

TAFFY E. RAPHAEL
KATHRYN H. AU

QAR: Enhancing comprehension and test taking across grades and content areas

The authors describe how Question Answer Relationships (QAR) can provide a framework for comprehension instruction with the potential of closing the literacy achievement gap.

Promoting high levels of literacy for all children is a core responsibility for today's teachers. In this article, we describe the potential of Question Answer Relationships (QAR) for helping teachers guide all students to higher levels of literacy. We set this description within the current instructional and assessment context, with a particular focus on what it means to teach to high levels of literacy and why it is especially important to ensure that such instructional activities reach all students.

Educators agree that students must meet high standards for literacy achievement. In a democratic society, success depends on an informed citizenry who can participate effectively in the democratic process—reading a wide range of materials, interpreting and evaluating what they read, drawing conclusions based on evidence, and so forth. Furthermore, with increasing accountability at the district, state, and national levels, U.S. teachers know that they are often judged on the basis of how well their students perform on mandated, high-stakes tests. And certainly high levels of achievement in literacy are important for learning across the curriculum, for independence in engaging with

print for personal satisfaction, and for success in an increasingly information-based economy.

But what does it mean to achieve high levels of literacy? Recent national panels and current reviews detailing what it means to comprehend text help inform us about current policies and future trends (e.g., Pressley, 2002; Snow, 2002; Sweet & Snow, 2003). For example, the RAND report (Snow), commissioned by the U.S. Department of Education, identifies literacy proficiency as reached when a

reader can read a variety of materials with ease and interest, can read for varying purposes, and can read with comprehension even when the material is neither easy to understand nor intrinsically interesting.... [P]roficient readers...are capable of acquiring new knowledge and understanding new concepts, are capable of applying textual information appropriately, and are capable of being engaged in the reading process and reflecting on what is being read. (p. xiii)

This same view is reflected in the current National Assessment of Educational Progress (NAEP; Donahue, Daane, & Grigg, 2003), the only federally funded large-scale testing program in the United States, and the framework for the NAEP 2009 reading assessment (National Assessment Governing Board, 2004) pushes the definition for proficiency even further. For example, students will be expected to read comfortably across genres within fiction, nonfiction, procedural texts, and poetry. They will be required to successfully answer questions, 70% to 80% of which call for the integration, interpretation, critique, and evaluation of texts read

independently. Traditional questions that simply require readers to locate and recall information will constitute only a third to a fourth of the questions that students will face. Over half of the higher level questions will require students to provide a short or extended written response rather than simply to select from multiple-choice options. To be judged as proficient in reading fiction, students must demonstrate that they can think deeply about and write in response to questions that address themes and lessons, elements of plot structures, and multiple points of view. To demonstrate high levels of literacy when reading nonfiction, students will need to draw on their knowledge of text organization (e.g., description, causal relationships, logical connections) and be able to identify important details in texts, graphs, photos, and other materials.

The kind of strategic knowledge assessed on national and state tests, now and in the future, is central to the achievement of high levels of literacy. In this context, the gap between the literacy achievement of mainstream students and students of diverse backgrounds must be a central concern (Au, 2003). Students of diverse backgrounds differ from mainstream students in terms of their ethnicity, socioeconomic status, or primary language (Au, 1993). In the United States, for example, students of diverse backgrounds may be African American, Latino American, or Native American in ethnicity; come from low-income families; or speak African American Vernacular English or Spanish as their primary language.

As displayed in Table 1, the existence of an achievement gap between students of diverse backgrounds and mainstream students is underscored by 2002 reading results (Grigg, Daane, Jin, & Campbell, 2003). These results show that, as a group, students of diverse backgrounds have fallen four years behind their mainstream peers in reading achievement by the time they reach grade 12. The average 12th-grade black student's score (267) is at the same level as the average 8th-grade Asian/Pacific Islander student (267), and slightly below that of the average 8th-grade white student (272). Similarly, an average 12th-grade Hispanic student's score (273) is only 1 point above that of an average 8th-grade white student. This gap is present as students move through the elementary grades, and it only becomes worse.

TABLE 1
Average 2002 NAEP reading scores

Ethnicity	Grade 4	Grade 8	Grade 12
White	229	272	292
Black	199	245	267
Hispanic	201	247	273
Asian/Pacific Islanders	224	267	286

Many theories have been proposed to explain the literacy achievement gap, identifying factors within and beyond the purview of the classroom teacher. We focus here on an area that falls within the control of individual classroom teachers and their school colleagues: diverse students' currently limited opportunities for high-quality instruction in reading comprehension. Research shows that, in comparison to their mainstream peers, students of diverse backgrounds tend to receive a great deal of instruction in lower level skills and little instruction in reading comprehension and higher level thinking about text (Darling-Hammond, 1995; Fitzgerald, 1995). This emphasis on lower level skills frequently results from lowered expectations for the achievement of students of diverse backgrounds, reflecting the mistaken belief that these students are less capable of higher level thinking than mainstream students (Oakes & Guiton, 1995). Using this misguided logic leads to the erroneous conclusion that instruction in lower level skills is a better match to the abilities of students of diverse backgrounds.

These stereotypes of students of diverse backgrounds are especially harmful at a time of rising standards for reading performance. As noted earlier, a high proportion of test questions—within the next five years, approximately three quarters to four fifths of questions on the NAEP reading assessment—require students to use higher level thinking, such as making reader-text connections or examining the content and structure of the text (National Assessment Governing Board, 2004; Donahue et al., 2003). As indicated above, studies suggest that many students of diverse backgrounds are not receiving the kind of comprehension instruction that would prepare them to perform well

on assessments that are increasingly oriented toward higher level thinking with text. It is clear from research that all students need instruction in reading comprehension, especially the kind that focuses on the strategies required to answer and generate challenging questions (Taylor, Pearson, Peterson, & Rodriguez, 2003).

In our work with schools enrolling a high proportion of students of diverse backgrounds, we find that teachers often experience difficulty making the desired changes to instruction. Typically, these teachers have become accustomed to instruction focused on lower level skills rather than on higher level thinking and reading comprehension. Or they are unsure of how to teach different comprehension strategies in a way that allows students to see how the strategies work together to facilitate an understanding of the text. The consequences of weak instruction for all students, but particularly for those of diverse backgrounds, may extend far beyond testing, likely limiting their opportunities for higher education, employment, and overall advancement in society.

