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The Effectiveness of Question Answer Relationship Strategy on Students' Reading Comprehension

Author:

Susi Indriani¹, Agus Husein As Sabiq²

Affiliation: ^{1,2}English Education,
Islamic University Prof. K.H. Saifuddin
Zuhri Purwokerto, Indonesia

Corresponding email: Agus Husein As Sabiq husein@uinsaizu.ac.id

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Abstract: This study examined the effectiveness of the Question-Answer Relationship (QAR) strategy on ninth-grade students' reading comprehension at MTs Muhammadiyah 03 Purbalingga. A quasi-experimental design was employed involving two classes: an experimental group taught using the QAR strategy and a control group taught using a task-based strategy. The population consisted of 136 ninth-grade students, and the sample included Class IX A as the experimental group and Class IX C as the control group. Data were collected through pre-tests and post-tests consisting of 23 multiple-choice questions assessing students' ability to identify explicit information, determine main ideas, make inferences, and understand contextual word meanings in recount texts. The data were analyzed using IBM SPSS Statistics version 27. The results indicated that students taught using the QAR strategy showed greater improvement in reading comprehension than those in the control group. The independent-samples t-test revealed a significant difference between the two groups, with a significance value of 0.000 (< 0.05). These findings demonstrate that the QAR strategy was effective in improving students' reading comprehension and promoting more active engagement in the reading process. Therefore, the QAR strategy is recommended as an effective instructional strategy for teaching reading comprehension.

Keywords: Question-Answer Relationship Strategy; Reading Comprehension; Recount Text; Quasi-Experimental Study

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Introduction

Reading comprehension is a fundamental component of English language learning, particularly in English as a Foreign Language (EFL) contexts, where it enables students to access information, construct meaning from texts, and develop higher-order thinking skills. In Indonesia, the Merdeka Curriculum emphasizes students' ability to identify, understand, and evaluate information from various text types, highlighting reading comprehension as a key learning outcome (Kemendikbudristek, 2022). Despite its importance, reading comprehension remains a challenging area for many students. Previous studies have reported that learners frequently experience difficulties in understanding main ideas, identifying specific information, making inferences, and interpreting unfamiliar vocabulary, which consequently limits their ability to comprehend texts effectively (Apriyani et al., 2024; Pang et al., 2003).

These challenges are further exacerbated by limited English exposure and the insufficient use of effective reading strategies in classroom instruction (Kusumawanti & Bharati, 2018).

To address these challenges, researchers have proposed various instructional strategies designed to improve students' reading comprehension. One strategy that has received considerable attention is the Question–Answer Relationship (QAR) strategy developed by Raphael (2005). The QAR strategy helps students recognize different types of comprehension questions and determine where answers can be found, either directly within the text or through the integration of textual information and prior knowledge. By categorizing questions into Right There, Think and Search, Author and You, and On Your Own, the strategy encourages students to engage actively with texts and apply metacognitive processes during reading (Madlambayan et al., 2017). Consequently, students are expected to become more strategic readers who can process information critically rather than relying solely on literal understanding.

The effectiveness of the QAR strategy has been demonstrated in various educational settings. Nurhayati et al. (2019) reported that students taught through QAR achieved significantly higher reading comprehension scores than those receiving conventional instruction. Similarly, Tiara et al. (2025) found that QAR contributed to improved post-test performance among secondary school students. Research conducted by Daflizar and Roza (2022) further indicated that the strategy facilitated students' comprehension of narrative texts by helping them connect textual evidence with prior knowledge. In addition, Yathip and Liang-Itsara (2024) showed that a modified QAR approach enhanced students' metacognitive awareness and promoted more sustainable comprehension development. Other studies have also reported positive outcomes in terms of students' reading achievement, classroom participation, and learning motivation (Muhaimin et al., 2024; Wiranegara et al., 2024).

Although previous studies consistently support the effectiveness of the QAR strategy, several limitations remain. Most existing research has been conducted in general secondary school settings, while relatively little attention has been given to its implementation in Islamic junior secondary schools. Educational contexts may influence the effectiveness of instructional strategies because students' learning characteristics, classroom environments, and institutional programs can differ substantially across schools. Consequently, the transferability of findings from general educational settings to Islamic-based schools requires further empirical investigation. This gap suggests the need for additional studies examining the application of QAR in different educational contexts to strengthen the evidence regarding its effectiveness.

