

The Effect Of Question And Answer Relationship (QAR) Strategy On Grade XI Vocational Students' Reading Comprehension: An Explanatory Mixed-Methods Study

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Abstract

This study aims to examine the effect of the Question–Answer Relationship (QAR) strategy on the reading comprehension of Grade XI vocational high school students and to explore students' perceptions of its implementation in EFL reading instruction. This research employed an explanatory sequential mixed-methods design involving 51 students from a vocational high school in Indonesia, divided into an experimental class (n = 27) and a control class (n = 24). Quantitative data were collected through pretest and posttest reading comprehension tests and analyzed using an independent samples t-test. The results revealed that students taught using the QAR strategy achieved significantly higher posttest scores (M = 83.85) than those taught through conventional instruction (M = 67.29). Qualitative data obtained from classroom observations, questionnaires, and semi-structured interviews indicated increased motivation, confidence, critical thinking skills, and strategic awareness in reading. Despite initial difficulties in categorizing question types, students responded positively to the strategy after consistent practice. The integration of quantitative and qualitative findings demonstrates that the QAR strategy not only improves students' reading comprehension outcomes but also fosters positive learning behaviors. Therefore, the QAR strategy is an effective instructional approach for improving reading comprehension in vocational EFL classrooms.

Keywords

QAR Strategy; Reading Comprehension; Vocational Students; EFL; Mixed Methods

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1. INTRODUCTION

Indonesia is one of the countries that concerns about the importance of English. One of the concrete actions taken by the Indonesia government is by covering English in the curriculum. It means that the Indonesia government requires its students to master English. In Indonesia, English serves as a foreign language in which English is formally learned since the students are in junior high school. English becomes one of the school subjects that is considered by Indonesia government. It is reflected in



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Indonesia national examination every year. English becomes one of the school subjects that is assessed in the national examination. By passing the English examination, it means Indonesian students master the English language at a certain level (Pustika & Wiedarti, 2019). In the current era of globalization, english is becoming a more significant international language, thus learning it is imperative. English is a foreign language in Indonesia, where junior high school is where pupils begin receiving official instruction in the language.

According to (Alyousef, 2005), "Reading can be seen as an interactive" process between a reader and a text which lead to automaticity or reading fluency". In the process of reading, the reader needs to comprehend the text. Defines comprehension as a method of deriving meaning from the related text. It includes comprehension of the term vocabulary as well as thought and reasoning. Consequently, reading comprehension is not a passive, but an active operation. The reader actively engages in the construction of meaning with the text. This successful involvement requires the use of prior knowledge (Pang et al., 2003).

(Pang et al., 2003) define reading comprehension as an active process of constructing meaning from connected text that involve word knowledge as well as thinking and reasoning. It is also supported by (Ahmadi, 2017) that said it may be a human activity procedure within which readers act with the text as their information is activated. When the reader comprehends a passage, there will be a process of extracting and constructing the meaning of the passage by interacting and engaging to the reading text. In the process of reading, it is important to consider the effectiveness and efficiency of reading (*Handbook of Reading Assessment*, n.d.). Hence, it is needed to reserve a room more on several primary reading skills. These include mainly identification of topics, main ideas, and details. In understanding a passage, the reader needs to know the topic, main idea, and the detail of a passage. As a result, after understanding the writer's idea, the contents of the text will be known by the readers. In other words, reading comprehension is the ability to understand what the readers read.

The process of teaching and learning involves many different factors. These factors interact as students work toward their goals and incorporate new knowledge, skills, and behaviors that expand their range of learning opportunities. Indonesian students, particularly those in diverse educational settings, often struggle with learning English (Khairini et al., 2025).

Reading is an important activity for acquiring knowledge, information, or simply for entertainment. Furthermore, daily activities are inseparable from reading. Various information can be obtained through reading, such as reading news in newspapers, the internet, billboards, storybooks, and so on. In the world of education, according to Nurgiantoro, reading and assignments are non-negotiable. Reading helps students obtain information from various sources to support their learning at school (Nurgiantoro, 2018).