In summary, current practice and future trends place increasingly heavy demands on teachers to ensure that all of their students achieve high levels of literacy. Teachers may feel overwhelmed by the challenges of bringing students to these high levels of literacy, due to uncertainty about how to teach reading comprehension strategies to foster the integration, interpretation, critique, and evaluation of text ideas. The challenges are compounded by the fact that students of diverse backgrounds often enter classrooms reading far below grade level.

We believe QAR provides a framework that offers teachers a straightforward approach for reading comprehension instruction with the potential of eventually closing the literacy achievement gap. QAR can serve as a reasonable starting point for addressing four problems of practice that stand in the way of moving all students to high levels of literacy:

- The need for a shared language to make visible the largely invisible processes underlying reading and listening comprehension.
- The need for a framework for organizing questioning activities and comprehension instruction within and across grades and school subjects.

- The need for accessible and straightforward whole-school reform for literacy instruction oriented toward higher level thinking.
- The need to prepare students for high-stakes testing without undermining a strong focus on higher level thinking with text.

Two decades ago, research showed that QAR could reliably improve students' comprehension (Raphael & McKinney, 1983; Raphael & Pearson, 1985; Raphael & Wonnacott, 1985). In the two decades since, literacy educators in a broad range of settings have demonstrated its practical value and shared their experiences in professional journals (e.g., Mesmer & Hutchins, 2002), textbooks (e.g., Leu & Kinzer, 2003; Reutzel & Cooper, 2004; Roe, Smith, & Burns, 2005; Vacca et al., 2003), and on the World Wide Web (e.g., www.smsd.org/schools/diemer/ and <http://gallery.carnegiefoundation.org/yhutchinson>). In the remaining sections of this article, we discuss the reasons underlying the "staying power" of QAR and its usefulness across a variety of settings. We frame our discussion in terms of the four problems of practice the QAR framework can address.

Making the invisible visible through QAR

The vocabulary of QAR—*In the Book, In My Head, Right There, Think & Search, Author & Me, and On My Own*—gives teachers and students a language for talking about the largely invisible processes that constitute listening and reading comprehension across grades and subject areas. Teachers know the value of modeling and thinking aloud to make visible the thought processes involved in higher levels of thinking, but it can be frustrating trying to convey complex ideas without a shared vocabulary. Thus, QAR first and foremost provides teachers and students with a much-needed common language.

How many times and in how many classrooms have conversations (such as the one that follows) taken place when students answer questions after reading or listening to text? In this fifth-grade classroom, students have read and are now writing answers to questions about *Hatchet* (Paulsen,

1987). Brian, the main character, is the lone survivor of a plane crash. He has as his only tool a hatchet. The teacher, Ms. Bendon, notices Alex looking upset as he reads and rereads the text. (Pseudonyms are used for teachers and students.)

- Ms. Bendon: Alex, you look like you might need help. What can I do for you?
- Alex: I don't get it.
- Ms. Bendon: Can you tell me what it is that you don't get?
- Alex: I don't know. I just don't get it.
- Ms. Bendon: Can you tell me the question you are having trouble with?
- Alex: [Turns to the page of questions sitting to the side, and points to the question, "How do you think Brian's hatchet might come in handy?"].
- Ms. Bendon: OK, let's think about this. What could you do to help answer this question?
- Alex: [shrugs]
- Ms. Bendon: [taking the book from Alex] I think you know a lot to help you answer this question. Just think about this some more and I'm sure you'll be able to think of some reasons.
- Alex: OK.

Ms. Bendon knew that Alex had background knowledge about hunting, survival strategies, and the use of hatchets and other tools. Thus, she walked away believing that Alex would be fine, because she had cued him to reflect on his background knowledge rather than refer to the text. But instead we see Alex move the question page aside and go back to his already frustrating rereading strategy; to him, the process of answering the question remains mysterious. He may believe the right answer is found only in the text. He may not want to take risks by using his own knowledge and experience. He may not realize the importance of using his background knowledge in question-answering activities. There are many possibilities for why he "doesn't get it," but they remain unidentified and unarticulated in the absence of a language framework to talk about questioning and related strategies. The original articles written to introduce QAR explained the common vocabulary, but they did not provide guidance about the best approach for introducing this language. Over the years, it has become

increasingly clear that there are advantages to introducing QAR language in terms of three binary comparisons: In the Book versus In My Head, Right There versus Think & Search, and Author & Me versus On My Own.

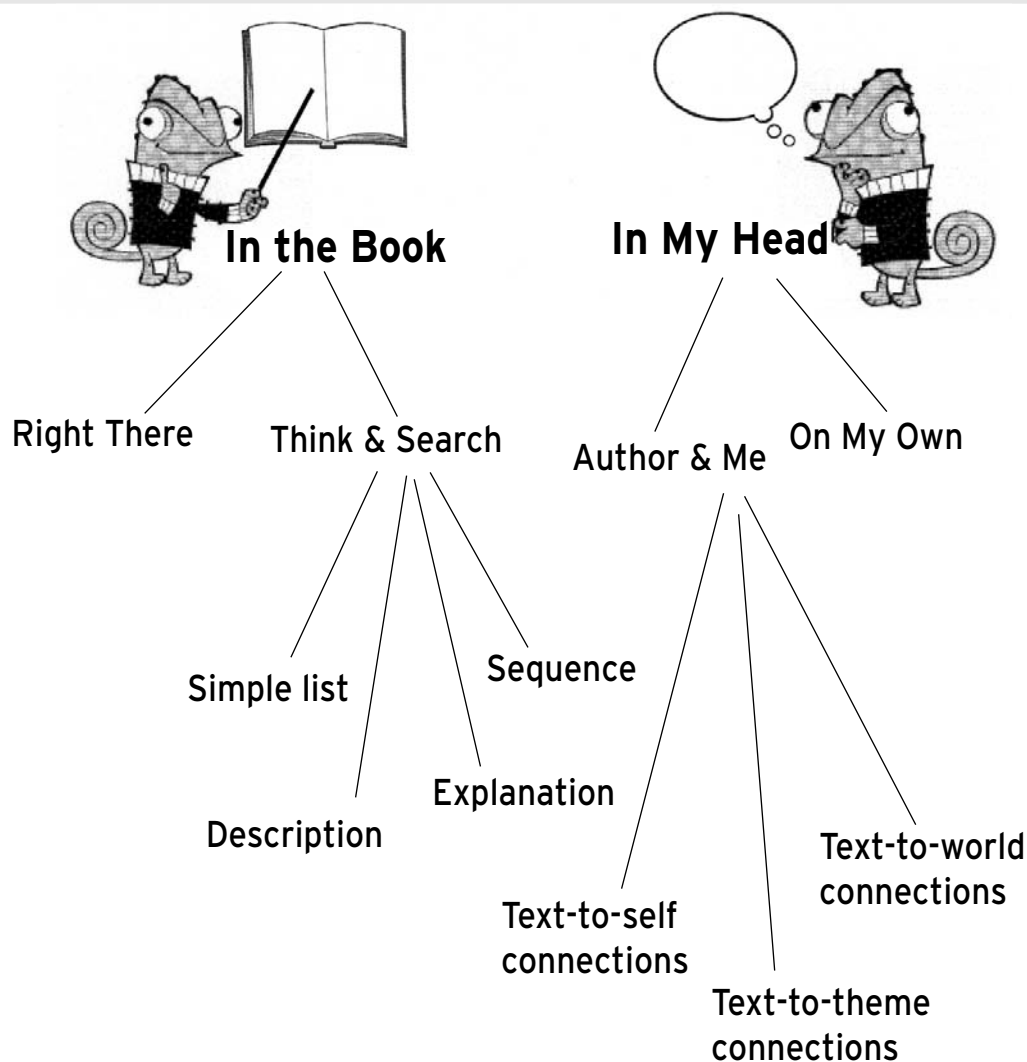
Too often, students of diverse backgrounds are denied access to the language needed to discuss strategies and questions, because the lessons they receive focus largely on lower level skills. We have observed that lessons in the reading programs often used in these classrooms tend to be based on texts that do not challenge or interest students. Questions tend to be limited to the Right There category, and students are not taught strategic or critical thinking. The classroom examples that follow show how teachers can move away from these limitations to provide more effective instruction, especially for students of diverse backgrounds.

