Teaching Reading in the Content Areas

If Not Me, Then Who?

Teacher's Manual
2nd Edition

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Teaching Reading in the Content Areas:

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The McREL Institute delivers training and consultation on *Teaching Reading in the Content Areas: If Not Me, Then Who?* to teachers, reading specialists, staff developers, and administrators. The Teachers Workshop, designed for upper elementary, middle school, and high school educators, provides an overview of content area reading instruction; engages participants in applying vocabulary, reading, and discussion strategies to specific content covered in their classrooms; and offers practical suggestions on integrating these strategies into existing curricula.

The Training-of-Trainers Workshop is designed for teachers who have a background in reading or who have completed the Teachers Workshop. Participants delve more deeply into critical conceptual ideas underlying the teaching of content area reading skills; receive guidelines for facilitating adult learning; discuss training issues, questions, and concerns; share and critique training plans for teaching content area reading strategies; and discuss school-wide implementation planning.

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Acknowledgements

Over the years, the authors have attended a number of workshops and received handouts that only occasionally identify the original source. Whenever possible, we have tried to acknowledge the author; if we have inadvertently included an individual's work without giving credit, please contact McREL and we will rectify this error in the next edition. Both the authors and McREL staff have used these ideas with educators in workshops, and the feedback from participants has enhanced the form in which they are presented here.

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Teaching Reading in the Content Areas:

If Not Me, Then Who?

> "Learning to read is critical to a child's overall well-being. If a youngster does not learn to read in a literacy-driven society, hope for a fulfilling, productive life diminishes."
>
> G. Reid Lyon,
> Chief of the Child Development and Behavior Branch of the
> National Institute of Child Health and Human Development

Rationale

"No, I don't read much; actually, I haven't read a book all summer. I guess the only thing I read is the sports page," commented my daughter's boyfriend. Knowing that Brian is valedictorian of the senior class, I asked him about the reading involved with his assignments in school. "Oh, I read what I need to in order to get by, but nothing more. I know I should read," he admitted, "but I just don't get into it."

Brian is not an atypical student. Many students admit they don't read very much— sometimes not even the required homework. In a long-term assessment of academic progress published in 1997, the National Assessment of Educational Progress (NAEP) found that nearly half of the 9-, 13-, and 17-year-old students they surveyed reported reading 10 pages or less each day, including pages read in school and for homework! The same report revealed, however, that 36 percent of the 9-year olds, 48 percent of the 13-year-olds and 39 percent of the 17-year-olds did find time to watch 3 to 5 hours of television per day (National Center for Education Statistics, 1997).

The fact that students don't read very much may not come as a surprise to classroom teachers; however, adults are not reading, either. Some aren't reading because they lack reading skills. An alarming percentage of our adult population—from 15 to 30 percent—have such poor reading skills that they have difficulty reading common print material: news articles, report cards, coupons, recipes, even the directions on prescription medicine bottles (Stedman and Kaestle, 1991; cf., Barton, 1997).

Others who can read are simply choosing not to do so. According to Dr. Bernice Cullinan of New York University, approximately 80 percent of the books in this

country are read by about 10 percent of the people (Cullinan, 1987). Weekday and Sunday newspaper readership has declined in the past several decades, suggesting that people are choosing to get their news from nonprint media.

Of major concern is that many of our preservice teachers actually dislike reading and avoid it whenever possible. A study conducted by two Kent State University education professors found that students enrolled in children's literature courses entered with a very negative attitude toward reading in general and, more specifically, toward literature. In fact, more than one-quarter potential teachers acknowledged a "lifelong discomfort with print," and many admitted that they made it through literature courses primarily by relying on Cliff Notes, book jackets, or anything that would allow them to get by (Mann and Misheff, 1987). The evidence seems clear; people aren't choosing to read, and if they must read for work or school, they don't enjoy it. And yet, people become good readers only by reading a lot!

The difficulties students have with school reading assignments are caused by a variety of skill-related issues. Many students have trouble understanding an author's ideas because they haven't learned how to mentally organize those ideas as they read. Or, they have not had much experience with the topic and don't know how to make meaningful and personal connections to new ideas while reading. Many simply label the assignment as "too hard" or "boring" because they lack effective reading and self-regulation skills needed to persevere and succeed.