Reading is the meaningful interpretation of written language. This means that reading is not just about pronouncing symbols but also about deriving meaning or attempting to understand those symbols. Reading is inherently complex and involves many things, not just pronunciation but also visual activity, thinking, psycholinguistics, and metacognition. As a visual process, reading is the process of translating written symbols (letters) into spoken words. As a thinking process, reading includes word recognition, literal comprehension, interpretation, critical reading, and creative comprehension. Based on the description above, it can be concluded that reading is a learning activity that requires the reader's active interaction with the text to gain meaning and understanding from what is read (R. Arsyad, 2022).

In the reading process, aspects of thinking such as remembering, understanding, comparing, discovering, organizing are evident, and ultimately, they are contained in the text. Based on the definitions of reading comprehension put forward by several experts, it can be concluded that reading comprehension is the activity of absorbing detailed information through interaction and engagement with written language and the reader's experiences. The goal of reading comprehension is to gain an

overall understanding of what is described in the text, rather than deriving meaning from individual words or sentences (R. Arsyad, 2022).

Reading comprehension is a complex cognitive process through which readers actively construct meaning from written texts and develop mental representations based on both explicit and implicit information ("Assessment of Strategy Instruction and Self-Regulation in Reading Comprehension," n.d.). Although it shares the same fundamental principles as reading in general, reading comprehension places greater emphasis on the reader's ability to understand, interpret, and analyze textual information critically. This process enables learners to engage in higher-order thinking and develop critical thinking skills.

According to (Aryanto, 2022), critical thinking in elementary school learning encompasses several components, including reading comprehension, inferential thinking, literary response and interpretation, as well as understanding concepts and text structures. Moreover, critical thinking involves a range of cognitive skills, such as analyzing arguments, drawing inductive and deductive conclusions, reasoning logically, evaluating evidence, and making informed decisions or solving problems (Cahyono, 2017). Therefore, reading comprehension plays a crucial role in fostering students' critical thinking abilities and enhancing their overall academic achievement.

One of the problems with reading instruction today is that reading instruction is rarely implemented to encourage students to develop the appropriate reading speed and style, but rather is solely aimed at practical purposes, namely, enabling students to answer questions. The result is that students only have low reading speeds, accompanied by low levels of comprehension (Abidin, 2012).

The Question-Answer-Relationships (QAR) strategy is a reading learning strategy that essentially aims to improve students' ability to comprehend reading content by training them to connect their prior knowledge of the text's content before reading with their new knowledge after reading the text to answer questions. Students are trained to connect their prior knowledge before reading a text by generating questions related to the text they are about to read and are trained to dig deeper to find relevant answers to their questions. By generating questions, students are encouraged to predict the possibilities that will be discussed in the reading text (Khasanah & Cahyani, 2016).

According to Pourhosein Gilakjani and Sabouri (in Merlin & Toneva, 2022), reading comprehension can be perceived as cognitive process that delves into the intricate depths of text, giving rise to profound meaning. From that understanding students must be able to understand of the text and can make create the text. In this research students must understand question about narrative text. There are some importance of reading comprehension, especially in National Examination and other formal exam. Reading comprehension is of great significance as it equips students with the ability to comprehend, evaluate, and express their thoughts in response to various textual materials. Furthermore, the mastery of reading comprehension paves the way for enhanced writing proficiency, enabling students to express their ideas with utmost clarity and effectiveness. Moreover, it nurtures sustained concentration on reading, thereby fostering a profound and lasting impact. The benefits of reading comprehension for students are manifold, primarily due to the fact that reading permeates every facet of life. Additionally, it serves as a source of immense pleasure and serves as an invaluable tool for acquiring knowledge and information (Aimah et al., 2020).

Reading comprehension is a fundamental skill in English as a Foreign Language (EFL) learning because it enables learners to access written information, construct meaning, and engage critically with texts. At the senior high school level, reading instruction is not merely focused on decoding words but on developing students' reasoning abilities, creativity, and critical thinking skills (Smith & Johnson, 2022). Effective reading instruction should therefore be delivered in an engaging, meaningful, and student-centered manner that allows learners to understand texts holistically rather than focusing on isolated linguistic units (Wijayanti & Pratiwi, 2023).

In English language education, four core skills are emphasized: listening, speaking, reading, and writing. Among these skills, reading plays a crucial role because it serves as the foundation for academic literacy and language development (O'Connor & Nguyen, 2022). Reading is a complex cognitive process that involves constructing meaning through interaction between the reader's prior knowledge, linguistic competence, and the text itself (Das & Baker, 2021). Successful reading comprehension requires readers to actively process information, make inferences, identify main ideas, and integrate textual information with background knowledge (Grabe & Stoller, 2020).