Developing QAR's shared language

In QAR classrooms during the first few days of school, Ms. Bendon and other teachers introduced students to the basic principle underlying QAR: that generating and answering questions draws on two core sources of information. As illustrated in Figure 1, these sources are the texts that we read and our background knowledge and experiences; or, in the language of QAR, information that is In the Book or In My Head, respectively. Teachers use QAR language as they emphasize the importance of both sources of information. Furthermore, teachers use QAR language to help students learn to use strategies effectively. For example, they explain how skimming or scanning might lead to details for an In the Book QAR (a typical locate/recall strategy) or how using clues from the title and chapter headings can point to relevant background knowledge for answering an In My Head QAR (a relatively simple interpret/integrate/infer task).

Students like Alex may still say, "I don't get it," but they are more able to describe the strategies they've used and the kind of help they need. For example, Alex could explain that he has tried three In the Book strategies—rereading, skimming, and scanning—but can't find an answer explaining how a hatchet could help. Ms. Bendon could convey that this is an In My Head QAR and, thus, there are more effective strategies to use for this particular question. Once freed from his focus on the text, Alex could

FIGURE 1
The QAR framework as a developmental progression



From Raphael and Au (2001, pp. 4 and 5). Used by permission of the publisher, McGraw-Hill/Wright Group.

be directed to consider his background knowledge. Furthermore, he could help a peer, Samuel, who has never used tools such as hatchets or gone hunting with family members. Faced with the same question, Samuel could tell Ms. Bendon, “I know it’s an In My Head but I went to my head and there’s nothing there. Can I talk to Alex?” Armed with QAR language, students can communicate about what they are doing and request the help they need to answer or ask questions effectively.

Students learn about QAR through the comparisons illustrated in Figure 1. To differentiate among the QARs, teachers emphasize the source of information needed to answer the question. Mr. Blanco, a sixth-grade teacher, begins QAR instruction by analyzing the differences between In the Book and In My Head QARs. The text in the lesson is an adapted newspaper article about a heroic gorilla who rescued a toddler at a zoo (Bils & Singer, 1996). Mr. Blanco and his students read short

segments, each followed by two questions, one In the Book, one In My Head. The article begins,

A crowd of visitors at Brookfield Zoo looked on in horror Friday afternoon as they watched a toddler tumble more than 15 feet into a pit, landing near seven gorillas. But as zoo patrons cried out for help, expecting the worst for the 3-year-old boy lying battered on the concrete below, an unlikely hero emerged. (Bils & Singer, p. 1)

The two questions Mr. Blanco asks students to answer and analyze are (1) What caused the visitors to look on in horror? and (2) What do you think makes a hero an unlikely one?

Answering the first question requires readers to use the information in the first two sentences of the text, that a toddler fell 15 feet into a gorilla pit. The horror might be attributed to the length of the fall, the toddler landing in the midst of the gorillas, or the toddler lying battered, but the limited information relevant to answering the question is in the text. In contrast, answers to the second question will vary considerably, depending on the background knowledge and experiences of the reader.

QAR instruction should not wait until students are able to read independently. Ms. Rodrigues, a first-grade teacher, introduces her students to the QAR language through listening comprehension activities during her read-aloud program. Like Mr. Blanco, she begins by introducing the categories of In the Book and In My Head. She reads a book's title to her class, then holds up the book and fields the children's comments and questions. She focuses children's attention on the relationships among what they know, the information provided by the text, and their questions. She records children's questions on sticky notes, which she puts on the cover of the book, then asks students to consider sources for answering their questions. She then models how their questions require information from their heads or from the text, introducing the formal language of In the Book and In My Head using a large wall chart.

For example, early in the year, Ms. Rodrigues displayed the cover of the text, *Anansi and the Magic Stick* (Kimmel, 2001). The students looked closely at the cover and began to make comments and ask questions. Martin looked closely at the illustrations on the cover and asked, "Why is there a tomato floating on the water?" Ms. Rodrigues wrote

his question on a sticky note and placed it, along with other students' questions, on the front cover. She then asked the students to think about where the information to answer their questions might come from. For Martin's question, Viola suggested that "he could look inside the book when he is reading it and maybe it will say." Ms. Rodrigues reinforced that as one possibility, then asked, "What if you finish reading the book, and you still don't really have an answer? What if the book doesn't exactly tell you?" In this way she introduced the possibility that not all questions may be answered in the text. The students then read the story and paused to talk about relevant information for answering their questions. Following the reading, Ms. Rodrigues created a two-column chart, with In the Book and In My Head each heading a column. She modeled how to think about the questions they had asked in terms of the source of information needed for answers, placing a sticky note for each question in the appropriate column on the chart.

