

## USING SQ4R TECHNIQUE TO DEVELOP ENGLISH READING COMPREHENSION ABILITY OF GRADE 6 STUDENTS

Thanyarat Wandeevitak<sup>1\*</sup> and Prayong Klanrit<sup>2</sup>

Teaching English to Speakers of other Languages Program, Udon Thani Rajabhat University,  
Udon Thani, Thailand

\*E-mail: thanyaratwandeevitak@gmail.com

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### ABSTRACT

This study explores the effect of using the SQ4R Technique to develop the English reading comprehension ability of grade 6 students. The purposes of this research were 1) to study and compare the English reading comprehension ability before and after using the SQ4R Technique of grade 6 students and 2) to study students' attitude towards teaching English reading comprehension using the SQ4R Technique.

The sample group consisted of 38 grade 6 students at Ban Nonghan (Wankru 2502) School, under the Udon Thani Primary Education Service Area Office 3, in the first semester of academic year 2024. The design of this research was a one group pretest-posttest design. The research instruments were lesson plans, an English reading comprehension ability test, and an attitude questionnaire. The experiment lasted 12 weeks, 2 hours a week, or 24 hours in all. The mean percentage, standard deviation, one-sample t-test, and t-test for dependent samples were employed to analyze the data. The findings of this research were as follows: 1) The students' pretest and posttest of English reading comprehension ability mean scores were 18.34 or 45.86 percent and 31.08 or 77.70 percent, respectively. The students' posttest mean score on English reading comprehension ability was higher than the set criterion of 70 percent, and the students' English reading comprehension ability after the experiment was significantly higher than that of the pretest, and 2) The students'

attitude towards teaching English reading comprehension using the SQ4R Technique was at a good level.

**Keywords:** The SQ4R Technique; English Reading Comprehension; English for primary school students

## INTRODUCTION

Reading is an essential skill for human life because it is a process of seeking knowledge and receiving various information that influences people's habits. As Laličić and Dubravac (2021) stated, reading is important for education at all levels since it is indispensable for learning various subjects both inside and outside the classroom. It is the skill that remains enduring with learners for a long time, qualifying them to continuously seek and acquire knowledge. According to Adasay et al. (2024) stated reading is a vital skill that helps develop language learning abilities. It is a skill that learners have the most opportunity to use, even as information technology advances. Reading skills remain important for lifelong learning. Moreover, Rachuri (2024) pointed out that reading is a process of communication between the reader and the writer, applying language as a tool to convey meaning. Additionally, reading stimulates critical thinking, encourages imagination, fosters moral development, and boosts self-confidence.

In Thailand, most Thai students are required to have more competency in English reading. As mentioned by Rochanaphapayon (2024), reading skill is used as a tool for seeking knowledge and enhancing their ability to research information. Recently, people are able to access new information through many online platforms such as YouTube, Facebook, Google, and other relevant platforms. These accesses mostly contain information that learners have to read in English. Hence, this is the crucial reason why they must have stronger reading skills to help them understand overseas information. Moreover, Kitichaidateanan and Sukying (2024) mentioned that Thai learners are required to achieve a high score on the English proficiency test for higher education, and the reading test is one of the parts of the testing. Consequently, they must intensively focus on their English reading skills to succeed in their future goals.

Moreover, Panjaitan (2023) stated that low proficiency in English reading ability

appears to be one of the concrete problems that Thai learners have faced. The crucial reason for low proficiency in English reading ability in Thailand is the use of traditional teaching strategies. Regarding the impact of using traditional teaching technique, Lertthahan et al. (2024) mentioned that many schools in the remote areas of Thailand are still teaching English by using teacher-centered teaching methods. These types of teaching methods are less effective for improving reading comprehension ability due to the lack of capacity to stimulate learners to think and use their own opinions during their learning tasks (Garcia-Pinilla et al., 2021). Moreover, it reduces their motivation for learning due to the limited learning activities.

To develop Thai students' reading ability, active reading learning is introduced into English classroom. Active reading learning of English can be divided into various types such as, task-based learning, reciprocal teaching, schema theory-based teaching, the SQ4R technique or interactive reading approach. This study uses the SQ4R technique as the methodology in teaching program which allows student to improve their vocabulary learning and analytical reading skills during learning

task (Panaputto et al., 2024). Thus, students are able to study in the process of active learning which students are effectively taught by activity approach. This leads them to involve with the informative learning steps, including survey, question, read, record, recite and reflect.