At the vocational high school (SMK) level, reading comprehension has particular importance because students are expected to understand texts related not only to academic learning but also to vocational and practical contexts. However, preliminary observations at SMK Muhammadiyah 1 Palu indicated that many Grade XI students experienced difficulties in comprehending English texts. These difficulties were reflected in students' low achievement in reading comprehension tests, limited ability to answer comprehension questions accurately, and a tendency to guess answers without sufficient textual understanding. Similar challenges have been widely reported in EFL contexts and are often associated with students' limited use of reading strategies and inadequate instructional guidance (Alghamdi, 2021; Zhang & Duke, 2022).

Regrettably, not all students devote their full concentration to the teacher's elucidation, often engaging in whispered conversations with their peers. Such behavior not only disrupts the learning environment but also hinders fellow students who earnestly desire to grasp the valuable insights shared by the teacher (Bavi, 2018).

One instructional strategy that has been widely recognized for addressing these challenges is the Question–Answer Relationship (QAR) strategy. The QAR strategy helps students understand the relationship between questions and answers by categorizing questions into four types: Right There, Think and Search, Author and You, and On My Own. Through this categorization, students learn whether answers are explicitly stated in the text, inferred from multiple parts of the text, or derived from prior knowledge combined with textual information. According to Nguyen & Taylor (2022), QAR encourages learners to become strategic readers by guiding them to identify where and how answers can be found, thereby enhancing metacognitive awareness during reading.

The students looked like they felt bored when teacher asked to read the text, then the students should do an exercise based on the content, and the students did not understand the question because they had not some strategy to do exercise. The students could only cheat from their friends when the teacher left the room for a while (Arafah, 2018).

Previous studies have demonstrated that the QAR strategy effectively improves students' reading comprehension by helping learners recognize question types and locate relevant information more accurately (Alqahtani, 2020; Asilestari, 2021; Sinurat et al., 2024; Utami, 2023). Research has also shown that strategy-based reading instruction positively influences students' engagement, confidence, and critical thinking skills in EFL classrooms (Duke & Cartwright, 2021; L. J. Zhang & Gu, 2020). Nevertheless, most existing studies have focused on general secondary school contexts and have primarily emphasized quantitative outcomes. Empirical evidence examining the effectiveness of QAR in vocational high school settings, particularly in Indonesia, remains limited.

Therefore, this study aims to address these gaps by investigating the effect of the Question–Answer Relationship (QAR) strategy on the reading comprehension of Grade XI vocational high school students using an explanatory sequential mixed-methods design. Specifically, this research seeks to (1) examine whether the QAR strategy significantly improves students' reading comprehension compared to conventional teaching methods and (2) explore students' perceptions of the implementation of the QAR strategy in an Indonesian vocational EFL context.

Based on the problems outlined above and the results of the literacy study, the author considers

it necessary to conduct research to improve reading comprehension skills using the Question-Answer Relationships (QAR) strategy in elementary school students. This strategy is expected to improve students' reading comprehension skills and the quality of reading comprehension learning.

The research was apply non-experimental design with a quantitative approach. The research was conducted through using non-experimental research. The research was concentrate on one group pretest-posttest design because there was no control group and experimental group. The students of X grade were the subjects of this research. The students were received treatment by using QAR Technique (Sari & Rahayu, 2024).

2. METHODS

Research Design

This study employed an explanatory sequential mixed-methods design (Creswell & Plano Clark, 2023). In this design, quantitative data were collected and analyzed first to examine the effect of the QAR strategy on students' reading comprehension, followed by qualitative data collection to explain and elaborate on the quantitative findings.

Participants

The participants of this study were 51 Grade XI students from SMK Muhammadiyah 1 Palu, Indonesia. The students were selected through purposive sampling based on class availability and school recommendations. They were divided into an experimental class consisting of 27 students and a control class consisting of 24 students. Both classes followed the same curriculum and had similar English learning backgrounds.

Table 1. Population Overview of Grade XI Students

No.	Name of Classes	Number of Students
1.	XI DKV	18
2.	XI DPIB	8
3.	XI TFARM	17
4.	XI TKJT A	24
5.	XI TKJT B	27
6.	XI TO A	38
7.	XI TO B	14
	Total	146

Instruments Of The Research

This study employed four main instruments: reading comprehension tests, classroom observation sheets, questionnaires, and semi-structured interviews.