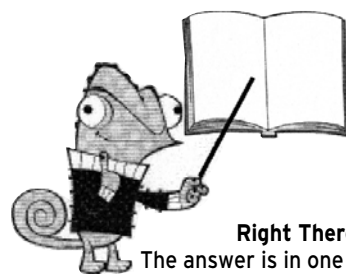
Regardless of grade level and whether students read independently or participate in shared readings or read alouds, teachers introduce students to the language of QAR by analyzing the differences between questions with answer sources in the book and those where the answer source is students' own heads. Shorter texts work quite effectively for characterizing basic differences between these two information sources, but as students become more experienced with QARs, this simple distinction is not sufficient to capture the range of strategies used to answer and generate questions related to text. Thus, teachers build on In the Book and In My Head by introducing the four core QARs.

Once students are confidently and accurately identifying In the Book QARs, teachers introduce its subcategories, Right There and Think & Search. Similarly, when students are confident and accurate with In My Head QARs, teachers introduce its subcategories, Author & Me and On My Own (see Figure 2 for definitions of each).

Longer passages (e.g., 3–5 paragraphs) are used for this instruction so that students can more easily see the differences between Right There and Think & Search, as well as between Author & Me and On My Own responses.

Mr. Blanco conducted QAR instruction within a unit on immigration. For these QAR lessons, he used the following passages from a short biography

FIGURE 2
The core Question Answer Relationships



Right There

The answer is in one place in the text. Words from the question and words that answer the question are often "right there" in the same sentence.

In the Book



Think & Search

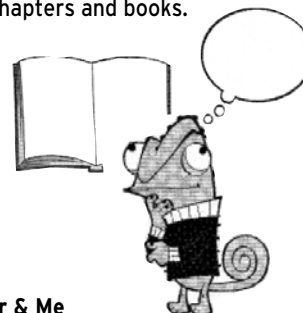
The answer is in the text. Readers need to "think and search," or put together different parts of the text, to find the answer. The answer can be within a paragraph, across paragraphs, or even across chapters and books.



On My Own

The answer is not in the text. Readers need to use their own ideas and experiences to answer the question.

In My Head



Author & Me

The answer is not in the text. To answer the question, readers need to think about how the text and what they already know fit together.

From Raphael and Au (2001, pp. 4 and 5). Used by permission of the publisher, McGraw-Hill/Wright Group.

of Cesar Chavez, displayed on an overhead transparency:

Cesar Chavez moved from Arizona to California with his family when he was ten years old. He and his family worked as migrant farm laborers. Chavez attended more than thirty-eight schools during his childhood. After eighth grade, he worked full-time to help his family until he left home to fight in World War II.

When he returned home after the war, Chavez learned all he could about labor law and worked at organizing protest marches for the rights of farm laborers. In 1962 he organized the National Farm Workers Association, called *La Causa*, in Fresno, California. *La Causa* wanted to stop using dangerous chemicals in the fields. "Our belief is to help everybody, not just one race," Chavez said. Most farm owners refused to negotiate with *La Causa*. Some reacted with violence, and local police usually

supported the owners. Chavez urged protesting workers to leave their guns and knives at home. "If we used violence, we would have won contracts long ago," he said, "but they wouldn't be lasting because we wouldn't have won respect."

La Causa called for Americans to boycott, or refuse to buy, lettuce and grapes to show their sympathies for the workers. The boycotts were so successful that owners agreed to contracts with the workers.

By the time Chavez died in 1993 he had helped create better lives for thousands of people. Senator Robert F. Kennedy called Chavez "one of the heroic figures of our time." (Raphael & Au, 2001, p. 15)

Mr. Blanco used two questions, written on chart paper, to introduce Right There and Think & Search QARs: (1) How many schools did Chavez attend as

a child? and (2) How did Chavez create better lives for thousands of people?

He used a “transfer of control” model of instruction (see Au & Raphael, 1998; Pearson, 1985), beginning by thinking aloud about the information source for the first question. While saying he thought this was an In the Book QAR, he highlighted the words *schools* and *attended* in the first paragraph. He then described scanning the sentence they appeared in for a number that would make sense to answer the question. He circled *thirty-eight* as he said aloud, “This is the answer to the first question.” Then he wrote on the chart paper, “Chavez attended 38 schools as a child.” He used a similar process of modeling, highlighting, and displaying an answer to the second question, highlighting better working conditions, getting higher pay, and learning to use boycotts rather than violence.

Mr. Blanco then spoke about his own analysis of the differences in what it took to answer the two questions, drawing on the definitions in Figure 2 (Raphael & Au, 2001). He talked about how much more difficult a Think & Search QAR can be for many reasons. Think & Search QARs require that readers find *all* the information that is relevant to the question and then integrate that information into one coherent answer. This is more challenging than finding a detail in the text to respond to a Right There question. Over time and through many examples, Mr. Blanco’s students learned to apply the heuristic that their teacher had taught them to reading, social studies, science, and other school subjects, and to a variety of tasks—from answering end-of-chapter questions in their content area subjects to generating inquiry questions for research projects and good discussion questions for student-led book clubs.

To illustrate the differences between the In My Head QARs—Author & Me and On My Own—Mr. Blanco began with the following two questions about the Chavez biography: (1) List characteristics you most admire about Cesar Chavez and describe why you think these are admirable, and (2) Whom do you admire in your family, and why do you admire them? Continuing the same instructional approach, he paired these two questions to illustrate the key difference between Author & Me and On My Own. While both QARs require that readers use information from their background

knowledge, to answer an Author & Me, readers need to have read and understood the text. Unless they had prior knowledge, most students would be unable to list admirable characteristics of Cesar Chavez without having read the selection. However, an On My Own QAR does not require students to read the text. For example, students could describe a family member they admire without reading or understanding the biography.

Organizing comprehension instruction through QAR

QAR instruction can be adjusted for use across grade levels and content areas because of the way the categories form a progression of difficulty. This provides an opportunity to coherently frame specific instruction in QAR, as well as more general instruction in the range of high-level comprehension strategies students learn across grade levels.