Because students often resist classroom reading assignments, teachers may at times lose confidence in using the textbook. Rather than struggle with unmotivated students, a teacher may resort to telling the class what they need to know rather than have them read it. Or, teachers may rely on other media to provide the instruction, even though they are aware that significant portions of the curriculum need to be print-based, and that students need to develop and practice effective reading skills in order to survive in a society that is calling for even higher literacy standards.

Content area teachers know that reading is a complex process, and they often struggle with the following questions:

- What are the specific skills or knowledge that students need in order to read effectively?

- What learning environment promotes effective reading and learning?

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- What strategies might I use with my students that will help them become more effective readers and independent learners?

The information in this manual is designed to help teachers answer these questions.

This manual is intended to be a resource to assist teachers in expanding and refining their repertoire of teaching strategies. It can also serve as a guide for instructional planning and decision making when teaching reading in the content areas. It is not intended to prescribe a particular style of teaching – one "best" method or model. Rather, it is meant to be a resource for teachers as they consider their curriculum objectives, the nature and needs of their students, and their personal teaching styles.

There are many aspects to consider when teaching reading in the content areas. As educators, we need to understand the big picture about learning, the premises that guide the teaching of reading in content areas, the vast array of reading strategies available, and then how to use this information to impact all learners. The following four major areas comprise the contents of this publication:

1. We examine the **three interactive elements** of the reading process that influence comprehension: what the reader brings to the situation; the learning climate; and the characteristics of the written text, or the text features.

2. **Strategies:** We have compiled 40 popular teaching strategies that can be adapted for students from elementary through high school and that are appropriate for students in all content areas.

3. **Strategic teaching:** As a decision maker, the teacher must consciously plan for teaching reading in all content areas, and this section shares a framework for instructional planning.

4. **Six assumptions about learning:** The research on learning serves as the foundation for this publication, and so the critical implications for instruction are discussed. This section can serve as the introduction or as the conclusion to this publication. Big-picture thinkers may enjoy the information up front while other readers may want an understanding of the reading process and strategies first.

These four sections are presented graphically in Figure 1 on the next page.

Teaching Reading in the Content Areas:
If Not Me, Then Who?

Three Interactive Elements of Reading

Reader

Climate

Text Features

Vocabulary

Text Structure

Narrative

Informational

Strategies

Reflective Questioning

Reflective Conversation

Strategic Teaching

Discussion

Reflective Writing

Six Assumptions About Learning

Learning is:
1. Goal-oriented
2. The linking of new information to prior knowledge
3. The organization of information
4. The acquisition of cognitive and metacognitive structures
5. Nonlinear, yet occurring in phases
6. Influenced by cognitive development

Figure 1. **Model of Teaching Reading in the Content Areas**

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Section 1

Three Interactive Elements of Reading

> "Reading transcends the mere transmission of information: It fosters an imaginative dialogue between the text and the reader's mind that actually helps people to think."
>
> **Stratford P. Sherman**
> **Author of "America Won't Win Till It Reads More"**

Three Interactive Elements of Reading

Reader · Climate · Text Features
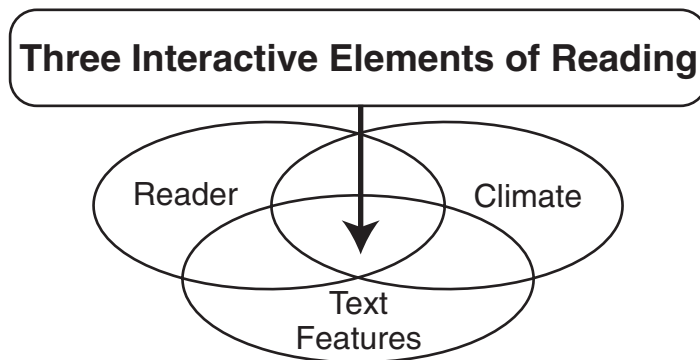
Introduction

