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Paper

# Inquiring Minds Learn to Read

*By*

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*“Being told is the opposite of finding out.”*

—Jimmy Britton

*“The only thing worth learning is learning how to learn.”*

—Seymour Papert (The Connected Family 1996)

After 20-plus years as a teacher and classroom researcher, I have become compelled to conclude that reading is much more complicated than we generally think. In studying the literate lives of boys, my coresearcher Michael Smith and I found that many boys echoed one informant’s claim: “I used to be a good reader until around third or fourth grade, then I suddenly got stupider” (Smith & Wilhelm, 2002).

In reality of course, this boy—and the other boys in the study—certainly did not get stupider. What happened was that the texts they were asked to read got harder. Between third and fifth grade, classroom readings begin to shift from simple narratives (i.e., stories) to more challenging nonfiction and informational text. Since this boy had read primarily narrative texts through third grade, he did not know how to address the demands or use the strategies required by expository text structures. Even the narratives he was now asked to read posed new strategic challenges by using unfamiliar conventions like symbolism, irony, unreliable narrators, subverted time order, and the like. Indeed, some researchers have pointed to this shift in reading material as one reason why children often experience a “slump” in their reading performance in the upper-elementary grades.

All students need significant support from their teachers if they are to meet the new challenges that are presented by the sophisticated arguments and literary conventions in textbooks, as well as the density and complexity of new content. My own research convinces me that students need to be assisted to be better readers at every grade level and in every subject area (e.g., Smith & Wilhelm, 2002; Wilhelm, 1997, 2001; Wilhelm, Baker, & Dube, 2001; Wilhelm & Edmiston, 1998). In fact, even when I teach extremely accomplished readers in doctoral classes, I must still instruct them how to read abstracts, literature reviews, and methodology sections. These are new kinds of text structures with unfamiliar conventional features that are most efficiently learned through explicit instruction; they are “conventional”—meaning that they operate according to rules agreed upon by people (i.e., they are not natural), and must therefore be taught. If students were required to discover how the conventions work on their own, it would be extremely difficult and time-consuming indeed.

How can teachers help students develop these skills? In this paper, I will recommend a set of techniques that teachers can use—before, during, and after reading. These recommendations grow out of an *inquiry-based approach* to reading instruction.

For the past several years, I have been the in-service director for a national demonstration site project in developing literacy across the content areas. We have worked with teachers from kindergarten through college, and we have yet to find teachers in any subject area who cannot reframe every unit they teach as inquiry. Our data also show that reframing units as inquiry does not mean covering different content; it means “doing” and “uncovering” the same content in more powerful ways that develop “big understandings”—essential concepts used by practitioners in the disciplines—and strategic capacities.

As one of our participating teachers expressed, “Doing inquiry changes *everything*, and makes it better for both me and the students!”

## **“Before Reading” Techniques**

Effective literacy instruction begins even before students pick up a book. The following techniques can be used before students begin to read a text:

### **Create a meaningful context by asking an essential question.**

Before students begin a new unit, teachers can provide or negotiate an “essential question” for the unit work. Such a question should engage the students, build upon their current interests and need for personal relevance, and also promote the deep, socially significant understandings that unit study should develop. These understandings should be ones that students can use as they think and solve problems throughout their lives.

In our national demo site, teachers have pursued questions like these with their students: What are civil rights and how can they be protected? What is good government? What is courage? Who will survive? Was geometry invented or discovered? Why do organisms die? Who was the greatest American? Is war necessary? Was the Civil War necessary? All of these questions led directly to all of the important understandings the teachers wanted students to take from their unit study.

### **Provide a clear, personally relevant, and socially significant purpose for each reading.**

Effective, inquiry-based instruction gives students a reason to read. Researchers define reading as a complex, recursive, and *purposeful* process of making meaning (National Research Council, 2001). Reading involves many different strategic features, but the prerequisite feature is *purpose*, a powerful reason to begin and continue reading. This purpose must be personally relevant to the students *right now*, not in the far-off future. It must be socially significant in the world, both now and in the future. And, equally important, students must understand how this is so (Smith & Wilhelm, 2002). No one wants to have to learn something that is not useful and important—that is only “schoolish” (i.e., limited to classroom settings) instead of “toolish” (i.e., usable) (Smith & Wilhelm, 2002).