The reading comprehension tests consisted of a pretest and a posttest, each comprising ten essay questions designed to measure students' literal, inferential, and critical comprehension. Classroom observation sheets were used to document students' engagement, participation, and interaction during the implementation of the QAR strategy. Questionnaires were administered to gather students' perceptions of the QAR strategy, including their motivation, confidence, and perceived usefulness. Semi-structured interviews were conducted to obtain in-depth qualitative data regarding students' learning experiences and challenges.

a. Observation Sheets

Classroom observations were conducted to document students' engagement, participation, and interaction during the implementation of the QAR strategy. The observation sheets focused on students' learning behaviors and the teacher's instructional practices during pre-reading, while-reading, and post-reading activities. These observations provided contextual qualitative data to support and explain the quantitative findings.

b. Tests

Two reading comprehension tests, namely a pretest and a posttest, were administered to measure students' reading comprehension before and after the implementation of the QAR strategy (Wijayanto, 2025). Both tests consisted of ten essay questions designed to assess students' literal, inferential, and critical comprehension based on the same scoring rubric.

Table 2. Scoring System

No.	Types of the Test	Number of Tests	Score Each Item	Total Score
1.	Essay Test	10	3	30
		Total		30

Table 3. Scoring Rubric

No.	Explanation	Score
1.	Correct content, grammar, and spelling	3
2.	Correct content and grammar, incorrect spelling	2
3.	Correct content and spelling, incorrect grammar	2
4.	Incorrect answer, grammar, and spelling	1
5.	No answer	0

Table 4. Score Range, Category, and Qualification

No.	Score Range	Category	Qualification
1.	90 - 100	Very Good	Successful
2.	80 - 89	Good	Successful
3.	75 - 79	Fair	Successful
4.	60 - 74	Poor	Failed
5.	0 - 59	Very Poor	Failed

c. Interview Question

Semi-structured interviews were conducted with selected students from the experimental class to gain deeper insights into their learning experiences, challenges, and perceptions of the QAR strategy. The interviews allowed flexibility for follow-up questions and provided rich qualitative data to explain students' responses to the instructional treatment.

d. Questionnaire

A questionnaire was administered to collect data on students' perceptions of the QAR strategy. It consisted of 15 items, including 10 close-ended statements using a five-point Likert scale and 5 open-ended questions. The questionnaire explored students' motivation, confidence, participation, and perceived usefulness of the QAR strategy in reading comprehension.

e. Interview

Semi-structured interviews were conducted with selected students from the experimental class to gain deeper insights into their learning experiences, challenges, and perceptions of the QAR strategy. The interviews allowed flexibility for follow-up questions and provided rich qualitative data to explain students' responses to the instructional treatment.

Procedures Of Data Collection

Data collection was conducted in several stages. First, a pretest was administered to both the experimental and control classes to measure students' initial reading comprehension levels. Next, the experimental class received instruction using the QAR strategy, while the control class was taught using conventional reading instruction. Classroom observations were conducted during the instructional sessions. After the treatment period, a posttest was administered to both classes. Finally, questionnaires and interviews were conducted with students from the experimental class.

a. Observation

Observation serves as one of the instruments in this research to obtain qualitative data about the teaching and learning process during the implementation of the QAR (Question and Answer Relationship) strategy (Nisa, 2023). The observation focuses on students' behavior, participation, and interaction in the classroom as well as the way the teacher applies the strategy. A structured observation sheet was used to guide the process, so the researcher could record relevant aspects consistently. This technique allows the researcher to gather natural data directly from the classroom setting, which supports the findings from tests, questionnaires, and interviews.

b. Testing Procedures

The testing procedures consisted of administering a pretest and a posttest to both the experimental and control class. The pretest was conducted prior to the instructional treatment to measure students' initial reading comprehension levels. Following the treatment period, the posttest was administered to assess students' reading comprehension improvement. Both tests were designed to measure students' abilities in literal, inferential, and critical comprehension based on the same scoring criteria.