The present study was conducted at MTs Muhammadiyah 03 Purbalingga, where preliminary observations indicated that ninth-grade students experienced difficulties in identifying main ideas, locating detailed information, interpreting references, and drawing inferences from reading texts. These difficulties were accompanied by limited vocabulary knowledge and instructional practices that tended to emphasize text translation rather than the development of strategic reading skills. Considering these challenges and the limited evidence regarding the implementation of QAR in Islamic junior secondary schools, this study investigates the effectiveness of the Question–Answer Relationship (QAR) strategy in improving the reading comprehension of ninth-grade students at MTs Muhammadiyah 03 Purbalingga. To achieve this objective, a quantitative experimental approach was employed to compare students' reading comprehension performance before and after the implementation of the strategy.

Literature Review

This section is used to limit the scope of the relevant data by focusing on specific variables and defining the specific viewpoint (framework) that the researcher will take in analyzing and interpreting the data to be gathered, understanding concepts and variables according to the given definitions, and building knowledge by validating or challenging theoretical assumptions. (Cambria, 12-point, 1.0 Spacing).

Reading Comprehension

Reading comprehension is a complex cognitive process involving the construction of meaning through interaction with written texts. According to Snow (2002), reading comprehension requires readers to simultaneously extract and construct meaning from written language. This process extends beyond word recognition and decoding, as it involves integrating background knowledge, making inferences, and interpreting information within context. Similarly, Butterfuss et al. (2020) emphasize that successful comprehension depends on the interaction among working memory, prior knowledge, and inferential thinking. Therefore, reading comprehension is considered a multidimensional skill that enables learners to understand both explicit and implicit meanings contained in a text.

In EFL contexts, reading comprehension plays a crucial role in language learning because it facilitates the acquisition of vocabulary, grammatical knowledge, and critical thinking skills. Ramadhani (2021) argues that reading comprehension enables students not only to identify information but also to analyze, evaluate, and synthesize ideas from written materials. Furthermore, Alshehri (2024) highlights the close relationship between reading comprehension and critical thinking, suggesting that effective readers actively engage with texts through questioning, reflecting, and evaluating information. Consequently, reading comprehension contributes significantly to students' academic achievement and overall literacy development.

Several scholars have identified key aspects of reading comprehension that support students' understanding of texts. According to Nuttall, as cited in Ma'rifah et al. (2017), effective comprehension involves identifying the main idea, locating specific information, making inferences, understanding references, and interpreting vocabulary in context. These aspects allow readers to construct coherent meaning from a text and to connect ideas across sentences and paragraphs. Difficulties in any of these areas may hinder comprehension and reduce students' ability to engage critically with reading materials.

To improve reading comprehension, researchers have proposed various instructional strategies, including questioning techniques, summarization, cognitive strategies, metacognitive strategies, and collaborative reading activities (Muslaini, 2017). Among these approaches, questioning-based strategies have gained considerable attention because they encourage students to interact actively with texts and monitor their understanding during reading. Such strategies are particularly relevant to the Question-Answer Relationship (QAR) strategy, which provides a structured framework for helping students identify different types of comprehension questions and determine appropriate sources of information when constructing answers.

Question Answer Relationship Strategy

The Question Answer Relationship (QAR) strategy, developed by Raphael (2005), is a reading comprehension framework designed to help students understand the relationship between questions and the sources of information needed to answer them. The strategy assists learners in identifying whether answers can be found directly in the text, inferred from multiple parts of the text, constructed by combining textual information with prior knowledge, or generated entirely from personal experiences. By explicitly teaching students how to approach different types of comprehension questions, QAR promotes strategic reading and enhances students' awareness of the comprehension process.

QAR categorizes questions into four types: Right There, Think and Search, Author and You, and On Your Own (Raphael, 2005). Right There questions require students to locate explicitly stated information within the text, whereas Think and Search questions require them to synthesize information from several parts of a passage. Author and You questions encourage readers to combine textual evidence with prior knowledge to construct meaning, while On Your Own questions rely primarily on personal

knowledge and experiences. These categories represent different levels of comprehension, ranging from literal understanding to higher-order thinking and interpretation.

Theoretical perspectives suggest that QAR functions as a metacognitive scaffold that supports students in monitoring and regulating their reading processes. Anggraini (2021) argues that QAR encourages learners to become more strategic and self-regulated readers by helping them recognize the cognitive demands of different question types. Similarly, Lokot et al. (2022) found that the strategy strengthens students' analytical reading abilities by enabling them to distinguish between literal and inferential comprehension tasks. Through systematic practice, students develop greater awareness of how information is constructed within texts and how different reading strategies can be applied to answer specific questions effectively.

The relevance of QAR to reading comprehension lies in its ability to promote active engagement with texts. Rather than focusing solely on locating information, students are encouraged to analyze, infer, evaluate, and connect textual information with their prior knowledge. Consequently, the strategy supports the development of essential reading comprehension skills, including identifying main ideas, locating supporting details, making inferences, interpreting references, and understanding vocabulary in context. Given these characteristics, QAR is considered a promising instructional strategy for improving students' reading comprehension in EFL classrooms.

