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Question Answer Relationships (QAR) in the Primary Grades: Laying the Foundation for Reading Comprehension

Abstract

Question Answer Relationships (QAR) can be taught effectively to students in the primary grades for the purpose of laying a strong foundation for reading comprehension. In this action research study, a kindergarten, first, and second grade teacher, along with a special education teacher, implemented the QAR strategy in their classrooms over a four week period. The teachers were trained in the strategy prior to implementing it in their classrooms. They were shown engaging methods of implementing the QAR with young students. Support was then provided to them throughout the entire implementation period. The results indicate that the QAR strategy, if implemented effectively, can increase comprehension of young students and provide a strong foundation for reading comprehension.

Key words: Question Answer Relationships (QAR), action research, kindergarten, first, and second grades, reading comprehension.

“I have read the chapter three times and still can’t find the answer to this question!” Third, fourth and fifth grade teachers continue to hear this statement from their students as the students look through the text expecting to find the answer written in one sentence. Students continue to become frustrated searching for answers to questions, in both narrative and expository text selections. Question Answer Relationships (QARs)

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might be one solution to student frustration in upper grades if primary grade teachers introduced this strategy early in students' education.

The authors' belief that Question Answer Relationships (QARs) can be effectively taught to students in grades K-2 was explored when early elementary teachers implemented the QAR strategy in their instruction. The outcome confirmed the effectiveness of using QARs with primary grade students.

Research Supporting QAR

Raphael (1982, 1986) devised the QAR strategy as a way for students to understand that the answer to a question is directly related to the type of question asked. QARs assist students in differentiating among questions based on where the answer can be found: either In the Book or In My Head (Caldwell & Leslie, 2005). If answers are In the Book, the questions will be of a literal type because the answers are "right there" in the text. If the questions are In My Head, inferential questions have been posed, and the readers must use their own background knowledge to compose answers that require information not found in the text (Tompkins, G.E., 2004).

The two categories of questions, In the Book and In My Head, can be further delineated into four subcategories. For questions that can be found In the Book, students will either find them Right There in one place in the text, or they will have to Think and Search, also called Search and Find. For these types of questions, students will need to look in several places in the text to find the answer. Questions from the In My Head category are going to be Author and You questions, where the student will need to use their own background knowledge and experiences in addition to the textual information to answer the question. They might also be classified as On my Own questions, where the student will rely solely on background experiences and knowledge to supply the answer (Frank, Grossi, & Stanfield, 2006).

Many research studies have been conducted in the upper elementary grades, (grades 3-6), and in middle and high school, (Ezell, Hunsicker, & Quinque, M.M, 1994; Ezell, Hunsicker, Quinque, & Randolph, 1996; Ezell, Kohler, Jarzynka, & Strain, 1992; Graham & Wong, 1993; Raphael & McKinney, 1983; Raphael & Pearson, 1982; Raphael & Pearson, 1985; Raphael & Wonnacutt, 1985) which prove that QAR improves students' comprehension. Very few studies have been conducted to find whether this strategy can be successfully implemented in students in kindergarten, first and second grade. An ERIC search yielded no studies of younger students' achievement growth with QARs; however, Raphael, Highfield, and Au (2006) describe many instances where primary grade teachers have implemented the strategy with their students.

According to Raphael and Au (2005), "QAR instruction should not wait until students can read independently" (p. 211). They claim that teachers can introduce young students to the language of QAR through shared readings and read alouds. By beginning QAR

instruction in grades K-2, a common school wide language can be built that will lay the foundation for effective reading comprehension instruction.

Raphael (1986) stated that young students are able to distinguish two sources of information: the text (In the Book) and their own background knowledge and experiences (In My Head). Because of the finer discriminations required by the four subcategories of the QARs (Right There, Think and Search, Author and You, and On Your Own), students must be more conceptually mature than what they are in kindergarten to sort questions into these categories (Alvermann, Phelps, & Ridgeway, 2007).

Background for the Study

The authors, a university faculty member and a special education teacher, met when they were co-trainers for the *Just Read, Florida!* summer reading academies. They were conducting training sessions for K-3 teachers whose schools had received Reading First grants. The teachers who attended the training sessions would be implementing the reading strategies they learned in the summer academy in their classrooms during the upcoming school year.