The use of QAR as a framework for comprehension across the grades and school subjects may be particularly helpful in schools serving many students of diverse backgrounds. Often, under the pressure to raise test scores, teachers in these schools have been implementing highly structured programs focusing on lower level skills. Teachers usually report that they see gains in lower level skills, such as word identification, but not in comprehension and higher level thinking. QAR provides a means for teachers to gain or regain a focus on instruction in comprehension strategies in their classrooms.

Initially, teachers introduce In the Book and In My Head QARs. In early primary grades, some teachers may use only these two categories and may depend on teachers in later grade levels to introduce the next level of categories. Others may begin with the two categories but choose to introduce the next level once certain students understand the two sources well. Research has shown that by second grade, students comfortably learn to distinguish between Right There and Think & Search QARs (Raphael & McKinney, 1983). Further, research studies have demonstrated that fourth graders understand the differences among the four core QARs (e.g., Raphael & Wonnacott, 1985). Introduction of the core categories varies depending on the knowledge of the teacher as well as the

TABLE 2
Using QAR to frame comprehension strategy instruction

QAR	Sample comprehension strategies
On My Own	<ol style="list-style-type: none"> 1. Activating prior knowledge (e.g., about genre, experiences, authors) 2. Connecting to the topic (e.g., self-to-text)
Right There	<ol style="list-style-type: none"> 1. Scanning to locate information 2. Note-taking strategies to support easier recall of key information 3. Using context clues for creating definitions
Think & Search	<ol style="list-style-type: none"> 1. Identifying important information 2. Summarizing 3. Using text organization (e.g., comparison/contrast, problem/solution, list, explanation) to identify relevant information 4. Visualizing (e.g., setting, mood, procedures) 5. Using context to describe symbols and figurative language 6. Clarifying 7. Making text-to-text connections 8. Making simple inferences
Author & Me	<ol style="list-style-type: none"> 1. Predicting 2. Visualizing 3. Making simple and complex inferences 4. Distinguishing fact and opinion 5. Making text-to-self connections

progress of students. However, anecdotal data from teachers such as Ms. Rodrigues suggest that, with appropriate instruction, even young students are able to talk about all four QARs.

Across grade levels and subject areas, teachers continue to use the QAR categories to frame listening and reading comprehension strategy instruction (see Table 2). Although there are exceptions (e.g., reciprocal teaching, transactional strategy instruction, Questioning the Author), many approaches to comprehension instruction are based on teaching individual strategies. However, readers functioning at high levels of literacy use strategies in combination and apply different approaches to strategic thinking, depending on the genre or difficulty of the texts. Understanding how strategies interrelate can be quite abstract for students faced with the need to apply several strategies, as well as quite demanding for teachers in terms of providing effective instruction. Table 2 conveys how QAR can be used to help students see the relation-

ships among the strategies they are learning and the task demands represented by different questions. Table 3 shows how questions asked typically vary across the reading cycle.

Thinking about QAR in this way provides a framework that students can use to link strategies at appropriate points in the reading cycle—whether during their language arts instruction or in other school subjects. Furthermore, the framework guides teachers' modeling of question-asking practices before (e.g., eliciting relevant background knowledge), during (e.g., focusing on important information, locating key terms, making inferences about key plot events or character motivation), and after reading (e.g., considering themes, building arguments about author intent supported by text evidence). Understanding and control of strategies learned helps readers engage in the high levels of literacy for which they are accountable in their day-to-day classroom literacy activities and in

TABLE 3
Using QAR to frame questioning within the reading cycle

Before reading	<p>On My Own From the title or the topic, what do I already know that can connect me to the story or text?</p> <p>Author & Me From the topic, title, illustrations, or book cover, what might this story or text be about?</p>
During reading	<p>Author & Me What do I think will happen next? How would I describe the mood of the story and why is this important?</p> <p>Think & Search What is the problem and how is it resolved? What role do [insert characters' names] play in the story? What are the important events? (literary, informational)</p> <p>Right There Who is the main character? (literary) Identify the topic sentence in this paragraph. (informational) What are some words that describe the setting? (literary)</p>
After reading	<p>Author & Me What is the author's message? What is the theme and how is it connected to the world beyond the story? How can I synthesize the information with what I know from other sources? How well does the author make his or her argument? How is the author using particular language to influence our beliefs?</p> <p>Think & Search Find evidence in the text to support an argument.</p>

high-stakes assessments at the district, state, and national levels.

Whole-school reform through QAR

The efforts of an individual teacher to provide effective comprehension strategy instruction can certainly contribute to improvements in students' achievement. However, more than one year of instruction by an individual teacher is usually required to bring students of diverse backgrounds to high levels of literacy and to ensure their continued success as readers. There has been increasing recognition that to have the strongest effect on students' literacy development, we should look to the school as the unit of change (Cunningham & Creamer, 2003) and organize professional develop-

ment to promote teacher learning that leads to a coherent, schoolwide approach to literacy instruction. Coherence is central to students' literacy success on informal and high-stakes assessments (Newmann, Smith, Allensworth, & Bryk, 2001; Taylor et al., 2003). Coherent efforts are particularly needed for increasing the access of students of diverse backgrounds to the kind of reading comprehension instruction that will close the literacy achievement gap.

In the United States, under the influence of the federally funded Comprehensive School Reform program of 2001, many schools—enrolling considerable numbers of students of diverse backgrounds—purchased packaged programs that emphasized lower level skills (Viadero, 2004). The problem with reform efforts based on packaged

programs is that they do not foster the kinds of conversations among teachers within and across grades that can lead to coherent and cohesive literacy instruction. Research (e.g., Anders & Richardson, 1991; Duffy, 2004; Taylor, Pearson, Peterson, & Rodriguez, 2005) suggests that a schoolwide approach based on collaboration and long-term commitment is more effective than top-down models or packaged programs designed as a “quick fix.” Our observations suggest that schools serving students of diverse backgrounds often prefer to rely on packaged programs rather than undertaking the long-term professional development efforts that are likely to be more effective. The reasons that such schools favor packaged programs include large numbers of inexperienced teachers, high rates of teacher turnover, and a lack of the expertise or funding needed to carry out systematic, multiyear professional development.

As a framework that is relatively simple and straightforward, yet applicable across grade levels and subject areas, QAR has potential for schoolwide professional development. The QAR framework helps organize comprehension instruction within and across grade levels and serves as a bridge between study of the language arts and other subjects. The application is clear for both day-to-day classroom activities as well as high-stakes assessments. In addition, it is not based on a particular ideology (e.g., it can be applied within basal reading instructional programs or literature-based instruction or content area instruction). The QAR framework can be a starting point for conversations that lead teachers to think deeply about reading comprehension instruction to promote sustained changes in practice.

