

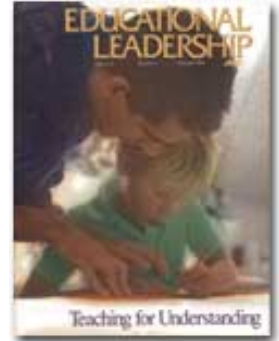
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Synthesis of Research / Reading Comprehension: What Works

To set the stage for students to succeed at reading, teachers can supply ample time for text reading, direct strategy instruction, and opportunities for collaboration and discussion.



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Perhaps the most sweeping changes in reading instruction in the last 15 years are in the area of comprehension. Once thought of as the natural result of decoding plus oral language, comprehension is now viewed as a much more complex process involving knowledge, experience, thinking, and teaching. It depends heavily on knowledge—both about the world at large and the worlds of language and print. Comprehension inherently involves inferential and evaluative thinking, not just literal reproduction of the author's words. Most important, it can be taught directly.

Two years ago we reviewed the most recent research about comprehension instruction (Pearson and Fielding 1991). Here, we revisit that research, supplementing it with current thinking about reading instruction, and transform the most consistent findings into practical guidelines for teachers.

We contend that a successful program of comprehension instruction should include four components:

- large amounts of time for actual text reading,
- teacher-directed instruction in comprehension strategies,
- opportunities for peer and collaborative learning, and
- occasions for students to talk to a teacher and one another about their responses to reading.

A program with these components will set the stage for students to be interested in and to succeed at reading—providing them the intrinsic motivation for continual learning.

Ample Time for Text Reading

One of the most surprising findings of classroom research of the 1970s and '80s was the small amount of time that children spent actually reading texts. Estimates ranged from 7 to 15

minutes per day from the primary to the intermediate grades (Anderson et al. 1985). Children typically spent more time working on reading skills via workbook-type assignments than putting these skills to work in reading connected texts. The skill time/reading time ratio was typically the highest for children of the lowest reading ability (Allington 1983b). Allocating ample time for actual text reading and ensuring that students are actually engaged in text reading during that time are among teachers' most important tasks in comprehension instruction.

Why is time for text reading important? The first benefit of time for reading is the sheer opportunity to orchestrate the skills and strategies that are important to proficient reading—including comprehension. As in sports and music, *practice makes perfect* in reading, too.

Second, reading results in *the acquisition of new knowledge*, which, in turn, fuels the comprehension process. Research of the late 1970s and early '80s consistently revealed a strong reciprocal relationship between prior knowledge and reading comprehension ability. The more one already knows, the more one comprehends; and the more one comprehends, the more one learns new knowledge to enable comprehension of an even greater and broader array of topics and texts.

The first part of this reciprocal relationship was the focus of much research of the last 15 years—developing methods for activating and adding to readers' knowledge base before reading to increase text understanding (Beck et al. 1982, Hansen and Pearson 1983). More recently, researchers have emphasized the second part of the relationship: the role that actual text reading plays in building knowledge. For example, increases in vocabulary and concept knowledge from reading silently (Nagy et al. 1987, Stallman 1991) and from being read to (Elley 1989) have been documented. Further, the positive statistical relationship between amount of time spent reading and reading comprehension (Anderson et al. 1988) may be largely attributable to the knowledge base that grows through text reading.

Recent research has debunked the misconception that only already-able readers can benefit from time spent in actual text reading, while less able readers should spend time on isolated skills instruction and workbook practice (Anderson et al. 1988, Leinhardt et al. 1981). A newer, more compelling argument is that the differing amounts of time teachers give students to read texts accounts for the widening gaps between more able and less able readers throughout the school grades (Allington 1983b, Stanovich 1986).

How much time should be devoted to actual text reading? At present research offers no answers, but we recommend that, of the time set aside for reading instruction, students should have more time to read than the combined total allocated for *learning* about reading and *talking or writing* about what has been read.

Getting the Most Out of Reading Time

The equivocal results of sustained silent reading programs throughout the years (Manning and Manning 1984) suggest, though, that simply allocating time is not enough. Teachers can increase the likelihood that more time for contextual reading will translate into improved comprehension skills in the following ways.

