activities and texts included in the two units and to help in the design of the reading pre- and post-tests.
3. The researcher developed the instructional program after consulting a jury of teachers and supervisors.
4. The researcher developed the reading pre- and post-test.
5. The researcher obtained permission from the chosen school, Um Jouzah Secondary School for Girls, to carry out the study.
6. The study's experimental group participated in the reading pre-test.
7. A fellow teacher implemented the instructional program in the experimental group.
8. The researcher conducted the reading post-test after implementing the program.
9. The findings of the study were analyzed and discussed using the appropriate statistical software (SPSS).

4. Results and Discussion

Results Pertaining to the Study Question

Are there any statistically significant differences at the level of significance ($0.05 \geq \alpha$) between the average scores of the experimental group and the controlled group on the post-test of the English Reading Comprehension scale attributable to using the SQ4R strategy vs. the conventional method?

To answer this question, the mean scores, standard deviations, and estimated marginal means of participants' English Reading Comprehension test were conducted due to the teaching method (Using SQ4R Strategy vs. the conventional method), to compare the average scores of the experimental group and the controlled group on the post-test of the English Reading Comprehension test., as shown in Table 1:

Table 1: Means, Standard Deviations, and Estimated Marginal Means of Participants' English Reading Comprehension Test Scores Attributed to the Teaching Method (Using the SQ4R Strategy vs. the Conventional Method)

Method	Mean	Std. Deviation	Estimated Marginal Means	N
Experimental	15.36	2.782	14.877	25
Controlled	11.08	1.847	11.563	25
Total	13.22	3.183	13.220	50

Table (1) reveals that there was a statistically significant difference between the two groups, with the mean score of the post-test of the experimental group being (15.36), a standard deviation of (2.782) and an estimated marginal mean (14.877), whereas the mean score of the post-test of the control group was (11.08), standard deviation of (3.183) and an estimated marginal mean (11.563). This finding suggests that incorporating the SQ4R strategy in teaching English reading comprehension can be beneficial for students' performance. The outcome may be attributed to the SQ4R teaching strategy, which encourages creativity and clear communication and is more effective than conventional methods like lectures or demonstrations. The teacher's training in this strategy, which involves active participation and understanding of the SQ4R, has also improved students' academic performance. A diverse learning environment, which encourages critical thinking and a range of ideas, can also foster deeper learning and intellectual development. Overall, the SQ4R strategy has proven to be a successful approach to teaching.

The one-way ANCOVA was used to determine if there are significant differences in these means, with the results presented in Table 2.

Table 2: -One-way ANCOVA results of post-English Reading Comprehension test scores related to the teaching method.

Source	Sum of Squares	df	Mean Square	F	Sig.	Partial Squared	Eta
Pre-test (covariate)	146.246	1	146.246	56.641	.000	.547	
Method	127.193	1	127.193	49.262	.000	.512	
Error	121.354	47	2.582				
Corrected Total	496.580	49					

Table 2 reveals significant differences in post-English reading comprehension between the experimental and control groups, with the experimental group showing better performance. The SQ4R strategy significantly influenced students' post-test scores, with a value higher than 0.05, indicating a significant impact on reading comprehension skills.

Table 3 displays the mean, standard deviations, and estimated marginal means of English reading comprehension subscales attributed to the teaching method (SQ4R strategy vs. conventional method)

Table 3: Means, standard deviations, and estimated marginal means of the subscales attributed to the teaching method (using the SQ4R strategy vs. the conventional method).

Sub-skill	GROUP	Mean	Std. Deviation	Estimated Marginal Means	N
Literal post items	Experimental	5.88	1.301	5.644	25
	Controlled	4.52	1.327	4.756	25
	Total	5.20	1.471	5.200	50
Inferential post items	Experimental	3.60	1.118	3.556	25
	Controlled	2.76	1.165	2.804	25
	Total	3.18	1.207	3.180	50
Critical post items	Experimental	4.44	1.261	4.290	25
	Controlled	2.96	1.098	3.110	25
	Total	3.70	1.389	3.700	50
Creative post items	Experimental	1.44	.712	1.369	25
	Controlled	.84	.800	.911	25
	Total	1.14	.808	1.140	50

Table 3 reveals slight variance in English Reading Comprehension test scores due to teaching methods using SQ4R strategy vs. conventional method, with one-way MANCOVA revealing statistically significant differences.

