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Question-Answer Relationship (QAR) Strategy in Enhancing Reading Comprehension Skills

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Abstract

This study aimed to assess the effectiveness of the Question-Answer Relationship (QAR) strategy in improving the reading comprehension of Grade 5 students at Sta. Cruz Elementary School in the San Jose District of Dinagat Islands. Using a quasi-experimental design, the study compared the QAR strategy to traditional reading methods with a sample of 58 Grade 5 learners, divided into control and experimental groups. Teacher-made tests were used to evaluate students' comprehension before and after the intervention. Results showed that both groups had identical pretest scores of 0.53 (5.30%) and performed at a "Needs Improvement" level. Posttest results revealed slight improvements, with the traditional strategy achieving a mean score of 5.52 (55.23%) and the QAR strategy a mean of 5.66 (56.61%), still under the "Needs Improvement" category. Both strategies significantly improved students' reading comprehension, as indicated by the statistical analysis (p -value = 0.0001). However, no significant difference was found between the two methods. Based on these findings, it is recommended that educational administrators promote the QAR strategy, teachers incorporate it into lesson planning, and further research explore its application in different academic settings.

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Introduction

Reading comprehension is essential to academic success and lifelong learning. However, many students, particularly in the Philippines, continue to face challenges in understanding and analyzing text. The 2018 Programme for International Student Assessment (PISA) ranked Filipino students among the lowest in reading performance, highlighting the need for effective instructional strategies (PISA, 2018).

One promising approach is the Question-Answer Relationship (QAR) strategy developed by Raphael (1986). QAR teaches students to categorize questions as "Right There," "Think and Search," "Author and Me," or "On My Own," helping them better understand text and develop critical thinking. Research supports QAR's effectiveness in enhancing comprehension across diverse educational settings (Baqi, 2019; Butar *et al.*, 2022; Nugroho *et al.*, 2021; Solihin & Muaz, 2022) ^[1, 2, 5, 6]. However, limited studies have investigated its implementation in the context of the Philippines.

A recent survey by the DepEd Dinagat Islands Division (SY 2023–2024) reveals that while many schools have reading initiatives such as Project DEAR, Project BARE, and Project ELMAR, results are mixed. Some schools reported full implementation and high participation; others cited limited resources, low student engagement, or lack of training as barriers. Moreover, most programs emphasize basic fluency rather than higher-order comprehension.

This gap calls for structured, evidence-based interventions like QAR.

Unlike traditional reading programs, QAR explicitly equips students with strategies to interpret and respond to different question types (Solihin & Muaz, 2022)^[6], promoting deeper textual engagement. Introducing QAR into Philippine classrooms could strengthen existing efforts and align with the Department of Education's literacy goals (Butar *et al.*, 2022)^[2].

This study, therefore, aimed to assess the effectiveness of the QAR strategy in improving reading comprehension among Filipino students, bridging both global research and local educational needs.

Problem Statement

This study sought to evaluate the effectiveness of the Question-Answer Relationship (QAR) strategy in improving the reading comprehension abilities of Grade 5 students at Sta. Cruz Elementary School. Specifically, the research aims to determine the (a) level of reading comprehension of students in the control and experimental groups; (b) significant difference between pretest and posttest reading comprehension performances of the students using the traditional strategy and those using the QAR strategy, and; (c) the significant difference between the mean gain in reading comprehension performance of students using the QAR strategy and those using traditional strategies.

Methods

Research Design

This study employed a quasi-experimental design with a descriptive component to assess the effectiveness of the Question-Answer Relationship (QAR) strategy in enhancing the reading comprehension skills of students at Sta. Cruz Elementary School in the San Jose District, Dinagat Islands.

Research Environment

This study was conducted at Sta. Cruz Elementary School, San Jose District, San Jose, Dinagat Islands. San Jose District consists of 12 elementary schools: Aurelio Elementary School, Mahayahay Elementary School, San Juan Elementary School, San Jose Central Elementary School, Matingbe Elementary School, Jacquez Primary School, Don Ruben Elementary School, Sta. Cruz Elementary School, Wilson Elementary School, Cuarenta Elementary School, Luna Elementary School, and Borres-Omega Elementary School.

Participants

The respondents of the study were the 29 learners from the control group and 29 learners from the experimental group, a total of 58 Grade 5 learners at Sta. Cruz Elementary School, San Jose District, Dinagat Islands Division.

The subjects were chosen using nonprobability sampling, specifically the purposive sampling method, to compose the control and experimental groups.

Research Instrument

The study employed teacher-made test items to assess the students' ability to read and comprehend the short stories they encountered. The questions were carefully crafted based on selected reading materials from *Aesop's Fables*. The control group was assigned one set of questions, while the experimental group was given a different set of questions,

each corresponding to specific reading selections. These differentiated sets of questions were designed to evaluate the students' comprehension and ensure that the assessments aligned with the instructional strategies applied to each group.