The focus of this study is on the use of the SQ4R technique in order to enhance reading comprehension ability for Grade 6 students at Ban Nonghan (Wankru 2502) School who had a low proficiency rate of English reading comprehension on Ordinary National Test (O-NET). Over the past two academic years, students have consistently demonstrated low English language proficiency. In the academic year 2022, the proficiency rate was 42.18 percent, which declined to 40.21 percent in 2023 (NIETS. 2022). According to the effectiveness of the SQ4R technique that has been proved by various studies, the researcher decided to apply the SQ4R technique to develop students' reading comprehension ability by studying and comparing the English reading comprehension ability before and after studying English reading comprehension using the SQ4R technique, and to investigate the students' attitude towards teaching reading comprehension using the SQ4R technique.

## OBJECTIVES OF THE STUDY

1. To study and compare the English reading comprehension ability of Grade 6 students before and after studying English reading comprehension using the SQ4R technique.

2. To investigate students' attitude towards teaching English reading comprehension using the SQ4R technique.

## HYPOTHESES OF THE STUDY

1. The students' English reading comprehension ability after studying English reading comprehension using the SQ4R technique is higher than their pretest scores.

2. Grade 6 students have a positive attitude toward learning English reading comprehension using the SQ4R technique.

## SCOPE OF THE STUDY

### 1. Population

The population in this study was 160 grade 6 students of Ban Nonghan (Wankru 2502) School, Udon Thani Primary Educational Service Area Office 3, in the first semester of the 2024 academic year.

### 2. Sample

The sample in this study were 38 Grade 6 students enrolled in Fundamental English 6 (E16101), in the first semester

of the 2024 academic year at Ban Nonghan (Wankru 2502) School, Nonghan District, Udon Thani Province, under the Udon Thai Primary Educational Service Area Office 3. These students were selected by cluster random sampling.

### 3. Variables

#### 3.1 Independent Variable

3.1.1 The lesson plans for teaching English reading comprehension using the SQ4R technique.

#### 3.2 Dependent Variables

3.2.1 Students' English reading comprehension ability

3.2.2 Students' attitude towards teaching English reading comprehension using the SQ4R technique.

## PROCESS OF TEACHING ENGLISH READING COMPREHENSION ABILITY USING THE SQ4R TECHNIQUE

It refers to a teaching reading comprehension strategy which was introduced by Brown (2001) which was divided into three stages: pre-reading activity stage, during-reading activity stage, and post-reading activity stage. The teaching steps were applied from the teaching stages of the SQ4R technique by Pauk (1984) as follows:

## 1. Pre-reading activity stage

### 1.1 Survey

1.1.1 The teacher distributes the reading text (Handout 1) to students and asks them to survey the main topic and the basic organization structure of the text.

1.1.2 The teacher assigns students to read the first sentence and the conclusion of the text.

1.1.3 The teacher shows the pictures, charts or graphs to students and asks them to skim the title and examine them.

### 1.2 Question

1.2.1 The teacher assigns students to read the text.

1.2.2 The teacher asks students Wh-questions using basic question words who, what, when, why, and how on Worksheet 1.

1.2.3 The teacher assigns students to ask themselves about the topic of the text, created from the text to make new information easier to remember.

## 2. During-reading activity stage

### 2.1 Read

2.1.1 The teacher asks students to read the text carefully and actively by asking questions in the relation to the contents of the subject of the text.

### 2.1.2 The teacher assigns

students to look for answers to the questions and other important points or ideas. They read one section or chunk of text at a time, keeping their questions in mind.

### 2.2 Record

2.2.1 The teacher instructs students to read the text carefully and take notes while reading by recording key points such as definitions, explanations, facts, and important details. Students are guided to use single words or short phrases instead of full sentences to keep their notes concise and time-efficient. They then complete Worksheet 2 based on their understanding from the text.

### 2.3 Recite

2.3.1 The teacher asks students to recite their notes by reading them out loud after finishing each section or chunk of the text.

2.3.2 The teacher asks students to share their notes with a peer to enhance their understanding of the text.

## 3. Post-reading activity stage

### 3.1 Reflect

3.1.1 The teacher assigns students to return to the questions that they created and answer them aloud.

3.1.2 The teacher assigns students to review their notes or reread

parts of the text until they feel confident about the content.

3.1.3 The teacher helps students check their answers by discussing and guiding them to find the correct information. Students are then instructed to review the text and their notes to confirm their understanding.