Table 4: One-way MANOCVA results of the subscale English Reading Comprehension test scores related to the teaching method.

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	p-value
Literal items (COVARIATE)	PRE Literal items post	64.475	1	64.475	161.543	.000	.786
Inferential items (COVARIATE)	PRE Inferential items post	22.169	1	22.169	26.330	.000	.374
Critical items (COVARIATE)	PRE Critical items post	16.984	1	16.984	24.259	.000	.355
Creative items (COVARIATE)	PRE Creative items post	7.298	1	7.298	17.769	.000	.288
GROUP Hotelling's Trace= 1.301 P=.000	Literal items post	9.113	1	9.113	22.833	.000	.342
	Inferential items post	6.530	1	6.530	7.756	.008	.150
	Critical items post	16.050	1	16.050	22.926	.000	.343
	Creative items post	2.421	1	2.421	5.895	.019	.118
Error	Literal items post	17.561	44	.399			
	Inferential items post	37.046	44	.842			
	Critical items post	30.805	44	.700			
	Creative items post	18.071	44	.411			
Corrected Total	Literal items post	106.000	49				
	Inferential items post	71.380	49				
	Critical items post	94.500	49				
	Creative items post	32.020	49				

Table 4 shows there are statistically significant differences ($\alpha \leq 0.05$) in the subscales (literal items, inferential items, critical items, and artistic items) attributable to the teaching method in favor of the experimental group (using the SQ4R strategy). As a result, it is possible to conclude that using the SQ4R techniques in reading comprehension instruction improves literal, inferential, critical, and creative items from the text. The outcome may be attributed to the SQ4R strategy, with its emphasis on active reading, which may enhance students' ability to engage with and comprehend text, leading to improved performance on these subscales.

5. Conclusions

Based on the research result and discussion, it can be concluded in the following points:

1. The experimental group, which utilized technology-integrated SQ4R, outperformed the control group regarding scores.
2. The researcher's recommendations highlight the importance of incorporating technology and collaborative learning strategies into the curriculum to enhance student engagement and accessibility.
3. The use of technology-integrated SQ4R can improve students' reading comprehension skills and overall academic performance.
4. The need for ongoing professional development for teachers to effectively integrate technology and collaborative learning strategies into their instructional practices.
5. The potential benefits of incorporating SQ4R into other subjects and grade levels to further improve student learning outcomes.
6. The importance of considering the availability and accessibility of technology resources for all students and ensuring equitable learning opportunities.
7. The potential impact of technology-integrated SQ4R on students' critical thinking skills and ability to apply knowledge in real-world situations.
8. further research aims to explore the long-term effects of incorporating technology and collaborative learning strategies into the curriculum.

6. Recommendations

The study suggests further investigation into factors contributing to the high ranking of the item "SQ4R encourages discussion with classmates" and the low ranking of "SQ4R lacks immediate feedback". It also suggests exploring the connection between SQ4R and teaching English writing skills. The Ministry of Education should incorporate SQ4R into the curriculum, explore technology integration, and implement it across various subjects to develop critical thinking abilities.