At its most basic, teaching reading in the content areas is helping learners to make connections between what they already know and "new" information presented in the text. As students make these connections, they create meaning; they comprehend what they are reading. Teaching reading in the content areas, therefore, is not so much about teaching students basic reading skills as it is about teaching students how to use reading as a tool for thinking and learning. Until recently, learning was thought to be a passive activity: teachers poured their knowledge into the receptive minds of students. Reading was thought to be passive as well. The words of the text contained meaning; reading simply entailed decoding the words on the page. Recent research indicates, however, that learning and reading are active processes. Readers construct meaning as they read. Effective readers are strategic. They make predictions, organize information, and interact with the text. They evaluate the ideas they are reading about in light of what they already know. They monitor their comprehension, and know when

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and how to modify their reading behaviors when they have problems understanding what they read. (See Figure 2).

	Traditional Views	**New Definition of Reading**
Research Base	Behaviorism	Cognitive sciences
Goals of Reading	Mastery of isolated facts and skills	Constructing meaning and self-regulated learning
Reading as Process	Mechanically decoding words; memorizing by rote	An interaction among the reader, the text, and the context
Learner Role/Metaphor	Passive; vessel receiving knowledge from external sources	Active; strategic reader, effective strategy user, cognitive apprentice

<u>Figure 2.</u> **Historical view of reading**

Three elements working interactively determine the meaning a reader constructs from a text. They are the **reader,** and what she brings to the situation; the learning **climate,** or the environment in which the reading occurs; and the **text features,** or specific characteristics of the written text. To fully understand how these three elements affect the reading process, a short summary of the findings from cognitive science is helpful.

Research from cognitive science identifies five premises that are basic to the teaching of content area reading skills:

1. The meaning of a text is not contained in the words on the page. Instead, the reader **constructs** meaning by making what she thinks is a logical, sensible connection between the new information she reads and what she already knows about the topic. Researchers believe that what we know is stored in knowledge frameworks called "schemata." Learners draw on these schemata to make inferences and predictions, organize and reflect on new information, and elaborate on it (Vacca and Vacca, 1993). When learners are confronted with "new" information, they try to make sense of it by seeing how it fits with what they already know. In other words, they try to match this new information with existing schema (singular of

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schemata) so that it can be understood. To illustrate, read the paragraph below and fill in the missing words:

The questions that p_____ face as they raise ch_____ from in_____ to adult life are not easy to an_____. Both fa_____ and m_____ can become concerned when health problems such as co_____ arise any time after the e_____ stage to later life. Experts recommend that young ch_____ should have plenty of s_____ and nutritious food for healthy growth. B_____ and g_____ should not share the same b_____ or even sleep in the same r_____. They may be afraid of the d_____.

How did you do? (Check your answers on page 4.)

This passage illustrates that deriving meaning is not simply a matter of reading the words on the page. In order to comprehend, the reader selects a schema that seems appropriate and connects it with the new information, filling in any gaps so that the text makes sense. Because no two students bring the same background and experience to class, no two students will comprehend a text passage in the same way.

2. Closely related to schema theory is the role **prior knowledge** plays in learning. According to Vacca and Vacca (1993), "the single most important variable in learning with texts is a reader's prior knowledge" (p.13). Research (Anthony and Raphael, 1989) and common sense tell us that the more a reader brings to the text in terms of knowledge and skills, the more he will learn and remember from what he reads.

> **"The meaning of things lies not in the things themselves but in our attitude toward them."**
>
> **Saint-Exupéry,**
> *The Wisdom of the Sands (1948)*

3. How well a reader comprehends a text is also dependent on **metacognition:** his ability to think about and to control his thinking process before, during, and after reading. Students who have learned metacognitive skills can plan and monitor their comprehension, adapting and modifying their reading accordingly. Ineffective readers often are unaware that there is anything they should be doing while reading except moving

their eyes across the page. They have never been taught that they should think about what they are reading, create mental pictures, and ask questions (e.g., "Do I understand this? What do I need to do to fix things if I don't understand? Do I get the author's point? How does it fit with what I already know? What do I think the author will discuss next?") Low-achieving students, in particular, need to be taught how to monitor their understanding and to select and use appropriate "fix-up" strategies when needed (Pogrow, 1993; Caverly, Manderville and Nicholson, 1995).