During the comprehension training session, the QAR strategy was explained to the teachers, and the authors left the training convinced that more data was needed to explain how this strategy could be effectively implemented in kindergarten, first and second grades. The early elementary teachers did not buy into the strategy, especially the teachers who had struggling readers and students with learning disabilities in their classrooms. The third grade teachers seemed to have fewer problems accepting that this strategy could be used successfully with their students.

An action research study was conducted by the authors with four teachers of students in grades K-2 which included a special education teacher who taught primary aged students. A teacher from each grade level, including a special education teacher, was asked to implement the QAR strategy with their students over a four week period. One of the authors (author two) trained the teachers in the use of the strategy and assisted them over the four weeks of implementation.

The purpose of our study was to find if the QAR strategy could be successfully implemented in grades K-2 to increase students' reading achievement. Since few studies have been conducted with primary grade students, a second purpose was to explore the enthusiasm of teachers in using this strategy in their classrooms.

Method

Participants

The study was conducted in a Title I school in the southeastern United States. It has an enrollment of approximately 1,000 students. Four teachers, a kindergarten, first grade, second grade, and K-2 special education teacher and their classes of students

participated in the study. All classes had approximately 20 students with the exception of the special education class that consisted of seven students in grades K-2. There was a total of 69 students in the study.

Data Collection

The four teachers were trained in the use of the QAR strategy during a half day in-service training session. Author two continued teacher training by holding individual conferences during the four week implementation period. The teachers taught and used the strategy every day over a four week period using a variety of activities that included the use of picture books, poems, songs, and chants. They created questions for QAR categories for specific picture books they used during their lessons (Appendix 1). During the four week implementation period author two observed in each teacher's classrooms and met weekly with each teacher to answer their questions and offer advice regarding using the strategy at their grade level.

At the end of the four weeks, all students and the four teachers were interviewed by author two. A reading comprehension test from the basal reading series was administered to the first and second grade students as a pre and posttest, which showed gains in reading comprehension for both groups. The kindergarten class and the students with special needs were not tested, as no test of comprehension was available for these groups; data was gathered solely through student and teacher interviews. Student interview questions for all students in grades K-2 included:

- 1) Did you enjoy learning the QAR strategy?
- 2) Did it help you to understand the story?
- 3) How did help you understand the story?
- 4) What are the differences in the types of questions?

The questions asked in the teacher interviews were:

- 1) Was the QAR strategy appropriate for your grade level?
- 2) Did the implementation of the QAR strategy assist students in answering questions?
- 3) Will you continue using the strategy?
- 4) Will you use the strategy in subject areas other than reading?

Findings

Kindergarten

The kindergarten class consisted of twenty students. Ten students were on grade level; six were below grade level, and four were above grade level. These levels were determined by data collected through the Dynamic Indicators of Basic Early Literacy Skill (DIBELS) and through the School Readiness Uniform Screening System (SRUSS). Picture books, big books and posters containing poems, chants and songs provided the text for shared reading and read alouds.

The kindergarten teacher taught students the two broad QAR categories: In the Book and In My Head. She used Wikki stix and highlighter tape to point out key words in the

questions she posed which were written on chart paper. Students used the highlighted and underlined words to decide if answers were In the Book or In My Head. The teacher drew students' attention to the words "who," "what," "when," and "where" to teach students that answers to questions beginning with these words could be found In the Book. When answering In My Head questions, teachers directed students to key words in the questions such as "how" and "why." The strategy was taught and practiced in both whole group and small group settings.

When the kindergarten teacher was interviewed, she stated that her students caught on very quickly to the strategy and that she felt it was "very appropriate for kindergarten students when taught through oral presentation." She felt the QAR "led her young students to better comprehension skills and laid a solid foundation to build upon in first grade." She said that she was using the strategy throughout the day during her thematic teaching units and planned to continue using it.

The student interviews resulted in all of the students stating that they enjoyed learning the strategy, and they all felt it helped them understand the stories. When asked how the strategy helped them, the students comments included, "I could answer the questions that my teacher asked," "I know what is happening in the story," and "I know if the author doesn't tell me everything." When asked to explain the differences in the two types of questions, 16 students (80%) could explain the differences. One student's explanation was, "The author doesn't give me the answers sometimes." Another student commented, "I have to think about the answer because it didn't tell me."