7. References

- Abu Riyash, H., & Abdul Haq, Z. (2007). *Educational Psychology for University Students and Practicing Teachers*, Amman: Dar Al-Masirah for Publishing and Distribution
- Almanza, T. (1997). The effect of DRTA and Cooperative Learning Strategies on Reading Comprehension. *The Special Issue on Commerce and Social Sciences*, 2(16), 138-151
- Al-Borini, T. (2022). *Effectiveness of Six Steps (SQ4R) Strategy in the Development of Reading Comprehension and Analytical Thinking Skills in English Language among Basic Stage Students*. (Unpublished Doctoral Dissertation), The world Islamic Sciences and Education University, Amman.
- AL-Qatawneh, K. (2005). *The Effect of The Generative Teaching Model on Jordanian Secondary School Students' Reading Comprehension and Strategy Awareness in English*. (Unpublished Doctoral Dissertation), Amman Arab University for Graduate Studies, Amman.
- Alzu'bi, M. (2020). The Effect of the Use of SQ4R Strategy on Freshmen Students' Reading Comprehension in Al-Balqa Applied University. *Jordan Journal of Modern Languages and Literatures*, 12(4), 531-545.
- Assaf, M., Al-Jamal, D., & Rababeh, E. (2020). The Effect of an Electronic Collection-Based Instructional Program on Enhancing Jordanian EFL Tenth Grade Students' Reading Comprehension, IUG. *Journal of Educational and Psychology Sciences*, 28(4), 869-888.
- Balqees, A. (2002). *Self-Learning Proficiencies*. Open Arab University: Kuwait.
- Barrett, T. C. (1972). *Taxonomy of reading comprehension. Reading 360 Monograph*. Lexington, Mass: Ginn & Xerox Education Company.
- Bernstein, A., Louis A., Alison C., & Edward, J. (2008). *Psychology. United States of American*: Houghtin Mifflin Company.
- Butler, S., Urrutia, K., Buenger, A., Gonzalez, N., Hunt, M., & Eisenhart, C. (2010). *A Review of the Current Research on Vocabulary Instruction*. Portsmouth, NH: National Reading Technical Assistance Center, RMC Research Corporation, 1.
- Chen, H., Min, H., & Wen, L. (2019). The Use of a "Think-Pair-Share" Brainstorming Advance Organizer to Prepare Learners to Listen in the L2 Classroom, *International Journal of Listening*, 33(2), 114-127
- Clarke, P., Truelove, E., Hulme, C., & Snowling, M. (2013). *Developing Reading Comprehension*. Hoboken: Wily.
- Depdiknas. (2006). *Concerning Content Standards*. No.22. Jakarta: Ministry of National Education.
- El-Sayed, A. (2002): Developing Some Metacognitive Skills among Student Teachers at the Faculty of Education in Sohag. *Journal of Studies in Curricula and Teaching Methods*, Issue Seventy-Seventh.
- Erliana, S. (2011). Improving Comprehension through Directed Reading Thinking Activity Strategy. *Journal of English as Foreign Language*, 1(1), 49-57.
- Goodman, K. S. (1970). *Reading: Process and Program Champaign, III.*: National Council of Teachers of English.
- Greenway, C. (2002). The Process, Pitfalls and Benefits of Implementing a Reciprocal Teaching Intervention to Improve the Reading Comprehension of a Group of Year 6 Pupils, *Educational Psychology in Practice*, 18(2), 113-137.
- Harris, T., and Hodges, R. (Eds.) (1995). *The Literacy Dictionary Newark, DE*: International Reading Association
- Hedgcock, J., & Ferriss, D. (2009). *Teaching Readers of English Students, Texts, and Context*. New York: Taylor & Francis E-Library.
- Hidayani, S., Hasanah, N., Khalidin, M., & Salmiah, T. (2022). SQ4R Method Analysis in Improving the Understanding of English Discourse in Students Management of Islamic Education STAI Jam'iyah Mahmudiyah Tanjung Pura. *Khazanah: Journal of Islamic Studies*, 1(3), 16-22.
- Hidayati, S. N., & Harnadi, H. (2020). *The Implementation of Survey, Question, Read, Recite, Record and Review (SQ4R) Method in Teaching Reading Comprehension. Septi Nurul Hidayati*. (Doctoral Dissertation), English Language and Literature. Pasundan University, Bandung, Indonesia.
- Khusniyah, N. L., & Lustyantje, N. (2017). Improving English Reading Comprehension Ability through Survey, Questions, Read, Record, Recite, Review Strategy (SQ4R). *English Language Teaching*, 10(12), 202-211.
- Megawati, M. (2017) . The Improving Students' Reading Comprehension Through Grammar Translation Method. *English Education: Journal of English Teaching and Research*. 2, (2), 95-108.
- Meyers, C., & Johnes T. (1993). *TB Promoting Active Learning*. San Francisco: Jossey Bass Press.
- Ministry of Education. (1991). *English Language Curriculum and its General Guidelines for the Basic and Secondary Stage*. Amman, Jordan.
- Ministry of Education. (2006). *General Guidelines and General Specific Outcomes for the English Language*. Amman, Jordan.
- Muayanah, M. (2014). Reading Comprehension Questions Developed by English Teachers of Senior High Schools in Surabaya. *Jsh Jurnal Sosial Humaniora*. 7(1), 20-44.
- Nassir, S. (2014). *The Effectiveness of Project- Based Learning Strategy on Ninth Graders' Achievements Level and their Attitudes toward English in the Governmental Schools- North Governorate*. (Unpublished Thesis), the Islamic University of Gaza, Palestine.