### **Provide a wide variety of engaging texts that match students’ reading levels.**

Whatever topic you choose for your inquiry, make a wide range of relevant reading material available. Allow students to choose and pursue readings to inquire into specific aspects of the topic. Think outside the box and provide electronic materials, popular-culture texts, picture books, young-adult texts, musical recordings, and other materials that are used for literacy and learning outside of school. In our study, we found that many boys gravitated towards short works, and toward reading materials that were highly visual, such as cartoons, graphic novels, and illustrated books (Smith & Wilhelm, 2002). Work to insure that the variety of materials in your classroom is wide enough to accommodate a broad range of interests and levels of reading ability.

### **Front-load the unit by activating and building necessary background knowledge.**

Many current theories of learning state that students can only learn something new by connecting it to something they already know. In this way, all learning entails moving from the known to the new; “good teaching” is building new interests from existing ones and developing new abilities based on existing competences (Hillocks, 1995; Rogoff & Lave, 1984; Rogoff, Matusov, & White, 1996; Wilhelm, Baker, & Dube, 2001). In approaching a reading assignment, then, teachers need to “front-load” the unit, by either activating the information that students already know about the subject matter, or providing them with the background knowledge that they will need in order to understand the text (e.g., Bransford & Johnson, 1972; Rosenblatt, 1978).

If students do not know anything about a topic, then it will be difficult for them

to comprehend a text that explores that topic. For students to read a text effectively teachers must first front-load the unit in ways that build the pre requisite background knowledge about the topic.

### **Foster mastery by introducing and teaching new reading strategies.**

Just as teachers may need to preface a reading assignment by providing background knowledge about its subject matter, teachers also may need to introduce students to the reading strategies that they will need to make sense of the text. Before students read a text that requires the use of an unfamiliar strategy, or that is written in an unfamiliar text structure/genre, they often need procedural front-loading that prepares them to meet these new demands.

By analogy, in our study of boys, our informants would play the beginning of a new video game over and over again together as they discussed how the game worked and what strategies were effective. Procedural front-loading serves the same kind of purpose: It provides the students with knowledge of the strategy and practice using it—practice that will be followed up as the students read the text and complete the unit work, until they achieve independent mastery.

Of course, teaching a new reading strategy isn't as simple as merely explaining the strategy once and watching students use it. Learning a new strategy requires teachers and students to work together. In my book *Strategic Reading* (Wilhelm, Baker, & Dube, 2001), I offer this process for helping students acquire a new reading strategy: First, the teacher models the strategy by using it as the students watch. Next comes a stage of apprenticeship, in which the teacher uses the strategy while students join in to “help.” Third, students practice the strategy together in a joint collaborative activity, supported by peer assistance and help from the teacher. Finally, the students use the strategy independently as the teacher watches and plans future instruction (i.e., the stage of assessment and further intervention).

### **When introducing a new strategy, it is helpful to:**

- Explain and model *when* to use the strategy. Identify tip-offs and cues that signal when the strategy must be used.
- Explain *what* the strategy entails.
- Explain *why* the strategy is important. Model the “work” that the strategy does and how it can help readers understand a text.

- Model *how* to use the strategy, using meaningful text in a meaningful context in which the strategy is required.
- Work through several uses of the strategy while gradually releasing responsibility to the students.
- Provide meaningful opportunities for students to use the strategy to accomplish personal and curricular goals.

In this way, students can make the strategy their own, achieving mastery and independence over time (Taylor, Pearson, Harris, & Garcia, 1995).

## **“During Reading” Techniques**

Naturally, a teacher’s role does not end when students sit down to read. The following techniques can be used to support students’ learning and performance while they are reading:

### **Support struggling readers via instructional interventions.**

While students are reading, teachers can use a variety of “scaffolds” or other teaching techniques to help students to understand the general purposes and uses of literacy and the specific uses of particular texts and conventions. These scaffolds provide students with the support they need, and teachers can gradually reduce their level of support as students master the skills they need to make sense of a given type of text (Bruner, 1975). Teachers can support and scaffold students’ use of reading strategies through think-alouds, periodic questioning, and other techniques that help students discover and use the reading strategies that successful readers use every time they read. Some of these reading strategies include: setting a purpose; using background knowledge to make sense of new information; decoding word meanings; asking questions; identifying central ideas in the text; making meaning; summarizing information as they read and bringing it forward through the text; monitoring their own comprehension (i.e., checking to see whether they understand what they’re reading); using fix-up strategies when they don’t understand something; and synthesizing information to create new knowledge and thinking.