c. Interview

A semi-structured interview was conducted with purposively selected students from the experimental class to gain deeper insights into their experiences using the QAR strategy (A. Arsyad et al., 2022). The interview aimed to explore students' opinions, difficulties, learning processes, and perceived impacts of the QAR implementation. The semi-structured format allowed flexibility for follow-up questions based on students' responses. Each interview lasted about 15–20 minutes and was recorded with consent to ensure data accuracy. The recorded data were transcribed and coded for thematic analysis, providing rich qualitative data to support and explain the quantitative test results.

d. Identification

Identification in this research refers to the process of identifying and classifying the types of data obtained from various instruments used during the data collection procedures. After administering the pretest, posttest, observation, questionnaire, and interview, the researcher organized the collected data based on its sources and characteristics. Quantitative data were identified as numerical scores generated from the pretest and posttest results, while qualitative data were identified as descriptive information obtained from observations, students' written responses in the questionnaire, and interview transcripts. This identification process ensured that each dataset was properly categorized before analysis, allowing the researcher to determine which analytical techniques were appropriate for each type of data. Through this step, the researcher established a clear distinction between quantitative and qualitative

findings, which later facilitated the integration of both data sets during the mixed-method analysis phase.

The text's vocabulary, length, organization, and level of interest all contribute to reading difficulty. With the active reading movement taking place in both developed and developing countries, the issue of students' reading comprehension skills has received considerable attention. Problems in teaching reading often stem from the students themselves, including their level of comprehension, inability to make connections between ideas in a passage, tendency to overlook or omit important details, difficulty distinguishing important information from unimportant details, and lack of concentration while reading. In addition, the reading approach used by teachers can also be a source of difficulties. In the past, many teachers made little effort to stimulate students' interest in reading materials or to activate their prior knowledge before reading. Typically, students were assigned to read a text and then answer a series of comprehension questions. When this method was repeatedly employed in reading instruction, students often became disengaged and lost interest in their studies. Therefore, more interactive and student-centered reading strategies are needed to enhance students' reading comprehension and motivation to learn (Gaffar et al., 2024).

Techniques Of Data Analysis

Quantitative data were analyzed using descriptive statistics and an independent samples t-test through SPSS version 25. Qualitative data obtained from observations, interviews, and open-ended questionnaire responses were analyzed thematically following Saldaña (2016) coding procedures. The integration of quantitative and qualitative findings was conducted during the interpretation stage to provide a comprehensive understanding of the effectiveness of the QAR strategy.

a. Quantitative Data Analysis

Quantitative data were obtained from students' pretest and posttest results in both experimental and control classes. The data were analyzed using SPSS version 25. The steps of analysis included:

- 1) Descriptive Statistics: Calculating the mean, standard deviation, minimum, and maximum scores to describe students' reading performance before and after the treatment.
- 2) Normality Test: To verify whether the data were normally distributed using the Shapiro–Wilk test.
- 3) Homogeneity Test: To ensure that the variances of the two class were homogeneous.
- 4) Inferential Statistics (t-test): The Independent Sample t-test was applied to determine the significance of the difference between the posttest means of the experimental and control classes.

The level of significance (α) was set at 0.05. If the significance value ($p \leq 0.05$), it indicates a statistically significant difference, meaning that the QAR strategy had a positive effect on students' reading comprehension.

b. Qualitative Data Analysis

The qualitative data were analyzed using thematic coding procedures following Saldaña (2016) framework. The analysis involved several stages, including initial coding to reduce and organize the data, data display to identify emerging themes and patterns, and conclusion drawing to interpret the meanings of the findings. This analytical process was applied to data obtained from classroom observations, interviews, and open-ended questionnaire responses to examine how the QAR strategy influenced students' reading comprehension, motivation, confidence, and learning engagement. The use of thematic analysis ensured that qualitative findings systematically supported and explained the quantitative results.

c. Integration of Quantitative and Qualitative Findings

In accordance with the explanatory sequential design, the integration of quantitative and qualitative findings was carried out during the interpretation stage. The quantitative results demonstrated measurable improvements in students' reading comprehension after the implementation of the QAR strategy. Meanwhile, the qualitative findings provided explanations for these improvements by highlighting students' perceptions, challenges, and learning experiences. Together, this integration offered a more comprehensive understanding of the strategy's effectiveness and ensured that the conclusions were both statistically and contextually grounded.

d. Data Triangulation

All instruments were designed to complement each other through a process of data triangulation.