3.1.4 The teacher gives the students a quiz.

## RESEARCH METHODOLOGY

### 1. Research Design

This study was experimental research with a one-group pretest-posttest design. It used a quantitative research approach (Campbell & Stanley, 1969).

$$T_1 \times T_2$$

$T_1$  means Pretest

$T_2$  means Posttest

X means Teaching English reading comprehension using the SQ4R technique

### 2. Sample

The sample in this study was 38 grade 6 students enrolled in fundamental English 6 (E16101), in the first semester of the 2024 academic year Ban Nonghan (Wankru 2502) School, Nonghan District, Udon Thani Province, under the Udon Thai

Primary Educational Service Area Office 3. These students were selected by cluster random sampling.

### 3. Research Instruments

Three research instruments were employed as follows:

3.1 The lesson plans for teaching English reading comprehension using the SQ4R technique with the Index of Item Objective Congruence (IOC, received a score of 1.00 in every aspect. The lesson plans consisted of 12 units, 2 hours per each unit and 12 weeks were conducted. The total was 24 hours. Twelve lesson plans were developed in the English version.

3.2 The English reading comprehension ability test was developed by the researcher. It was used as a pretest and posttest. This test was a multiple-choice test with 40 items. The test was used to examine the students' English reading comprehension ability using the SQ4R technique. An English reading comprehension ability test was developed in an English version with the Index of Item Objective Congruence (IOC), which was 1.00 for every item, the difficulty index ranged from 0.26 to 0.80, and the discrimination index ranged from 0.35 to 0.93. The reliability value of the test was 0.94.

3.3 The attitude questionnaire towards teaching English reading

comprehension using the SQ4R technique was developed in the Thai version based on Saiyos and Saiyos (2000) to measure students' attitude towards teaching English reading comprehension using the SQ4R technique, which consisted of 20 items related to the contents using five-point Likert rating scales.

Likert (1932) has designed how to measure and criteria for attitudinal measurement in forms of sentences, topic or questions positively and negatively disagree that can be ranged from 5 to 1 respectively. Positive attitude derives many scores, conversely negative one derives less score. From collection of all scores and their average can derive the attitude of the whole questionnaire.

Five-point Likert rating scales are ranged from:

- 5 means strongly agree
- 4 means agree
- 3 means unsure
- 2 means disagree
- 1 means strongly disagree

### **Research Procedure**

The research procedure was systematically conducted as follows:

1. Preparation Phase:
  - 1.1 Developed lesson plans for teaching English reading comprehension

using the SQ4R technique, verified by experts (IOC = 1.00).

- 1.2 Created and validated the English reading comprehension test (40 multiple-choice questions) with item difficulty ranged from 0.26 to 0.80, discrimination ranged from 0.35 to 0.93, and reliability at 0.94.

- 1.3 Developed the attitude questionnaire based on Saiyos & Saiyos (2000), consisting of 20 items using a five-point Likert scale.

### 2. Pre-experimental Phase:

- 2.1 Administered the pretest (English reading comprehension test) to 38 students, allowing 60 minutes for completion to measure baseline comprehension.

### 3. Experimental Phase:

- 3.1 Implemented 12 lesson plans over 12 weeks, conducting two-hour sessions weekly, totaling 24 hours.

- 3.2 The SQ4R technique was systematically applied during these sessions, encompassing Survey, Question, Read, Record, Recite, and Reflect phases.

- 3.3 Monitored student progress closely, providing support and clarification as needed.

3.4 Managed unexpected issues (such as student absences, misunderstandings of tasks, or classroom disruptions) proactively by adjusting lesson pacing, providing additional guidance, and ensuring that all students could consistently participate.

#### 4. Post-experimental Phase:

4.1 Administered the posttest, identical to the pretest, to measure the improvement in students' reading comprehension.

4.2 Collected data from the attitude questionnaire to assess students' perspectives toward the SQ4R technique.

#### 5. Data Analysis Phase:

5.1 Analyzed pretest and posttest data using mean, percentage, standard deviation, and t-test statistical methods to evaluate the effectiveness of the intervention.

5.2 Interpreted attitude questionnaire responses using mean and standard deviation to quantify students' attitudes.

### DATA COLLECTION

The researcher conducted the research with the purposes of studying and comparing the English reading comprehension ability of the students before and after using the SQ4R technique

and investigating the students' attitude towards teaching English reading comprehension using the SQ4R technique. To perform data collection, the researcher collected data in the first semester of the 2024 academic year. The details were as follows:

1. The students took the pretest using the English reading comprehension ability test with 40 items before studying English reading comprehension using the SQ4R technique for 60 minutes.