First Grade

The first grade class that participated in the study consisted of 21 students with 14 males and seven females. Twelve students were reading on grade level, five were below grade level and four read above grade level. Data used for determining students' levels were derived from DIBELS. The first grade teacher used posters with key words written on them which served as visual reminders for the students regarding what kind of question was being asked and whether the answer would be found In the Book or In My Head. She also used the following chant that assisted students in remembering the key words to use in knowing where to find the answers:

QAR - QAR –Question-answer-relationship
Right there -right there - one place- (repeat)
Who -what -when - where
Right there -right there - one place!
QAR - QAR –Question-answer-relationship
Search and find -search and find -more than one place! (repeat)
Who -what -when – where
Search and find -search and find -more than one place!
QAR - QAR -Question -answer – relationship
Author and me - Author and me
in the book and in my head! (Repeat)
Why and How - Why and How - in the book and in my head!

She used the two subcategories of In the Book questions as well as the Author and Me subcategory of On My Own questions. In her interview she stated that she was able to “use many Author and Me questions.” This surprised her because, in the beginning, she was unsure if the first grade students were developmentally ready to think through a question that required them to use the text information and their background knowledge. She also commented that “the strategy is very effective for students when taking required reading tests from the basal series.” She said that she “definitely planned to continue using the strategy as it helped her first graders know how to find the answers to questions.” She stated that she had begun using the strategy in other content areas.

In student interviews, they all stated that they enjoyed learning the QAR strategy. Comments from students responding to how the QAR helped them understand the story included, “The chant helped me know what to look for,” “It helped me find the answers to the questions,” and “Stories were hard at the beginning of the year, but when we learned the QAR song, I could answer the questions better.” One student commented that “It helped me answer test questions.” When asked the differences in the types of questions, 16 students (75%) were able to distinguish between In the Book and In My Head questions. One student called them “Right There” and “Think About Questions.”

Pre and posttest scores from a test from the basal reading series showed student growth in reading comprehension after the implementation of the QAR strategy instruction. The students’ average mean score on the pretest was 74.6% and increased to 89.5% on the posttest.

Second Grade

The second grade class had 21 students consisting of 10 males and 11 females. Fourteen students read on grade level, five read below grade level and two read above level based on data from DIBELS. In teaching the strategy, the second grade teacher used stories from the basal reader, picture books, and supplemental trade books that are included in the basal reading program. She used posters that contained clue words as visuals. The posters contained the headings In the Book and In My Head. Clue words were located on the posters underneath the headings that assisted students in knowing what to look for when they read or heard a question.

During her interview, the teacher stated that she focused mostly on In the Book questions “because most of our test questions are In the Book.” She said that the strategy helped the students find answers to questions “especially when they took their reading tests.” She commented that she would continue to use the strategy and would develop questions for other content areas now that she had seen how much her students had improved in their reading comprehension from the use of the strategy.

All students responded that they enjoyed learning the QAR strategy. They all agreed that the strategy helped them understand stories. When asked to explain how the strategy helped them understand, one student commented, “It helped me a lot! If

I didn't know the answers, I looked at the posters for help. Another student said, "The clue words helped me a lot." Another noted that, "If I didn't get something, it helped me figure it out." When asked the differences in the types of questions 21 (100%) of the students were able to distinguish between In the Book and In My Head questions.

Pre and posttest scores from a test from the basal reading series showed student growth in reading comprehension as a result of QAR strategy instruction. The students' averaged mean score on the pretest was 58% and increased to 80% on the posttest.

Special Education Class K-2

There were seven students enrolled in the special education class: four of the students were males and three were females. Three students were in kindergarten, three were in first grade and one was in second grade. All students read below grade level based on results of the Woodcock-Johnson Achievement Test and DIBELS. The special education used the QAR chant, posters and big books to teach the strategy.

The teacher stated in her interview that, "It was a very difficult concept for this level; but personally, I think it is a great strategy." I would definitely use it for higher level exceptional education students." She further stated, "It helped keep me focused on the levels of questions I was asking."

In the student interviews, all students stated that the strategy helped them understand the stories. When asked about the different types of questions the students had difficulty remembering; however, with a little prompting, they could remember the chant which led them to the different types of questions. The three first grade students and the second grade student did not take the pretest and posttest and they do not use the same reading program and the other grades.

Discussion and Conclusion

The comments from both the students and the teachers make a strong case for introducing the QAR strategy to students in kindergarten and continuing it through first and second grades. When kindergarten students understand that the author doesn't always give the answers to the questions, they are, as the kindergarten teacher commented, getting a strong foundation laid for moving into higher grades and understanding how questions "work." All of the students in the study were motivated to use the strategy by the teachers who used engaging materials such as posters with clue words, chants, and picture books.