- 1) The reading comprehension test provides objective, measurable data about students' improvement.
- 2) The questionnaire and interview reveal students' subjective perceptions and experiences.
- 3) The observation sheet captures classroom realities and learning behaviors.

By integrating these instruments, the research produces a more valid and comprehensive picture of how the QAR strategy affects students' reading comprehension and learning attitudes. This triangulation ensures that the quantitative and qualitative findings support and enrich each other, providing strong evidence for the Research's conclusions.

3. FINDINGS AND DISCUSSIONS

Finding

The quantitative analysis revealed a clear difference in reading comprehension achievement between students taught using the Question–Answer Relationship (QAR) strategy and those taught through conventional instruction. Students in the experimental class demonstrated a substantially higher level of improvement than students in the control class. Table 1 summarizes the comparison of pretest and posttest mean scores for both classes.

Table 6. Summary of Students' Reading Comprehension Results

Class	Pretest Mean	Posttest Mean	Interpretation
Experimental Class (QAR)	60.48	83.85	Significant improvement
Control Class	60.42	67.29	Limited improvement

The quantitative analysis revealed a significant difference in reading comprehension achievement between students taught using the QAR strategy and those taught through conventional instruction. Students in the experimental class demonstrated substantial improvement from pretest to posttest, while the control class showed only limited improvement. It is known that teaching and learning activities can have a positive effect when using the Qar method, thereby helping students to improve the learning process, helping teachers in teaching and making it easier for the material to enter students' thought patterns.

The mean pretest score of the experimental class was 60.48, which increased to 83.85 in the posttest. In contrast, the control class showed an increase from a mean pretest score of 60.42 to a posttest mean score of 67.29. The independent samples t-test indicated that the difference in posttest scores between the two classes was statistically significant ($p < 0.05$), confirming the positive effect of the QAR strategy on students' reading comprehension.

The improvements made in the experimental class resulted in a significant increase in the scores obtained in the experimental class so that the QAR method used had a positive influence on students as objects of the QAR method. The results showed that the QAR learning strategy had a significant effect on students' reading comprehension skills and theoretical mastery of nonfiction texts. Based on the results of the *pretest and posttest*, students' reading comprehension skills increased by an average of 83.85 from 60.48 after the QAR learning strategy was implemented (Budianty, 2023)

Qualitative findings supported the quantitative results. Classroom observations showed that students in the experimental class were more actively engaged during reading activities. They participated in discussions, collaborated with peers to identify question types, and demonstrated increased awareness of how questions relate to sources of answers. Interview and questionnaire data revealed that students perceived the QAR strategy as helpful, engaging, and motivating. They reported increased confidence, reduced reliance on guessing, and improved strategic awareness in reading. Table 7 presents the main findings obtained from classroom observations, interviews, and questionnaires.

Table 7. Summary of Qualitative Results

Data Source	Key Findings
Classroom Observation	Increased engagement, collaboration, and active participation
Interview	Improved confidence, reduced guessing, and strategic reading awareness
Questionnaire	Positive perceptions toward QAR, increased motivation, and interest in reading

The results demonstrate that the implementation of the QAR strategy not only improved students' reading comprehension outcomes but also fostered positive learning behaviors, including increased motivation, confidence, and strategic awareness during reading activities.

Discussion

The implementation of the QAR (Question and Answer Relationship) strategy significantly enhances students' reading comprehension compared to conventional teaching methods. This conclusion is supported by quantitative findings from the pretest and posttest results as well as qualitative evidence obtained from classroom observations, interviews, and questionnaires. The convergence of these data sources indicates that the QAR strategy not only improves students' reading achievement but also positively influences the overall learning process. Therefore, the effectiveness of QAR can be viewed from both cognitive and affective perspectives in reading instruction.

The substantial improvement in the experimental class's mean score from 60.48 in the pretest to 83.85 in the posttest indicates that QAR provides a structured framework that helps students process texts more effectively. This improvement suggests that students became more capable of identifying relevant information, making inferences, and evaluating textual content. These findings are consistent with Raphael's (1986) theory, which emphasizes that QAR helps learners understand the relationship between questions and the sources of their answers. By applying different question types, students are guided to use appropriate strategies rather than relying on random guessing.