For example, teachers at one of the largest elementary schools in Hawaii use QAR to frame comprehension instruction in their ongoing efforts to improve their students’ reading achievement. To implement a schoolwide focus on reading comprehension, teachers mapped their end-of-year targets for student learning in terms of grade-level benchmarks related to state standards. The QAR framework laid out in Figure 1 helps a school with such mapping. In this case, the first-grade teachers agreed to teach *In the Book* and *In My Head* QARs. The third-grade teachers agreed to teach their students all four of the core categories. Teachers in the fourth through sixth grades agreed

to emphasize *Think & Search*, which students could use with both fiction and nonfiction texts.

At this school, teachers in special education as well as in general education use the language of QAR. One of the special education teachers developed approaches for teaching her students about QARs by drawing on multiple modalities. She created rhythmic chants for *In the Book* and *In My Head*. She used sentence strips so that students could physically match questions and answers. She created charts for each category to help students better understand the meaning of “sources of information.” As shown in Figure 3, one of the charts was developed as students brainstormed places that information comes from before it eventually ends up in our heads. She then helped students identify which of these information sources could be read, putting an *R* in the box by the source.

Having the common language of QAR can help teachers know how to proceed when they are seeking to improve comprehension instruction. For example, when examining the results of their classroom-based assessments, the first-grade teachers at this school noticed that their students had trouble making inferences. As they discussed the problem, one of the teachers had an idea. She explained to the other teachers that the problem might lie in the fact that they had been teaching only the QAR categories of *In the Book* and *In My Head*. However, to answer questions requiring inferences, children needed to know the category of *Author & Me*. At the time, *Author & Me* was being introduced to students in later grades, but the first-grade teachers decided that they should begin teaching it.

Consistent QAR instruction across the grades and school subjects establishes the foundation for improved reading and listening comprehension. By the time students are in intermediate grades, those who have received consistent QAR instruction develop sophisticated strategies to analyze questions and use appropriate strategies and language for formulating good answers. For example, Kathy Highfield documented students’ use of QARs from third through fourth grade (Highfield, 2003). She found several examples of students’ theorizing about how questions work as well as appropriate strategies for answering questions. For example, students in her classroom discovered that the word *you* may signal that the question is either an *On My*

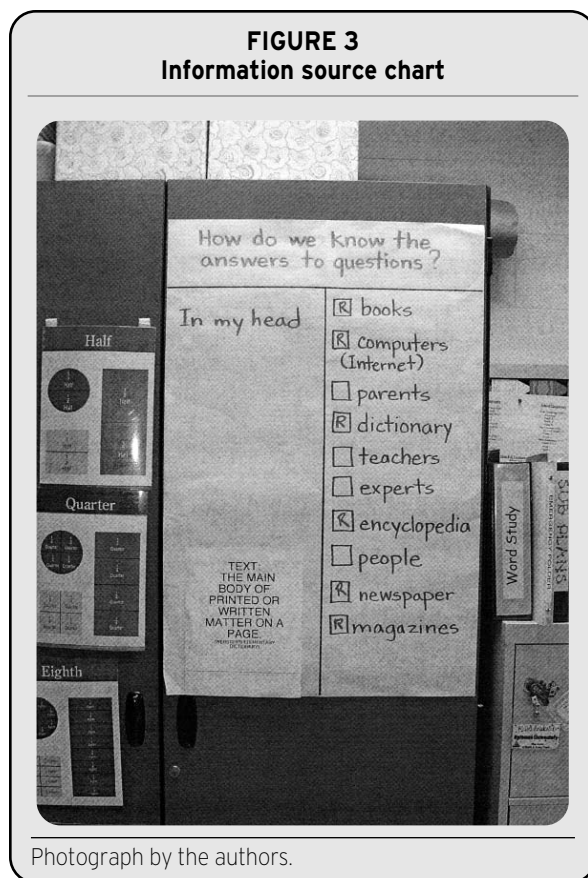
Own or Author & Me, while they also recognized that this is not always the case.

Highfield (2003) found that students learned to value skimming or rereading strategies to locate specific information in the text for Right There QARs (and the occasional Think & Search), while simultaneously recognizing the role of their prior knowledge in answering questions. They even began to debate individual differences in the way QARs might apply as they read and responded to questions. Toward spring of fourth grade, Highfield eavesdropped as two students debated whether a question represented a Right There or an On My Own QAR. After the debate had gone on for a few minutes, one student explained that for her, it was an On My Own because she already knew the information to answer the question, but for her peer, it was a Right There, because she didn't already have the information and had to get it from the book. Such metacognitive knowledge about questioning and related strategies supports students in their day-to-day work with text, as well as when they must take a high-stakes test.

Accountability and test preparation through QAR

Educators in U.S. schools are under increasing pressure to improve students' reading performance, as measured by scores on standardized and state reading tests. This pressure is greatest in schools with histories of low test scores, and these are schools that often have high proportions of students of diverse backgrounds. In their attempts to raise test scores, these schools inadvertently lower the quality of educational experiences. For example, one common response is to narrow the curriculum to focus on tested subjects such as reading and math, to the exclusion of subjects such as science, social studies, the arts, and physical education (Smith, 1991). Another common response, often months prior to spring testing, is to spend the bulk of instructional time on test preparation.

Test preparation typically takes the form of having students complete workbook exercises with items of a form and content ostensibly similar to those on upcoming tests. In general, students practice by reading short passages and responding to multiple-choice items. Most test preparation pack-



ages involve little or no instruction by the teacher. The problem with practice-only activities is that students who have not already acquired reading comprehension strategies gain little or nothing from the large amounts of time spent on these activities. Some students will muddle through as best they can, using the coping techniques at their disposal, while other students simply quit trying altogether. Teachers in schools following these practices have reported to us that many students of diverse backgrounds experience burnout and discouragement. These students lack motivation by the time large-scale testing actually occurs. For these reasons, practice-only test preparation activities cannot be expected to improve the test scores of most students of diverse backgrounds, much less help them to become better readers and thinkers.

With QAR as the framework for teaching listening and reading comprehension strategies, within a rich curriculum in language arts and other school subjects, teachers can help students be strategic when faced with the texts and tasks on

high-stakes tests. As we described earlier, the trend in national assessments is toward ever higher levels of literacy, moving away from a heavy emphasis on locating and recalling information to require that students integrate ideas across texts, draw inferences, critique, and evaluate.