An interesting point of the study is that both the first and second grade teachers specifically stated in their interviews how the QAR strategy would assist their students in taking reading tests. Since standardized testing is a fact of life in classrooms today, it is obvious that the primary grade teachers are aware of this, even though standardized testing mandated by No Child Left Behind doesn't begin until third grade. These

teachers see the need to make students aware of the importance of finding the relationships between questions and answers at an early age.

The QAR strategy can be successfully implemented in grades kindergarten, one, and two with proper staff development and support. The teachers in this study had the training and support of another teacher in the school (second author) and were willing to implement the strategy under her guidance. This is an important finding of this study because, many times, teachers are told to use strategies without any training or direction and are left to their own devices as to what to do if their implementation strategies are unsuccessful. By having someone to give them suggestions throughout the implementation of new strategies, they are much more willing to try the strategy knowing that, if they aren't successful, they have someone who will assist them in making changes.

A second finding of this study was that the QAR strategy can lead to growth in reading comprehension of primary grade students. This was shown by the comments from the teachers in the interviews, as well as the increase in test scores of the first and second grade students. This strategy can be implemented in these grade levels as a starting point for a strong foundation for reading comprehension. Though no test was given to the kindergarten students or the students in the special education class, the comments from the teachers during their interviews implied that their students' comprehension did improve. Based on their observations of their students during QAR strategy implementation lessons, they could attest to this improvement in the students' comprehension skills.

We are extremely satisfied with the results of this study. We are now armed with data that we can use in future classes, presentations, and teacher training sessions to explain the impact the QAR strategy can have on primary grade students' reading comprehension. It is in these early grades that the foundation must be laid for reading comprehension skills. If this foundation is in place, the upper grade teachers will have an easier time in assisting students in answering questions and making meaning from text.

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Appendix 1. *Results of Pre and Posttest Reading Assessment*

Participants	Pretest	Posttest
First Grade (N=21)	74.6%	89.5%
Second Grade (N=21)	58%	80%

Appendix 2. Sample Books and Questions Used by Grade Level

Grade Level	Books Used	In the Book	In My Head
Kindergarten	<i>Mrs Wishy Washy</i> by Joy Crowley	What animals were in the story?	Where do you think they will go after their bath?
	<i>The Gingerbread Baby</i> by Jan Brett	Who was the first person to chase the cookie?	What do you think happens to the baby?
	<i>The Mitten</i> by Jan Brett	What color was the mitten?	What do you think will happen when Nicky gets home?
First Grade	<i>The Rat and the Cat</i> by Edward Marshall	<u>Right There:</u> Where did the rat go? <u>Search and Find:</u> Where did the rat first see the cat?	<u>Author and Me:</u> How did the rat feel about the cat?
	<i>The Gingerbread Man</i> retold by Sally Bell	<u>Right There:</u> Where did the man and woman live? <u>Search and Find:</u> What places did the Gingerbread Man run?	<u>Author and Me:</u> Why was the ending a surprise?
Second Grade	<i>Tacky the Penguin</i> by Helen Lester	<u>Right There:</u> How did Tacky greet his friends? <u>Search and Find:</u> What items did the hunters bring?	<u>Author and Me:</u> How did Tacky show that he was a good friend?
	<i>Motion</i> (Science reader from Harcourt Brace)	<u>Right There:</u> What makes an object move? <u>Search and Find:</u> What items did the hunters bring?	<u>Author and Me:</u> Why does gravity pull your body down like a slide?

 Appendix 2. Sample Books and Questions Used by Grade Level (Cont.)

Grade Level	Books Used	In the Book	In My Head
Special Education Class K-2	<i>Clifford's Manners</i> by Norman Bridwell	<u>Right There:</u> Who is the little girl? <u>Search and Find:</u> What nice things did Clifford do for the neighbors?	<u>Author and Me:</u> Why do you think Clifford helped his neighbors?
	<i>The Teacher from the Black Lagoon</i> by Mike Thaler and Jared Lee	<u>Right There:</u> What was the teacher's name? <u>Search and Find:</u> What things did she turn the students into?	<u>Author and Me:</u> Why do you think the teacher turned the kids into nasty things?
	<i>The Cat Who Climbed the Christmas Tree</i> by Susanne Whayne	<u>Right There:</u> What is the cat climbing? <u>Think and Search:</u> What things does he pass?	<u>Author and Me:</u> Why do you think the cat climbed to the top of the tree?