Research Method

This study employed a quantitative approach using a quasi-experimental design. The study adopted a pre-test-post-test control group design to investigate the effectiveness of the Question-Answer Relationship (QAR) strategy on students' reading comprehension. The experimental group received instruction through the QAR strategy, whereas the control group was taught using conventional task-based instruction.

Participants

The population of this study consisted of 136 ninth-grade students of MTs Muhammadiyah 03 Purbalingga in the 2025/2026 academic year. Cluster random sampling was employed to select the participants. Two classes were randomly selected using a digital randomization tool. Class 9A Tahfidz, consisting of 23 students, was assigned as the experimental group, while Class 9C Seni, consisting of 23 students, served as the control group.

Research Instrument

The instrument used in this study was a reading comprehension test consisting of multiple-choice questions. Prior to the main study, the instrument was validated through expert judgment and pilot-tested in a class outside the research sample. The validity and reliability of the test items were analyzed using IBM SPSS Statistics 27. The reliability analysis indicated that the instrument was sufficiently reliable for data collection.

Data Collection

Data were collected through pre-tests, treatments, and post-tests. Both groups completed a pre-test before the treatment. The experimental group received three instructional sessions using the Question-Answer Relationship (QAR) strategy, whereas the control group received conventional instruction. Following the treatment, both groups completed a post-test to measure their reading comprehension achievement.

Data Analysis

The collected data were analyzed using IBM SPSS Statistics 27. Prior to hypothesis testing, normality and homogeneity tests were conducted using the Shapiro-Wilk and Levene's tests. Paired-samples t-tests were employed to examine the improvement within each group, while an independent-samples t-test was conducted to compare the post-test scores between the experimental and control groups. The significance level was set at 0.05.

Finding (s)

Table 1 presents the descriptive statistics of students' reading comprehension scores in both the experimental and control groups. Before the treatment, the experimental group obtained a mean pre-test score of 63.52, while the control group achieved a mean score of 61.35. These results indicate that the two groups had relatively similar levels of reading comprehension prior to the implementation of the treatment. Following the instructional intervention, both groups demonstrated improvement in their reading comprehension scores. The mean score of the experimental group increased from 63.52 to 88.91, whereas the control group improved from 61.35 to 74.39. However, the increase in the experimental group was substantially greater than that of the control group. The experimental group gained 25.39 points, while the control group gained 13.04 points. These findings suggest that students who were taught using the Question-Answer Relationship (QAR) strategy achieved greater improvement in reading comprehension than those who received conventional instruction.

Table 1. Descriptive Statistics by IBM SPSS 27 Statistics.

Descriptive Statistics	N	Minimum	Maximum	Mean	Std. Deviation
Pre-test Experiment	23	52	74	63.52	6.934
Post-test Experiment	23	78	100	88.91	6.395
Pre-test Control	23	52	74	61.35	6.806
Post-test Control	23	65	87	74.39	6.486
Valid N (listwise)	23				

The Effectiveness of the QAR Strategy on Students' Reading Comprehension

Before testing the research hypothesis, normality and homogeneity tests were conducted to ensure that the data met the assumptions required for parametric analysis. The results of the Shapiro-Wilk test showed that all significance values were higher than 0.05, indicating that the data were normally distributed. Furthermore, Levene's Test produced a significance value of 0.806, which exceeded 0.05, suggesting that the variances of the experimental and control groups were homogeneous. Therefore, the data were considered suitable for further analysis using parametric statistical tests.

To examine the effectiveness of the Question-Answer Relationship (QAR) strategy, a paired-samples t-test was conducted on the experimental group. The results revealed a significant difference between the pre-test and post-test scores, with a mean difference of -25.391, $t(22) = -19.528$, and $p = 0.000$. Since the significance value was lower than 0.05, the null hypothesis was rejected. This finding indicates that students' reading comprehension improved significantly after receiving instruction through the QAR strategy.

A paired-samples t-test was also conducted on the control group. The results showed a significant difference between the pre-test and post-test scores, with a mean difference of -13.043, $t(22) = -8.502$, and $p = 0.000$. Although the control group demonstrated improvement, the increase was considerably lower than that of the experimental group.

To determine whether the improvement in the experimental group was significantly greater than that in the control group, an independent-samples t-test was performed on the post-test scores. The results showed a significance value of 0.000, which was lower than 0.05. The experimental group obtained a higher mean score ($M = 88.91$) than the control group ($M = 74.39$), with a mean difference of 14.522 points. These findings indicate a statistically significant difference between the two groups after the treatment.