A total of 10 questions were developed for both the pretest and posttest to assess reading comprehension for both the control and experimental groups. Each of the 10 reading articles included 10 questions, ensuring consistency in the assessment for both groups. The validity and reliability of the research instrument were carefully established to ensure the accuracy and dependability of the data collected for the study. This process was crucial in ensuring that the test items effectively measured students' reading comprehension and provided reliable results for analysis.

Ethics and Data Gathering Procedure

The research was conducted with the permission of the Schools Division Superintendent and the School Principal, allowing the researcher to assess the identified classes. Following approval, the researcher oriented the respondents on how to complete the assessment. Lesson plans guided both the conventional and experimental groups, with students in the traditional group reading short stories, while those in the QAR strategy group answered questions based on the QAR principles after reading. Each student had 15 minutes to answer 12 questions per story. The collected data were recorded, tabulated, analyzed, and interpreted.

Data Analysis

The data was analyzed using the following statistical tools: Mean, to determine the reading ability of 5th grade pupils at Sta. Cruz Elementary School; Paired-samples t-test, to measure the difference between pretest and posttest reading comprehension scores; and Independent-samples t-test, to assess the effectiveness of the conventional reading method versus the QAR strategy by comparing the mean gain scores of the control and experimental groups.

Results and Discussion

The following section outlines the findings from various data collection methods, including pretest and posttest results, as well as survey responses related to the implementation of the QAR strategy. The results were analyzed and compared to determine the effectiveness of the QAR strategy in improving reading comprehension.

Reading comprehension performances of students before and after instruction using traditional and QAR strategies

Table 1 presents the reading comprehension performances of students before and after instruction using traditional and QAR strategies.

For the pretest, the average scores for both control and experimental groups were identical at 0.53, with a standard deviation of 0.08 and 0.16, respectively, reflecting a 5.30% performance, categorized as "Needs Improvement." In the posttest, there was a notable increase in the mean scores for both strategies. The traditional strategy had a mean of 5.52 with a standard deviation of 1.35, resulting in a 55.23% score, still falling under the "Needs Improvement" level.

Table 1: The level of reading comprehension performance of the students before and after instruction using traditional and QAR strategies

Test	Strategy	M	SD	%	Verbal Interpretation	Qualitative Description
Pretest	Control	0.53	0.08	5.30%	Needs Improvement	Both control and experimental groups displayed minimal understanding of the texts.
	Experimental	0.53	0.16	5.30%	Needs Improvement	The experimental group showed low comprehension levels, with little difference observed before instruction.
Posttest	Control	5.52	1.35	55.23%	Needs Improvement	Despite improvement from the pretest, the control group still demonstrated a low to moderate understanding of the material.
	Experimental	5.66	1.48	56.61%	Needs Improvement	The experimental group showed a slight improvement in reading comprehension, but overall performance indicates further development is necessary.

Legend:

Percentage Score	Performance Level
90–100%	Outstanding
80–89%	Very Satisfactory
70–79%	Satisfactory
60–69%	Fairly Satisfactory
Below 60%	Needs Improvement

In the posttest, there was a notable increase in the mean scores for both strategies. The traditional strategy had a mean of 5.52 with a standard deviation of 1.35, resulting in a 55.23% score, still falling under the "Needs Improvement" level. Similarly, the QAR strategy showed a mean of 5.66 with a standard deviation of 1.48, translating to a 56.61% score, which also falls under the "Needs Improvement" performance level.

Despite an increase in mean scores from the pretest to the posttest for both strategies, students' reading comprehension performance still falls within the "Needs Improvement" range, as the percentage scores remain below 60%. This suggests that while there is some progress in comprehension, it has not yet reached an acceptable level (i.e., 60% or higher). The standard deviations indicate a wider variation in scores, particularly with the QAR strategy, implying that the effect of the strategy on individual student performance may not be consistent. While both strategies showed some improvement, they may not have been fully effective in significantly enhancing reading comprehension within the observed timeframe.

The Question-Answer Relationship strategy stands as a robust framework designed to improve reading comprehension by explicitly teaching students how to identify the sources of information needed to answer questions (Swan *et al.*, 2018) [7].

These results imply that both the control and experimental

groups require further refinement to improve reading comprehension effectively. While there is a measurable increase in performance after the intervention, the percentage scores suggest that these strategies alone may not be sufficient in addressing the reading needs of Grade 5 students (Donegan & Wanzek, 2021; Login, 2022) [3, 4]. Educators may need to explore additional strategies or a combination of approaches to engage students better and foster a deeper understanding of reading materials (Yang, 2023) [8]. Adjustments to the instructional design, more targeted interventions, or longer instructional periods are needed to achieve a more significant impact on students' reading abilities.

Significant difference between the pretest and posttest scores for reading comprehension in both the control and traditional strategies

Table 2 presents the results of a paired sample t-test conducted to determine if there is a significant difference between the pretest and posttest scores for reading comprehension in both the control and traditional strategies. The table shows the t-value, degrees of freedom (df), p-value, decision, and interpretation for both groups. For the experimental group, the t-value is -20.4 with 27 degrees of freedom and a p-value of 0.0001, which is less than the 0.05 significance level, leading to the decision to reject the null hypothesis (Ho), indicating a significant difference.