2. The teaching process was carried out according to the 12 lesson plans for 12 weeks, 2 hours a week, 24 hours in total.

3. After the whole teaching process of English reading comprehension using the SQ4R technique was completed, the students took the posttest, which was the same English reading comprehension ability test as the pretest.

4. The attitude questionnaire towards teaching English reading comprehension using the SQ4R technique was used to examine the students' attitude towards teaching English reading comprehension using the SQ4R technique.

5. The collected scores from the pretest, posttest, and the students' attitude data were statistically analyzed and interpreted.

## DATA ANALYSIS

The collected data from all developed research instruments was analyzed by implementing the important statistics for each one as follows:

The process of data analysis

The following steps were implemented to analyze the data:

1. The researcher analyzed the English reading comprehension scores of Grade 6 students before and after learning using the SQ4R technique, applying the mean ( $\bar{X}$ ), percentage, standard deviation (SD), and dependent t-test.

2. The researcher analyzed the data to investigate the students' attitudes toward

teaching English reading comprehension using the SQ4R technique by calculating the mean ( $\bar{X}$ ) and standard deviation (SD). According to the interpretation criteria, a mean score between 3.51 and 4.50 is considered to reflect a good level of agreement.

## RESULTS

The results of the study of on students' English reading comprehension ability before and after studying English reading comprehension using the SQ4R technique were as follows.

**Table 1** The comparison of the students' English reading comprehension ability before and after studying English reading comprehension using the SQ4R Technique

Test	Total score	n	( $\bar{X}$ )	Percent	SD	t
Pretest	40	38	18.34	45.86	3.09	31.26**
Posttest	40	38	31.08	77.70	2.29	

\*\*p  $\leq$  .01

Table 1 shows a comparison of the students' English reading comprehension ability before and after receiving instruction using the SQ4R technique. The results revealed that the posttest mean score ( $\bar{X} = 31.08, 77.70\%$ ) was significantly higher than the pretest mean score ( $\bar{X} = 18.34, 45.86\%$ ) at the 0.01 level of significance. Notably, the posttest scores also exceeded the set criterion of 70 percent (equivalent to 28 points), confirming the effectiveness of the SQ4R technique in enhancing students' reading comprehension performance.

Table 2 presents the mean score and standard deviation representing the students' attitude towards learning English reading comprehension using the SQ4R technique. The mean score was 3.91 with a standard deviation (SD) of 1.12. Based on the interpretation criteria, this result indicates that the students' attitude was at a good level.

## DISCUSSION

The study conducted at Ban Nonghan (Wankru, 2502) School and aimed to investigate the effect of using the SQ4R

**Table 2** The students' attitude toward teaching English reading comprehension using the SQ4R technique

Attitude Test	n	( $\bar{X}$ )	SD	Interpretation
Students' attitude toward teaching English reading comprehension using the SQ4R technique.	38	3.91	1.12	Good

technique to develop the English reading comprehension ability of Grade 6 students. The results showed a significant improvement in students' reading comprehension, with pretest mean scores of 18.34 (45.86%) increasing to 31.08 (77.70%) on the posttest. The improvement was statistically significant as indicated by the t-test results ( $t = 31.26$ ,  $p \leq .01$ ). This result revealed that the students who were taught using the SQ4R technique received more effective instruction, which led to improved reading comprehension skills. Based on the analysis, the first hypothesis, stating that students' reading comprehension scores would improve after using the SQ4R technique, was accepted. This may be because the keys steps of the SQ4R technique used in this study played a crucial role in the students' development. With the SQ4R technique, the students were able to recognize the topics and the main ideas more effectively. SQ4R technique, including Step 1: Survey (S), students briefly skimmed the text to identify its main idea. In Step 2: Question (Q), they generated guiding questions to read with purpose. Step 3: Read (R1) involved reading thoroughly to find answers. In Step 4: Record (R2), they took concise notes on key points. Step 5: Recite (R3) required summarizing or answering in their