Overall, the results demonstrate that the Question-Answer Relationship (QAR) strategy was effective in improving students' reading comprehension. Students who were taught using the QAR strategy achieved significantly higher reading comprehension scores than those who received conventional instruction. Thus, the research hypothesis stating that the QAR strategy has a significant effect on students' reading comprehension was accepted.

Table 2. Result Data Analysis by IBM SPSS 27 Statistics.

Test	Mean Difference	t-value	Sig. (2-tailed)	Result
Paired t-test (Experimental)	- 25.39 1	-19.528	0.000	Significant
Paired t-test (Control)	- 13.04 3	-8.502	0.000	Significant
Independent t-test (Post-test)	14.52 2	-7.646	0.000	Significant

Discussion

The findings of this study demonstrate that the Question–Answer Relationship (QAR) strategy effectively improved students’ reading comprehension. This improvement can be attributed to the structured framework provided by QAR, which helps students identify the relationship between questions and answer sources. Through the categories of Right There, Think and Search, Author and You, and On My Own, students learned how to locate explicit information, integrate information from different parts of a text, make inferences, and connect textual information with their prior knowledge. As a result, students became more strategic readers and were better able to comprehend reading texts.

The findings support Raphael’s (2005) theory, which argues that students’ comprehension improves when they understand where and how answers can be found. By explicitly teaching students to recognize different question types, QAR promotes active engagement with texts and encourages the use of cognitive and metacognitive reading strategies. In the present study, students gradually became more confident in answering comprehension questions and demonstrated greater independence during reading activities. These findings suggest that QAR not only enhances comprehension performance but also supports the development of strategic reading behaviors.

Furthermore, the implementation of QAR appeared to increase students’ classroom participation and engagement. Students actively discussed texts, exchanged ideas with peers, and collaborated in identifying answer sources. Such interaction is important because reading comprehension involves not only understanding written information but also constructing meaning through active learning processes. Therefore, the effectiveness of QAR may be attributed to its ability to combine explicit strategy instruction with collaborative learning opportunities.

Comparison with Previous Studies and Research Contribution

The findings of this study are consistent with previous research reporting the positive effects of QAR on reading comprehension. Tiara et al. (2025) found that students taught through QAR achieved higher comprehension scores and demonstrated stronger abilities in answering both literal and inferential questions. Similarly, Daflizar and Roza (2022) reported that QAR helped students integrate textual information with prior knowledge, resulting in deeper comprehension. The present findings support these conclusions by showing that students became more capable of identifying answer sources and interpreting texts effectively.

The results also align with the findings of Yathip and Liang-Itsara (2024), who highlighted the role of QAR in developing students’ metacognitive awareness. In the current study, students showed greater awareness of how to approach different types of reading questions and became more strategic in selecting appropriate reading strategies. Likewise, the positive student responses observed in this study are consistent with the findings of Muhaimin et al. (2024), who reported increased motivation and favorable perceptions toward the use of QAR in reading instruction.

Despite the consistency with previous studies, the present research contributes additional evidence regarding the effectiveness of QAR in the context of an Islamic junior secondary school. While earlier studies were predominantly conducted in general educational settings, this study demonstrates that QAR is also effective for ninth-grade students at MTs Muhammadiyah 03 Purbalingga. This finding

suggests that the strategy can be successfully implemented across different educational contexts and student backgrounds.

Nevertheless, this study was limited to a relatively small sample from a single institution. Future research may involve larger samples, different educational levels, or other text genres to provide broader evidence regarding the effectiveness of the QAR strategy in improving reading comprehension.

Conclusion

This study investigated the effectiveness of the Question-Answer Relationship (QAR) strategy in improving the reading comprehension of ninth-grade students at MTs Muhammadiyah 03 Purbalingga. The findings revealed that the implementation of the QAR strategy contributed positively to students' reading comprehension. Through structured guidance in identifying the relationship between questions and answer sources, students became more capable of locating information, making inferences, and constructing meaning from texts effectively.

The study also found that students taught using the QAR strategy demonstrated greater improvement in reading comprehension than those taught through task-based instruction. In addition to enhancing comprehension achievement, the strategy encouraged students to become more active, confident, and strategic readers during the learning process. These findings support the view that explicit reading strategy instruction plays an important role in developing students' comprehension skills and engagement in reading activities.

This research contributes to the growing body of literature on reading comprehension instruction by providing evidence of the effectiveness of the QAR strategy in the context of an Islamic junior secondary school. Therefore, the QAR strategy can be considered an effective instructional approach for English teachers seeking to improve students' reading comprehension. Future studies are recommended to involve larger samples, different educational settings, and various text genres to further examine the effectiveness of the QAR strategy and its long-term impact on students' reading development and metacognitive awareness.

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