One reading strategy that is often ignored or overlooked is visualization and using sensory experience. Research has shown engaged readers construct and “see” mental models of the material they are reading about (Gambrell & Koskinene, 2002; Wilhelm, 1997). These mental models can help readers organize and understand the subject matter of the text. Instructional techniques such as visual think-alouds and

picture maps have been shown to be very powerful in promoting visualization, comprehension, and response (Wilhelm, 1997, 2004).

These strategies are broadly applicable across a wide range of texts, and they are tremendously important. When supplemented by task-specific strategies (e.g., knowing how to recognize and understand irony) and text-specific strategies (e.g., knowing how to read a particular genre, such as a logical argument), these strategies are essential for every reading task (Smagorinsky & Smith, 1992; Wilhelm, 2001). By supporting students' use of these strategies while they read, teachers can help students acquire and master the tools that are necessary for success and engagement in reading.

### **Motivate students by building a sense of competence and a “contract to care.”**

Vygotsky (1978) maintains that teaching and learning are relational—that is, all learning occurs through interaction between a learner and a more expert practitioner. The quality of the relationship between a learner and a teacher motivates, assists, and rewards the learning. This means that teachers need to relate to students as individuals; to care about them; and to use their relationship and personal knowledge of students to assist them (e.g., “I know you like racing cars, so I thought you might like this book”). Recent research on boys and literacy shows that they resist learning from people who do not take an interest in them and express care for them.

Through your relationship with your students, you can bring children to the point where they can say, “I am a reader!” As you direct and assist students to new reading achievements, you can name and celebrate what they have learned. This builds a sense of competence, known in educational psychology as “self-efficacy” (i.e., confidence in their own ability to succeed)—and self-efficacy motivates students to develop a “continuing impulse to learn.” Students who do not develop an honest sense of self-efficacy tend to be unmotivated and struggle as readers. As Pajares (1996) notes in his research review “it is difficult to learn anything while fighting self-doubt.”

### **Provide students with enough time to read, practice, and grow.**

Students need time to read, practice, and grow. Significant learning comes in small steps and sometimes requires a period of gestation to internalize new knowledge before it can be applied. By structuring reading time, teachers can not only provide opportunities for reading but also show that time for reading—and reading itself—is valued. Teachers need to allow kids the time to grow and develop with patient invitations, encouragement, and assistance.

## **“After Reading” Techniques**

Learning doesn't end when children finish reading a text. The following techniques can be used after reading to reinforce learning and motivate children to continue reading in the future:

### **Reflect on and consolidate what has been learned.**

Any significant achievement requires time to practice, refine, and consolidate learning. After reading, teachers can model good practice by pausing to review what students have learned—in terms of both the subject matter of the text and the reading strategies they used.

By encouraging students to name, discuss, and use what they have learned, teachers have the opportunity to reinforce and elaborate on the topics and strategies that children are learning. At the same time, teachers' process of review and reflection sets a good example in and of itself—one that hopefully will encourage students to engage in similar kinds of reflection on their own.

### **Set goals for the future.**

Apart from providing a context for reviewing what students have learned, post-reading discussions also give teachers the chance to set goals and directions for the future. Teachers can use the material students have learned as a springboard to feed into what they need to learn next. Take the opportunity to celebrate how students have grown—and how they can continue to grow!

### **Provide time for collaborative peer discussion of texts.**

In addition to teachers' reviewing material with students, there is great value in their giving students the opportunity to discuss texts with each other too. Students enjoy an emphasis on the social aspects of reading such as making and sharing meanings together with other children. Group discussion provides a context for exchanging ideas, building motivation, and having fun with reading. To derive the greatest possible benefit from these sorts of interactions, teachers must provide the opportunity for them to occur—by planning for and structuring time for reading, responding, and sharing together.



### **Make or do something that makes learning visible, usable, and accountable.**

Literacy assessments don't have to be limited to writing an essay or taking a reading-comprehension test. Instead, teachers can ask students to demonstrate and use what they have learned to create knowledge artifacts or social action projects that can be used by others. Be creative! Students need an opportunity to demonstrate and use what they have learned. The experience will be more valuable and rewarding if the assessment produces visual, "toolish" signs of accomplishment that go beyond a "schoolish" test score or a grade.