- Omaggio, A. (2001). *Teaching Language in Context*. New York: Heinle & Heinle.
- RAND Reading Study Group. (2002). Reading for Understanding: Toward an R&D Program in Reading Comprehension, p. 11. *Santa Monica Journal*, CA: RAND.
- Richard & Schmidt, B. & B.G Schick. (2002). *A Guidebook for The Teaching of Reading: Junior High School Through College Adult Levels*: Chicago-Illinois. Psychotechnics Press Inc.
- Richards, J. & Schmidt, R. (2010). *London Dictionary of Language Teaching and Applied Linguistics*. Longman Pearson: UK.
- Richardson, J. & Morgan, R. (1997). *Reading to Learn in the Content Areas*. Belmont. CA: Wadsworth, Publishing Company
- Ruddell, R., & Ruddell, M. R. (1994). *Language Acquisition and Literacy Processes*. In R. Ruddell & M. R. Ruddell (eds.), *Theoretical Models and Processes of Reading (4TH ed.)*. Newark, DE: International Reading Association
- Shastri, P. (2010). *Communicative Approach to the Teaching of English as a Second Language*. Himalaya Publishing House: Mumbai.
- Simanjuntak, E. (1988). *Developing Reading Skills for EFL Students*. Jakarta: Ministry of Education and Culture.
- Siregar, J. (2023). Application of Survey, Question, Read, Reflect, Recite, and Review (SQ4R) Reading Method in Learning to Read Argumentation Text by Class X Students. *Edunesia: Scientific Journal of Education*, 4(2), 521-532
- Suparman, U. (2005). *Understanding and Developing Reading Comprehension*. Bandar Lampung: Unila Press.
- Texas Educational Agency. (2002). *Comprehension Instruction*, 4-8. 1701 North Congress Avenue: Austin, Texas.
- Tracey, D. & Morrow, L. (2017). Introduction to Theories. Lenses on Reading. *Treatment of Children*, 33(1), 115-151.
- Wahyuningsih, H., Suhaili, N., & Suryana, D. (2021). Development of Teaching Materials SQ4R Strategy-Based Reading Skills in Primary School. *Basicedu Journal*, 5(2), 983–990.
- Wanissa P., B. (2023). *The Effect of SQ4R Strategy on Reading Comprehension at the Eight Grade of SMPN 6 Natar*. Fakultas Keguruan Dan Ilmu Pendidikan, Universitas Lampung.
- Yahya, O., Ghazali, M., Shamsudin, A., & Roselan, B. (2008). The Process of Understanding from a Metacognitive Perspective among University Students. *Pertanika Journal of Social Sciences Dan Humanities*, 16(2), 213-223.