1. *Choice*. Teachers can give children opportunities and guidance in making text selections. Although we know of no research that directly links choice to reading comprehension growth, we speculate that choice is related to interest and motivation, both of which are related directly to learning (Anderson et al. 1987).
2. *Optimal difficulty*. Teachers can monitor students' and their own selections to ensure that all students spend most of their time reading books that are appropriate in difficulty—not so hard that a student's cognitive resources are occupied with just figuring out how to pronounce the words and not so easy that nothing new is likely to be learned.
3. *Multiple readings*. Teachers can honor and encourage rereading of texts, which research suggests leads to greater fluency and comprehension (Allington 1983a). Although most research about repeated reading of passages has focused on improvements in reading speed, accuracy, phrasing, and intonation, a growing number of studies have documented improved comprehension as well (Dowhower 1987).
4. *Negotiating meaning socially*. "Silent" reading time shouldn't be entirely silent. Teachers can (a) allow part of the time for reading in pairs, including pairs of different abilities and ages (Koskinen and Blum 1986, Labbo and Teale 1990); and (b) provide regular opportunities for readers to discuss their reading with the teacher and with one another. We view reading comprehension as a social as well as a cognitive process. Conversation not only raises the status of independent silent reading from a time filler to an important part of the reading program; it also gives students another opportunity to practice and build comprehension skills collaboratively, a topic to which we return below. Atwell (1987) and Hansen (1987) further argue that these conversations help to build the all-important community of readers that is the essence of literature-based programs.

Teacher-Directed Instruction

Research from the 1980s indicated that in traditional reading classrooms, time for comprehension instruction was as rare as time for actual text reading. After extensive observations in intermediate-grade classrooms, Durkin (1978–1979) concluded that teachers were spending very little time on actual comprehension instruction. Although they gave many workbook assignments and asked many questions about text content, Durkin judged that these exercises mostly tested students' understanding instead of teaching them how to comprehend.

In response to Durkin's findings, much research in the 1980s was devoted to discovering how to teach comprehension strategies directly. In the typical study of this type, readers were directly taught how to perform a strategy that skilled readers used during reading. Then, their abilities both in strategy use and text comprehension were compared either to their own performance before instruction or to the performance of similar readers who were not taught the strategy directly. *Explicit instruction*, the name given to one such widely researched model, involves four phases: teacher modeling and explanation of a strategy, guided practice during which teachers gradually give students more responsibility for task completion, independent practice accompanied by feedback, and application of the strategy in real reading situations

(Pearson and Dole 1987).

In one of the biggest success stories of the time period, research showed repeatedly that comprehension can in fact be taught. Many strategies have been taught successfully:

- using background knowledge to make inferences (Hansen and Pearson 1983) or set purposes (Ogle 1986);
- getting the main idea (Baumann 1984);
- identifying the sources of information needed to answer a question (Raphael and Pearson 1985); and
- using the typical structure of stories (Fitzgerald and Spiegel 1983) or expository texts (Armbruster et al. 1987) to help students understand what they are reading.

One of the most exciting results of this body of research was that comprehension strategy instruction is especially effective for students who began the study as poor comprehenders—probably because they are less likely to invent effective strategies on their own. In some studies, less able readers who had been taught a comprehension strategy were indistinguishable from more able readers who had not been taught the strategy directly.

After more than a decade of research and criticism from both sides of the controversy about comprehension strategy instruction, we have a much clearer understanding of what quality instruction looks like and how to make it part of a larger comprehension instructional program.

Authenticity of strategies. First, the strategies students are taught should be as much as possible like the ones actual readers use when they comprehend successfully. To meet this criterion of authentic use, instruction should focus on the flexible application of the strategy rather than a rigid sequence of steps. It should also externalize the thinking processes of skilled readers—not create artificial processes that apply only to contrived instructional or assessment situations.

Demonstration. Teachers should also demonstrate how to apply each strategy successfully—what it is, how it is carried out, and when and why it should be used (Duffy et al. 1988, Paris et al. 1991). Instead of just talking about a strategy, teachers need to illustrate the processes they use by thinking aloud, or modeling mental processes, while they read.