### **Help students engage in inquiry of their own.**

Once teachers have started children along the path to inquiry-based learning, they have laid the groundwork for children to explore their own "big questions" in the future. As students come up with new questions and interests, teachers can encourage them to find and develop new sources of information that will help them investigate their topics and search for answers. By helping students find new reading materials and other ways of creating new knowledge (e.g., surveys, experiments, interviews), teachers can aid students in building the skills and tools that they will need to engage in inquiry-based learning of their own.

## ***The Role of Technology***

The rapid growth and evolution of technology presents vast new opportunities for education, including literacy education. In fact, Papert (1996) has argued that electronic technologies are the greatest construction kit ever invented. However, the fact that such potential exists does not necessarily mean that technology is always used to optimal benefit. Lehrer (1993; Lehrer, Erickson, & Connell, 1994) has shown that electronic technologies are too frequently used in very restricted ways, to deliver information or as electronic "worksheets." He argues that technology must also be used as an "inquiry and design tool" for developing student skills at finding, developing, organizing, analyzing and representing knowledge.

Technology can serve to motivate students, who are often engaged by the "holding power" of electronic technologies (Turkle, 1995). In my own research with boys, the students were cynical about school practices that were different from the kinds of literacy they practiced in their lives or saw practiced by adults. Real-world literacy

practices frequently involve various uses of technology, so our informants were nonplussed by how rarely schools use technology for learning (particularly when it is not a glorified electronic worksheet; Smith & Wilhelm, 2002).

Students today understand that technology is a tool that is wrapped up in literate practices and that can develop and extend human abilities. They want to use the available electronic tools both to learn new strategies and information *and* to demonstrate their learning (Wilhelm & Friedemann, 1998). Indeed, technology can be integrated throughout literacy instruction, as part of the teaching techniques that teachers employ before, during, and after reading. For example, before reading teachers can use video or online resources to introduce topics and build background knowledge. During an inquiry-based lesson, teachers can take advantage of the wealth of information on the Web by training students to search for online documents or articles that will help them answer their “big questions.” After reading, students can demonstrate what they have learned by creating their own knowledge artifacts, such as Web sites, hypermedia stacks, video documentaries, and the like. Many other possibilities exist as well.

## **Conclusion**

As I wrote in the introduction, reading is more complicated than is generally acknowledged. But so is teaching. By using an inquiry-based approach and the instructional techniques outlined above, you can help students learn in ways that more closely resemble the learning of real-world practitioners and literate adults. You can enhance engagement, improve comprehension, and foster the kind of learning that results in true understanding and future use.

Teaching is one of the world’s most complex and challenging jobs—and this is particularly true of the teaching of reading. But when it is done successfully, it is also one of the most rewarding professions there can be. Teaching reading in the context and spirit of inquiry enlivens instruction for teachers and students, and makes it more powerful for both parties.

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**Dr. Jeffrey D. Wilhelm** is a well-known teacher, author, and presenter. His recent research includes studying how student reading, writing, and thinking can be supported through the use of art, drama, and technology. He is particularly interested in supporting the learning of students who are often considered to be reluctant or resistant.

A classroom teacher for fifteen years, Dr. Jeffrey Wilhelm is currently an associate professor at the Boise State University where he teaches courses in middle and secondary level literacy.

Dr. Wilhelm's book *Standards in Practice: Grades 6–8* was released by both NCTE and IRA as an addendum to the national standards. He has published two books based on his dissertation, "Developing Readers: Teaching Engaged and Reflective Reading with Adolescents": *You Gotta BE the Book* (Teachers College Press and NCTE), and *Imagining to Learn: Drama Across the Curriculum*, coauthored with Brian Edmiston (Heinemann). He and two PDS teachers, Tanya Baker and Julie Dube, have published the implications of several of their teacher research studies in *Strategic Reading: Guiding Students to Lifelong Literacy, 6–12* (Heinemann). The provocative findings of his study on boys and literacy achievement are published in *Reading Don't Fix No Chevys: The Role of Literacy in the Lives of Young Men* (coauthored with Michael Smith, Heinemann Publishers). This study won the NCTE's David H. Russell Award for Distinguished Research in English Education.

Jeff has written three books for Scholastic Professional Books that explore the teaching implications of his various studies on reading: *Improving Comprehension with Think Alouds: Modeling What Good Readers Do*, *Action Strategies for Deepening Comprehension*, and *Reading IS Seeing. A fourth: Inquiring Minds Want to Read and Write* is currently in production.

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