Table 2: Significant difference between pretest and posttest on the reading comprehension performance of the students in the traditional and QAR strategies

Group		t	df	p-value	Decision	Interpretation
Control	Pretest -Posttest	-20.8	29	0.0001	Reject Ho	Significant
Experimental	Pretest- Posttest	-20.4	27	0.0001	Reject Ho	Significant

* If the p-value is <0.05, then there is a significant difference

Similarly, for the control group, the t-value is -20.8 with 29 degrees of freedom and a p-value of 0.0001, also leading to the rejection of the null hypothesis and indicating a significant difference between the pretest and posttest scores. Both the QAR and traditional strategies show statistically significant differences between the pretest and posttest scores, as indicated by the p-values of 0.0001, which are well below the 0.05 threshold for significance. This means that the changes in reading comprehension performance before and after the interventions are not due to chance. The negative t-values suggest that the posttest scores are significantly higher

than the pretest scores, indicating that both strategies led to improvements in students' performance.

The significant differences found in both the QAR and traditional strategies suggest that both instructional methods were effective in improving students' reading and speaking comprehension skills (Solihin & Muaz, 2022) [6]. Since the p-values are less than 0.05, educators can confidently conclude that the interventions had a measurable positive impact. However, further investigation into the relative effectiveness of the QAR strategy compared to the traditional method may be necessary to determine which approach has a more

substantial impact on improving reading and speaking comprehension (Butar *et al.*, 2022) ^[2]. The results also support the continued use of both strategies in educational settings to enhance student performance in these areas.

Significant difference between the mean gains in reading comprehension performance between the control (traditional) and experimental (QAR) groups

Table 3: Significant difference between the mean gain of students' reading comprehension performances between the control (traditional) and experimental (QAR) groups

Type of Test	Group Comparison	Mean	SD	t	df	p-value	Decision on Ho	Interpretation
Pre Test	Control	0.53	0.08	0.06	56	0.952	Not Rejected	Not significant
	Experimental	0.53	0.16					
Post test	Traditional	5.52	1.35	0.37	56	0.713	Rejected	Significant
	Experimental	5.66	1.48					

* If the p-value is <0.05, then there is a significant difference

For the **pretest**, both the control and experimental groups had identical mean scores of 0.53, with the control group having an SD of 0.08 and the experimental group an SD of 0.16. The t-value of 0.06 with a p-value of 0.952 indicates that there is no significant difference between the two groups before the intervention. In the **posttest**, the control group had a mean score of 5.52 with an SD of 1.35, while the experimental group had a mean of 5.66 with an SD of 1.48. The t-value of 0.37 with a p-value of 0.713 suggests that there is no significant difference between the two groups after the intervention as well.

The results of the Independent Sample t-test show that there is no significant difference in both the pretest and posttest mean scores between the control and experimental groups. The p-values for both tests (0.952 for the pretest and 0.713 for the posttest) are much higher than the 0.05 significance level, indicating that the differences observed are not statistically significant. This suggests that, based on these results, the mean improvement in reading and speaking comprehension is similar between the two groups, even after the intervention.

The lack of significant difference between the control (traditional) and experimental (QAR) groups implies that the QAR strategy did not lead to a noticeably greater improvement in students' reading and speaking comprehension compared to the traditional strategy (Solihin & Muaz, 2022) ^[6]. Since both groups show similar performance gains, this suggests that while QAR may have had some effect, it might not have been more effective than the traditional approach in improving student outcomes in this context (Butar *et al.*, 2022) ^[2]. Further exploration into other factors, such as the implementation of the strategy or the duration of the intervention, may be necessary to assess why the two strategies resulted in similar improvements. Additionally, the lack of significant difference does not rule out the potential benefits of QAR in other settings or with different groups of students (Nugroho *et al.*, 2021) ^[5].

Conclusion

The study showed that both the traditional reading strategy and the QAR strategy led to improvements in students' reading comprehension, although both remained at the "Needs Improvement" performance level. Despite showing positive outcomes, there was no significant difference in the effectiveness of the two methods, suggesting that both strategies resulted in similar improvements. The findings

Table 3 presents the results of an Independent Sample t-test used to determine if there is a significant difference between the mean gains in reading comprehension performance between the control (traditional) and experimental (QAR) groups.

The table shows the mean, standard deviation (SD), t-value, degrees of freedom (df), p-value, decision on the null hypothesis (Ho), and the interpretation of the results.

imply that further interventions or more targeted approaches may be necessary to achieve more substantial progress in reading skills. Additionally, while the QAR strategy holds potential, further research is needed to explore its effectiveness across diverse educational settings and populations.

Recommendation

Based on the study's results, it is recommended that educational administrators promote the integration of the QAR strategy across schools and provide professional development for teachers to enhance academic achievement. Teachers should incorporate QAR into their lesson planning to improve reading comprehension, while students are encouraged to actively engage in reading programs using QAR to strengthen their skills. Future researchers should consider replicating the study in diverse educational settings to explore the broader applicability and effectiveness of the QAR strategy in various contexts.

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