Guided practice. A phase in which teachers and students practice the strategy together is critical to strategy learning, especially for less-successful comprehenders. During this time teachers can give feedback about students' attempts and gradually give students more and more responsibility for performing the strategy and evaluating their own performance (Pearson and Dole 1987). This is also the time when students can hear about one another's reasoning processes—another activity especially important for less strategic readers.

Authenticity of texts. Finally, students must be taught, reminded, and given time to practice comprehension strategies while reading everyday texts—not just specially constructed materials or short workbook passages. We would like to see real texts used more and earlier in comprehension strategy instruction. Using real texts, we believe, will increase the likelihood

that students will transfer the use of taught strategies to their independent reading—and that, after all, is the ultimate goal of instruction.

Opportunities for Peer and Collaborative Learning

We are becoming more and more aware of the social aspects of instruction and their influence on cognitive outcomes. In addition to equity and the sense of community fostered through peer and collaborative learning, students gain access to one another's thinking processes.

Perhaps the most widely researched peer learning model is *cooperative learning*. This approach has been examined in a variety of academic disciplines (Johnson and Johnson 1985, Slavin 1987)—with the focus in a few cases on literacy learning, including comprehension (Melothe 1991, Stevens et al. 1987). A synthesis of this research suggests that cooperative learning is most effective when students clearly understand the teacher's goals, when goals are group-oriented and the criterion of success is satisfactory learning by each group member, when students are expected and taught to explain things to one another instead of just providing answers, and when group activities supplement rather than supplant teacher-directed instruction. At its best, cooperative learning has positive social and cognitive benefits for students of all abilities.

Other models of peer teaching also have been investigated—for example, *reciprocal teaching*. In this model, students take turns leading dialogues that involve summarizing, asking an important question about what was read, predicting information, and attempting to clarify confusions. Reciprocal teaching is effective when students, not just teachers, teach their peers to engage in these dialogues (Palincsar et al. 1987).

Time to Talk About Reading

Some form of discussion or explication of a text has been a feature of reading classrooms for years, but traditional teacher-student discussions have been consistently criticized because they emphasize teacher control and learning a single interpretation. Critics have tended to advocate student-centered discussions that honor multiple interpretations. Cazden (1986) and many others noted a universal format of traditional teacher-student discussions, called the IRE format. The teacher *initiates* a question, a student *responds*, and the teacher *evaluates* the response before moving to another question.

Recently, various forms of teacher-student discussions have been geared toward achieving the following three goals.

1. *Changing teacher-student interaction patterns*. In the traditional recitation format, teachers choose the topics and, through feedback to students, control which student answers are viewed as correct and incorrect. One outcome of the recitation format is that teachers talk a lot! Typically, teachers talk as much as or more than all students combined, because their questions and feedback focus on transmitting the text interpretation they have in mind and because of the monitoring function that teachers naturally perform when they are in charge of a discussion. Tharp and Gallimore (1989) use the terms *responsive teaching* and *instructional*

conversations to contrast effective teacher-student dialogues with such recitations. In responsive teaching, teachers plan instruction by anticipating a range of student responses in addition to thinking about their own interpretations. They then use student input into discussions and student text interpretations to move the discussion to higher levels. Teachers might still nominate topics and opinions for group consideration, but student input drives the discussion forward.

Changing the pattern of classroom discussions to allow more student input and control is no easy task. Alvermann and Hayes (1989), for example, found that it was much easier for teachers to change the *level* of questions they asked (for example, move to more inferential, evaluative, and critical thinking questions) than it was for them to change the basic *structure* or pattern of interactions in classroom discussions. Teachers suggested two main reasons for the persistence of the recitation format in their classrooms: maintaining control and ensuring coverage of important information and canonical interpretations.