4. Reading and writing are integrally related. Laflamme (1997) asserts that "reading and writing are two analogous and complementary processes" because both involve generating ideas, organizing them into a logical order, "drafting" them a number of times until they make sense, and then revising them as needed. The connection between reading and writing is also evident in research, which has shown that students who are taught how to write and edit different forms of expository text improve their comprehension of their content textbooks (Raphael, Kirschner and Englert, 1988).

5. Learning increases when students collaborate in the learning process. Quite simply, learning is a socially interactive process (Vygotsky, 1978). Students learn by interacting with others in the classroom, when they feel free to generate questions, and discuss their ideas freely with the teacher and one another. Dialogue can spark new ideas. Moreover, the process of verbalizing one's understanding of an idea or concept deepens understanding and also offers listeners an opportunity to compare their thinking to what is said. Finally, as students have opportunities to instruct one another, they assume more responsibility for their own learning and that of their fellow students.

These premises have implications not only for the learner but also for the content area teacher who wants to plan instruction that helps students improve their reading comprehension and learning.

Check Your Answers
The questions that poultrymen face as they raise chickens from incubation to adult life are not easy to answer. Both farmers and merchants can become concerned when health problems such as coccidiosis arise any time after the egg stage to later life. Experts recommend that young chicks should have plenty of sunshine and nutritious food for healthy growth. Banties and geese should not share the same barnyard or even sleep in the same roost. They may be afraid of the dark.

Adapted from Madeline Hunter

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Specifically, teachers can focus their planning around the interaction of these key elements:

1. The reader: what the reader brings to the learning experience.
2. The climate: the learning context or environment.
3. The text features: the characteristics of the written text.

Embedded within each of these elements are features that affect which strategies may be most effective for a particular reader at different times during the learning process. Therefore, we will examine each element separately and look at the implications each has for strategy selection and use.

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The Role of the Reader

Three Interactive Elements of Reading

Reader   Climate

Text
Features
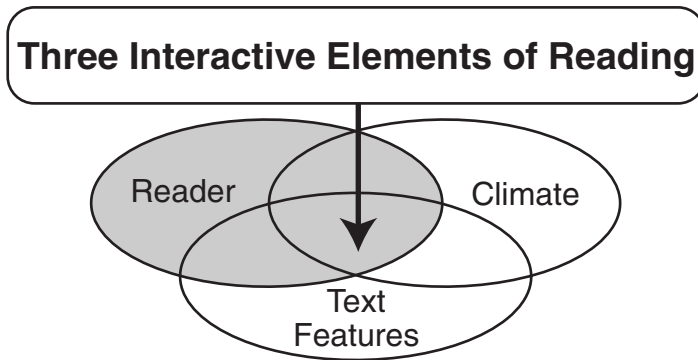
"No, I didn't finish reading the homework. It was way too hard. I mean, I have no clue about chromosomes, or whatever the chapter was about. How can you expect me to read the chapter if it doesn't make any sense?"