To illustrate this trend, we present an analysis of the 12 questions on a fourth-grade NAEP reading selection, "Watch Out for Wombats!" (Donahue et al., 2003). An overview of the questions and their characteristics is presented in Table 4. There are 6 multiple-choice questions, 5 short constructed responses, and 1 extended constructed response. For 4 of the multiple-choice questions, the QAR is Right There. For 1 of the remaining multiple-choice questions, the QAR is Author & Me, and for the other, Think & Search. Thus, even multiple-choice questions on the NAEP may go beyond simple forms of comprehension. With the 5 short constructed response items, 3 reflect the Think & Search QAR, while 1 is an Author & Me and the other a Right There. For the extended constructed response, the QAR is Author & Me. In total, students are required to answer 5 Right There items, 3 Author & Me items, and 4 Think & Search items. This analysis shows the shift toward higher level comprehension in current assessments and also highlights the fact that there is not a simple one-to-one correspondence between question format and QAR in current reading assessments. Specifically, multiple-choice questions do not always have a QAR of Right There. It is clear that teachers who want their students to perform well on reading tests would be wise to provide instruction in all the QARs and the reading strategies associated with them, as listed in Table 2. Instruction should foster students' independence in the application of QARs and reading strategies, as well as a mindset toward critical evaluation.

Through QAR instruction, teachers do not need to teach to a particular test but instead are able to unpack the task demands of different types of questions and alert students to these demands as appropriate to the different tests students face. For example, in 2003 on the Illinois State Achievement Test, many students were not successful when required to write an extended response. The state's definition for success required that students meet the following criteria:

- Demonstrate an accurate understanding of important information in the text by focusing on the key ideas presented explicitly or implicitly.
- Use information from the text to interpret significant concepts or make connections to other situations or contexts logically through analysis, evaluation, inference, or comparison/contrast.
- Use relevant and accurate references; most are specific and fully supported.
- Integrate interpretation of the text with text-based support (Illinois State Board of Education, 2004).

Many students simply wrote a personal response without making explicit connections to the text. Others wrote about the text but did not include any personal connections. Simply writing an extended essay was not sufficient. To be successful, students needed to identify the QAR as Author & Me and compose a written response including both text ideas and a personal connection.

Concluding comments

We believe QAR addresses four troubling problems of practice today, particularly involving students of diverse backgrounds who often receive little literacy instruction oriented to promoting high levels of thinking about text. First, QAR can help address the lack of a shared language among teachers and students for improving questioning practices, whether in the day-to-day life of the classroom, in students' activities outside of school, or in high-stakes testing situations. Second, QAR can bring coherence to literacy instruction within and across grade levels by providing a framework for a developmental progression for comprehension instruction. As a framework, QAR provides a means for organizing comprehension strategy instruction. Third, QAR provides a focal point to begin sustained efforts for whole-school reform aimed at higher standards for literacy learning and teaching. It is difficult to find points of contact that bring teachers from kindergarten through middle school to the table with the same high levels of interest. Yet all readers at all grades can benefit from

TABLE 4
Analysis of NAEP sample passage questions

Question	Format	QAR and Strategies
1. This article mostly describes how....	Multiple choice	Think & Search: <ul style="list-style-type: none"> • Identifying important information • Summarizing • Making simple inferences
2. Where do wombats live?	Multiple choice	Right There <ul style="list-style-type: none"> • Scanning to locate information
3. Describe one way in which wombats and koalas are similar and one way in which they are different.	Short constructed response	Think & Search <ul style="list-style-type: none"> • Visualizing • Identifying important information • Using text organization to identify relevant information • Summarizing
4. Use the information in this passage to describe marsupials.	Short constructed response	Think & Search <ul style="list-style-type: none"> • Visualizing • Identify important information • Using text organization to identify relevant information • Summarizing
5. Where do wombats usually live?	Multiple choice	Right There <ul style="list-style-type: none"> • Scanning to locate information
6. Choose an animal, other than a koala, that you know about and compare it to the wombat.	Short constructed response	Author & Me <ul style="list-style-type: none"> • Visualizing • Making simple and complex inferences (to compare) • Making text-to-self connections
7. Why are wombats not often seen by people?	Multiple choice	Right There <ul style="list-style-type: none"> • Scanning to locate information
8. Describe the sleeping area of wombats.	Short constructed response	Right There <ul style="list-style-type: none"> • Scanning to locate information • Note-taking to support easier recall
9. To get food, the wombat uses its....	Multiple choice	Right There <ul style="list-style-type: none"> • Scanning to locate information
10. What would a wombat probably do if it met a person?	Multiple choice	Author & Me <ul style="list-style-type: none"> • Predicting • Making simple and complex inferences
11. Why has Australia set up animal reserves to protect the wombat?	Short constructed response	Think & Search <ul style="list-style-type: none"> • Identifying important information • Using text organization to identify relevant information • Making simple inferences
12. Give two reasons why people should not have wombats as pets. Use what you learned in the passage to support your answer.	Extended constructed response	Author & Me <ul style="list-style-type: none"> • Identifying important information • Making complex inferences • Visualizing

Note. Questions retrieved June 14, 2005, from <http://nces.ed.gov/nationsreportcard/ITMRLS/search.asp?picksubj=Reading>

learning to think in terms of information sources for answering and asking questions. Fourth, QAR provides a responsible approach to preparing students for high-stakes tests at different grade levels and in a variety of subject areas, without detracting from the high-quality instruction that leads to high levels of literacy.

Using the QAR framework can provide benefits to schools, teachers, and students for a relatively small amount of time and effort. For schools, the benefit comes in the chance to pull the grade levels together around reading comprehension instruction. For teachers, the benefit is found in the opportunity to improve instruction around questioning activities and reading comprehension. For students, the benefit lies in gaining access to reading comprehension and higher level thinking with text—an opportunity often unavailable to those of diverse backgrounds.

Raphael teaches at the University of Illinois at Chicago. She may be reached there at 1040 W. Harrison Street #1234, Chicago, IL 60607-7133, USA. E-mail to taffy@uic.edu. Au teaches at the University of Hawaii in Honolulu.