2. *Accepting personal interpretations and reactions.* A broader definition of comprehension, one that includes the possibility of multiple interpretations and the importance of readers' responses to their reading, is behind many of the changes proposed for discussions in recent years. This respect for individual response and interpretation has been nurtured by the growth in popularity of the response to literature tradition (Beach and Hynds 1991). In particular, Rosenblatt's (1978) distinction between *efferent reading*—that from which a reader gets information or basic meaning—and *aesthetic reading*—the actual lived-through experience of reading and responding personally to a text—has allowed us to treat reading experiences differentially. Recently, the process of allowing students to build, express, and defend their own interpretations has become a *re* valued goal of text discussions.

Eeds and her colleagues use the term *grand conversations* to describe literature discussions in which the teacher's role is to be a coequal in the discussion, instead of the leader of a *gentle inquisition* (Eeds and Wells 1989, Peterson and Eeds 1990). In this role, the teacher can capitalize on teachable moments, help clarify confusions, keep track of students' ideas, and suggest ideas for consideration without insisting on a unitary interpretation of the text.

A typical concern about such discussions is that students might spend a lot of time talking about personal reactions but come away from the discussion not really "understanding" what they have read or not having taken the opportunity to discuss important text features. In analyses of such discussions of literary texts, however, Eeds and Wells (1989) and others (Raphael et al. 1992, Rogers 1991) have found that students engage in a variety of activities important to understanding:

- using the whole range of responses, from literal to critical and evaluative;
- clarifying the basic meaning of the text when there are confusions or disagreements; and
- using the opinions of others—including classmates, teacher, and published critics—

to help clarify their thinking about a text.

In some of these studies, writing also has been an important avenue for students to understand text: (a) by documenting their independent thinking before group discussion and, (b) by synthesizing information and figuring out how their thinking has changed after discussion.

3. *Embedding strategy instruction in text reading.* Even in teacher-student discussions focused around a shared understanding of important text information, new ideas are emerging about how to build this shared understanding in a way that will teach students something about comprehension as well as text information. For example, in *situated cognition* (Brown et al. 1989), learning about comprehension strategies is embedded in discussions about texts. The cognitive activities students engage in are much like the ones that have been the focus of research about explicit instruction in comprehension strategies, such as summarizing and getting the main idea. The difference is that the focus is on learning authentic information in the texts—for example, discovering how photosynthesis works by reading a chapter about it—with comprehension strategy learning as a secondary outcome of repeated engagement in such discussions about many different texts. The belief is that students will internalize effective comprehension strategies through repeated situations in which they read and discuss whole texts with a teacher and peers.

A Call for Multiple Approaches

When we teach courses about reading instruction for preservice and inservice teachers, we sometimes hear the complaint that researchers seem to pit approaches against one another instead of exploring how a particular innovation might operate as part of a total program. This is a legitimate concern, because if innovations are viewed as dichotomous, children may end up with instruction that is deficient in some areas.

Anything less than a well-rounded instructional program is a form of discrimination against children who have difficulty with reading. Delpit (1988), for example, asserts that children from nonmainstream backgrounds deserve to be taught directly what their mainstream teachers want them to do in order to read and comprehend texts. Slavin (1987) contends that an important outcome of cooperative learning is that it eliminates the segregation along racial and socioeconomic lines that often accompanies ability grouping. And Stanovich (1986) argues that if less able readers continually are denied opportunities to read actual texts, they will inevitably fall further and further behind—the rich will get richer and the poor will get poorer. Clearly, then, multiple approaches to comprehension improvement are in order. To use the recent language of the standards debate, a full portfolio of teacher strategies designed to promote a full portfolio of student strategies could be construed as essential in meeting opportunity-to-learn standards.

We see no reason why all four of the components described here—ample time for actual text reading, teacher-directed comprehension strategy instruction, opportunities for peer and

collaborative learning, and time to talk about what has been read—should not complement one another in the same classroom. Nor do we see why the appropriateness of any component would depend on whether the primary reading material is children's literature or basal readers. We do believe, however, that if our ultimate goal is to develop independent, motivated comprehenders who choose to read, then a substantial part of children's reading instructional time each day must be devoted to self-selected materials that are within the students' reach. It is through such reading that children can experience the successful comprehension, learning, independence, and interest that will motivate future reading.

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