own words to reinforce understanding. Finally, Step 6: Reflect (R4) allowed students to review, consolidate their understanding, and connect main ideas to what they had learned throughout the lesson. Nevertheless, the potential hypothesis of the students' pretest score on English reading comprehension ability that showed relatively lower scores compared to the posttest results. The reason might be the students lacked skill in English reading comprehension, such as vocabulary, grammar, and confidence. Moreover, this finding supported the ideas stated by Panaputto et al. (2024) mentioned the strong evidence that the SQ4R technique positively impacts reading comprehension for 10th-grade students, as demonstrated by a well-structured research design and significant statistical findings. The results support the integration of this technique into educational practices to enhance reading skills among students. Furthermore, the study by Lus (2023) stated that the SQ4R method, including four significant steps of read, record, recite, and reflect, has a positive impact on reading comprehension by improving test scores, increasing student engagement, providing a structured learning process,

and promoting critical reflection on the material. These elements work together to enhance students' understanding of reading.

Additionally, Panaputto et al. (2024) who stated that the SQ4R technique was one of the most effective and well-known techniques. As a result, during the middle of the SQ4R teaching process in the classroom, the researcher reported that students showed better recall of key vocabulary during the record step, which was consistent with the observed learning outcomes. This finding aligns with Bangkhadara et al. (2024) who stated that the record step aids the students' memory retention, and that the reflect phase involves students revisiting notes and the text to reinforce their understanding and solidify their memory, which is crucial for long-term knowledge retention.

The study also revealed that students' attitudes toward teaching reading comprehension using the SQ4R technique was positive, particularly in how the use of skimming titles in the Survey step, formulating questions in the Question step, and visual aids applied during the Read and Record steps contributed to students' comprehension. These strategies supported the SQ4R process by helping students

engage with the material meaningfully and reinforced vocabulary retention during the Reflect phase.

This aligns with the findings of Panaputto et al. (2024) who highlighted that the SQ4R technique's positive impact on reading comprehension, emphasizing its role in enhancing active memorization, vocabulary acquisition, and information retention through post-reading activities. In addition, the SQ4R technique positively impacted students' comprehension as Mahastu et al. (2022) who stated that applying strategies aligned with the SQ4R steps such as skimming titles in the Survey step, using visual aids in the Read step, and formulating questions in the Question step facilitated better engagement and understanding of narrative texts, leading to significant improvements in reading comprehension scores from pre-test to post-test.

## CONCLUSION

The investigation and comparison of the pretest and the posttest on students' English reading comprehension ability before and after studying English reading comprehension using the SQ4R technique and the investigation of the students' attitude towards teaching English reading

comprehension using the SQ4R technique can be summarized as follows:

1. The students' pretest mean scores on English reading comprehension ability increased from 18.34 or 45.86 percent to 31.08 or 77.70 percent in the posttest mean scores. The students' posttest mean score on English reading comprehension ability was higher than the set criterion of 70 percent at the 0.01 level, and the students' posttest mean score was significantly higher than the pretest mean score at the 0.01 level.

2. The students' attitude toward teaching English reading comprehension using the SQ4R technique was 3.91. It indicates a positive attitude toward the SQ4R technique. This score falls within the range of 3.51 to 4.50, which reflects a "good" level of agreement among the students.

#### **RECOMMENDATIONS FROM THE STUDY**

1. Based on the study results, the students showed significant improvement in reading comprehension after learning with the SQ4R technique. Therefore, instead of focusing on their English background or low proficiency, teachers should make sure that all students clearly understand and follow each step of the SQ4R process

to support their learning and participation.

2. The findings showed that students benefited from each step of the SQ4R technique. Therefore, teachers should carefully manage the time to cover all activities clearly and completely within the teaching session.

3. Before teaching reading comprehension using the SQ4R technique in the classroom, the teacher must be well-prepared to handle unexpected issues to maintain the flow of the lesson.

#### **RECOMMENDATIONS FOR FURTHER STUDY**

1. Future studies could explore the application of the SQ4R technique across learners of different proficiency levels by integrating its steps into various English language skills. This may support the development of autonomous learning and promote the creation of diverse classroom activities that enhance students' overall English proficiency.

2. Future studies should investigate how effective the SQ4R technique is when applied to students from different educational backgrounds and proficiency levels, focusing on how it influences their reading comprehension and engagement in a variety of teaching situations.

3. Due to the repeated use of the same activities in each lesson plan of reading comprehension, future studies should incorporate a variety of activities in the SQ4R technique to enhance students' participation in reading. This can be achieved by introducing new tasks to activate students' prior knowledge, such as storytelling, watching videos, playing games, etc.

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