References

- Anders, P., & Richardson, V. (1991). Research directions: Staff development that empowers teachers' reflection and enhances instruction. *Language Arts, 68*, 316-321.
- Au, K.H. (1993). *Literacy instruction in multicultural settings*. Fort Worth, TX: Harcourt Brace Jovanovich College.
- Au, K.H. (2003). Literacy research and students of diverse backgrounds: What does it take to improve achievement? In C.M. Fairbanks, J. Worthy, B. Maloch, J.V. Hoffman, & D.L. Schallert (Eds.), *52nd yearbook of the National Reading Conference* (pp. 85-91). Oak Creek, WI: National Reading Conference.
- Au, K.H., & Raphael, T.E. (1998). Curriculum and teaching in literature-based programs. In T.E. Raphael & K.H. Au (Eds.), *Literature-based instruction: Reshaping the curriculum* (pp. 123-148). Norwood, MA: Christopher-Gordon.
- Bils, J., & Singer, S. (1996, August 17). Gorilla saves tot in Brookfield Zoo ape pit. *Chicago Tribune*, p. 1.
- Cunningham, J.W., & Creamer, K.H. (2003). Achieving best practices in literacy education. In L.M. Morrow, L.B. Gambrell & M. Pressley (Eds.), *Best practices in literacy education* (2nd ed., pp. 333-346). New York: Guilford.
- Darling-Hammond, L. (1995). Inequality and access to knowledge. In J.A. Banks & C.A.M. Banks (Eds.), *Handbook of research on multicultural education* (pp. 465-483). New York: Macmillan.
- Donahue, P., Daane, M., & Grigg, W. (2003). *The nation's report card: Reading highlights 2003* (NCES 2004-452). Washington, DC: National Assessment of Educational Progress.
- Duffy, G.G. (2004). Teachers who improve reading achievement: What research says about what they do and how to develop them. In D.S. Strickland & M.L. Kamil (Eds.), *Improving reading achievement through professional development* (pp. 3-22). Norwood, MA: Christopher-Gordon.
- Fitzgerald, J. (1995). English-as-a-second-language reading instruction in the United States: A research review. *Journal of Reading Behavior, 27*, 115-152.
- Grigg, W.S., Daane, M.C., Jin, Y., & Campbell, J.R. (2003). *The nation's report card: Reading 2002* (NCES 2003-521). Washington, DC: U.S. Department of Education, Institute for Education Sciences.
- Highfield, K. (2003). *QAR and test preparation in a fourth grade classroom*. Unpublished dissertation, Oakland University, Rochester, MI.
- Illinois State Board of Education. (2004). *Extended-response reading rubric*. Retrieved June 14, 2005, from www.isbe.net/assessment/readrubric.htm
- Kimmel, E.A. (2001). *Anansi and the magic stick*. Ill. J. Stevens. New York: Holiday House.
- Leu, D.J., & Kinzer, C.K. (2003). *Effective literacy instruction: Implementing best practice K-8* (5th ed.). Upper Saddle River, NJ: Pearson Education.
- Mesmer, H.A.E., & Hutchins, E.J. (2002). Using QARs with charts and graphs. *The Reading Teacher, 56*, 21-27.
- National Assessment Governing Board. (2004). *Reading Framework for the 2009 National Assessment of Educational Progress* (Contract No. ED-02-R-0007). Washington, DC: American Institutes for Research.
- Newmann, F.M., Smith, B.S., Allensworth, E., & Bryk, A.S. (2001). Instructional program coherence: What it is and why it should guide school improvement policy. *Education, Evaluation, and Policy Analysis, 23*, 297-321.
- Oakes, J., & Guiton, G. (1995). Matchmaking: The dynamics of high school tracking decisions. *American Educational Research Journal, 32*, 3-33.
- Paulsen, G. (1987). *Hatchet*. New York: Puffin Books.
- Pearson, P.D. (1985). Changing the face of reading comprehension instruction. *The Reading Teacher, 38*, 724-738.
- Pressley, M. (2002). Comprehension strategies instruction. In C.C. Block & M. Pressley (Eds.), *Comprehension instruction: Research based best practices* (pp. 11-27). New York: Guilford.
- Raphael, T.E., & Au, K.H. (2001). *SuperQAR for testwise students: Teacher resource guide, Guide 6*. Chicago: McGraw-Hill/Wright.
- Raphael, T.E., & McKinney, J. (1983). An examination of 5th and 8th grade children's question answering behavior: An instructional study in metacognition. *Journal of Reading Behavior, 15*, 67-86.
- Raphael, T.E., & Pearson, P.D. (1985). Increasing students' awareness of sources of information for answering ques-

- tions. *American Educational Research Journal*, 22, 217-236.
- Raphael, T.E., & Wonnacott, C.A. (1985). Heightening fourth-grade students' sensitivity to sources of information for answering comprehension questions. *Reading Research Quarterly*, 20, 282-296.
- Reutzel, D.R., & Cooper, R.B. (2004). *Teaching children to read: Putting the pieces together* (4th ed.). Upper Saddle River, NJ: Pearson Education.
- Roe, B.D., Smith, S.H., & Burns, P.C. (2005). *Teaching reading in today's elementary schools* (9th ed.). Boston: Houghton Mifflin.
- Smith, M.L. (1991). Put to the test: The effects of external testing on teachers. *Educational Researcher*, 20, 8-11.
- Snow, C.E. (2002). *Reading for understanding: Toward an R&D program in reading comprehension*. Santa Monica, CA: RAND.
- Sweet, A.P., & Snow, C.E. (Eds.). (2003). *Rethinking reading comprehension: Solving problems in teaching of literacy*. New York: Guilford.
- Taylor, B.M., Pearson, P.D., Peterson, D.P., & Rodriguez, M.C. (2003). Reading growth in high-poverty classrooms: The influence of teacher practices that encourage cognitive engagement in literacy learning. *The Elementary School Journal*, 104, 3-28.
- Taylor, B.M., Pearson, P.D., Peterson, D.P., & Rodriguez, M.C. (2005). The CIERA school change framework: An evidenced-based approach to professional development and school reading improvement. *Reading Research Quarterly*, 40, 40-69.
- Vacca, J.L., Vacca, R.T., Grove, M.K., Burkey, L., Lenhart, L., & McKeon, C. (2003). *Reading and learning to read* (5th ed.). Boston: Allyn & Bacon.
- Viadero, D. (2004, April 21). Reform programs backed by research find fewer takers. *Education Week*, 1-5.