From a theoretical perspective, the effectiveness of QAR can be explained through metacognitive reading strategy instruction. Raphael and Au (2005) argue that QAR enhances students' metacognitive awareness by encouraging them to think about how answers are obtained and to justify their reasoning. In this research, students in the experimental class were able to explain why a question belonged to a particular QAR category and how the answer was derived. Such metacognitive engagement indicates that students were actively monitoring and regulating their comprehension during reading activities.

The improvement in classroom interaction observed during the implementation of QAR further supports its effectiveness. Classroom observations and interview data revealed that students actively discussed question types, exchanged ideas, and evaluated answers collaboratively. This finding aligns

with McLaughlin and Allen's (2002) assertion that guided comprehension strategies promote collaborative learning and higher-order thinking. Through QAR-based activities, students were positioned as active participants in constructing meaning from texts rather than passive recipients of information.

In addition to cognitive improvement, the QAR strategy positively influenced students' motivation in reading activities. Students reported that reading lessons became more interesting and less monotonous when QAR was applied consistently. This finding supports Nuttall's (2005) view that effective reading instruction should clarify both the purpose and process of reading. By providing clear steps for answering questions, QAR reduced students' anxiety and increased their willingness to engage with reading tasks.

The findings also indicate that QAR enhances students' competence and confidence in reading comprehension. Students became more confident in answering questions independently because they understood how to approach different types of questions. Brown (2017) states that effective readers are those who can select appropriate strategies based on reading purposes, and this ability was developed through the application of QAR. As a result, students demonstrated improved accuracy and confidence when responding to comprehension questions.

Although some students initially experienced difficulty distinguishing between Author and You and On My Own questions, this challenge gradually diminished through consistent practice and teacher scaffolding. This finding supports McIntosh and Draper's (1996) claim that QAR requires careful modeling and gradual implementation to ensure successful independent application. Over time, students became more familiar with the categories and applied the strategy more independently. This progression indicates that initial difficulties did not hinder the long-term effectiveness of QAR.

The findings of this study indicate that the Question-Answer Relationship (QAR) strategy has a significant positive effect on vocational students' reading comprehension in an EFL context. Students who were taught using the QAR strategy demonstrated substantially greater improvement than those who received conventional instruction. This result supports previous research emphasizing the effectiveness of strategy-based reading instruction in enhancing students' comprehension and strategic awareness (Duke & Cartwright, 2021; L. J. Zhang & Gu, 2020).

From a metacognitive perspective, the effectiveness of the QAR strategy can be attributed to its ability to enhance students' awareness of how questions relate to sources of information in the text. By categorizing questions into different types, QAR encourages students to monitor their comprehension processes and apply appropriate strategies when answering questions (Alghamdi, 2021; McNamara & Magliano, 2019). This strategic awareness helps students move beyond surface-level reading and develop deeper comprehension.

In addition to cognitive improvement, the qualitative findings revealed positive affective outcomes, including increased motivation, confidence, and classroom engagement. Students became more active participants in reading activities and demonstrated greater independence in answering comprehension questions. These findings align with constructivist learning theory, which emphasizes active meaning construction and learner-centered instruction (Cain et al., 2018; Snowling & Hulme, 2021).

From a pedagogical perspective, the findings suggest that the QAR strategy is particularly suitable for vocational high school students who benefit from clear, structured, and explicit instructional guidance. By providing practical scaffolding, the QAR strategy supports both academic and vocational literacy development. Therefore, integrating QAR into EFL reading instruction can help vocational students develop reading comprehension skills, critical thinking, and independent learning habits.

4. CONCLUSION

This study concludes that the Question–Answer Relationship (QAR) strategy significantly improves the reading comprehension of Grade XI vocational high school students. Students taught using the QAR strategy achieved higher reading comprehension scores than those taught through conventional instruction. In addition to improving academic performance, the QAR strategy enhances students' motivation, confidence, and strategic awareness in reading. These findings highlight the pedagogical relevance of the QAR strategy for vocational EFL classrooms and support its broader implementation in reading instruction.

These problems must be addressed immediately so that efforts to improve reading comprehension using the Question Answer Relationship (QAR) strategy can be successful as planned. In addressing these problems, researchers must be careful because if problem 1 is difficult to resolve, it will hinder the implementation of subsequent actions. Nevertheless, overall, the implementation of the teaching and learning process for reading comprehension using the Question Answer Relationship (QAR) strategy ran smoothly.

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