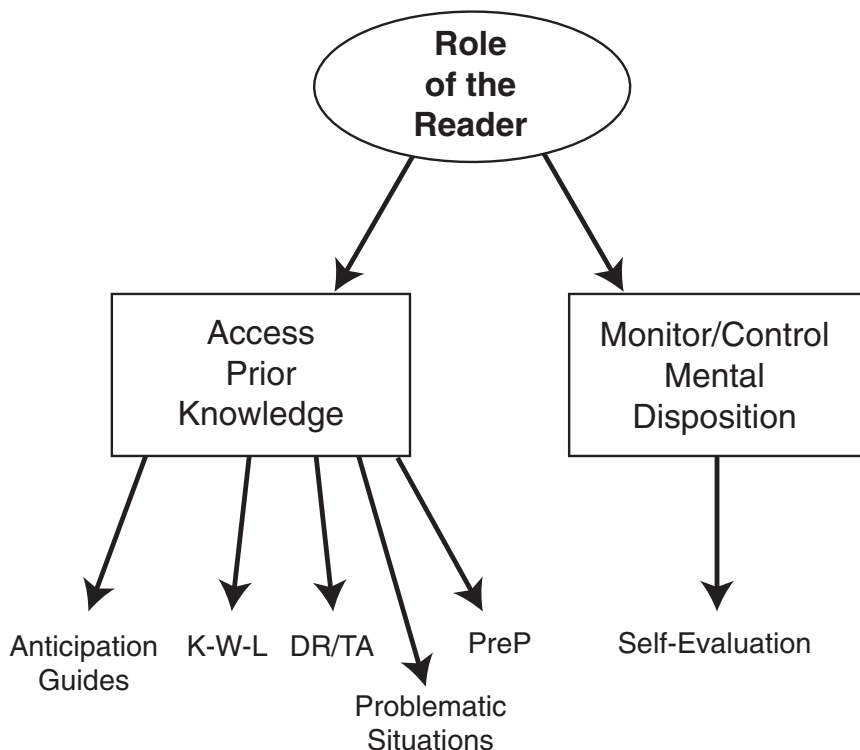*"'What did we read yesterday?' Well... uh... I think it was something about... Bosnia, no, wait... um... maybe it was Botswana? I don't know... it was about some foreign country that started with a B. Why do we have to know that stuff anyway? We'll never need it."*

"But I did read the story. I just don't remember it, that's all. I never do. I can read something three times and still not remember what I read."

Do these comments sound familiar? Students who struggle with reading often give up on reading and sometimes lose confidence in themselves as students. To them, reading comprehension is something of a mystery. They think that comprehension just happens, or ought to, if one can decode the words on the page. When they aren't successful at comprehending what they read, they blame the text, themselves, even their teacher. These students are unaware that comprehension requires more than simple decoding. They haven't been taught that readers have an active role to play while reading. Effective readers interact with the author of the text while they read, work to make sense of the text and how it aligns with what they already know, and apply strategies to stay on task.

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They have learned that comprehension is something that really "takes place behind the eyes" (Vacca and Vacca, p. 16).

Certainly the ability to decode a word is important; however, the reader's role extends beyond using basic reading skills to two key inner resources: (1) **prior knowledge** and (2) **mental disposition**, or the reader's affective response to reading content area text (Frager, 1993).

```
                    ┌─────────────┐
                    │   Role      │
                    │  of the     │
                    │   Reader    │
                    └─────────────┘
                   /               \
         ┌──────────────┐    ┌──────────────┐
         │   Access     │    │Monitor/Control│
         │   Prior      │    │   Mental     │
         │  Knowledge   │    │ Disposition  │
         └──────────────┘    └──────────────┘
```

Anticipation Guides   K-W-L   DR/TA   Problematic Situations   PreP   Self-Evaluation

Prior Knowledge

As noted earlier, prior knowledge is the content knowledge and personal experiences the reader brings to the learning task. Teachers know that students bring a wide range of background knowledge and experiences to class. The same class may contain students whose families are highly educated and encourage reading of all kinds, students whose experience of the world is limited to what they see on TV, and students for whom English is a second—or even a third—language. Faced with this mix of backgrounds, effective teachers help students prepare for reading as much as possible by incorporating prereading strategies that activate and assess learners'

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prior knowledge. Pulling forward that knowledge gives readers a structure on which to attach new learnings.

Teachers can help students to activate their prior knowledge in a variety of ways: brainstorming, asking questions, discussing the topic, and providing analogies. This manual contains five additional strategies teachers can use to help students recall what they know:

- K-W-L (What I Know, Want to Know, and Learned)
- DR/TA (Directed Reading/Thinking Activity)
- PreP (Prereading Plan)
- Anticipation Guides
- Problematic Situations

These can be found in the informational text strategies at the end of this manual.

Even before introducing these strategies, the teacher should consider discussing the benefits of strategy use. We know that students are more motivated to learn when they see the value in the learning. Consequently, it's helpful to point out that studies have been conducted on the benefits of strategy use; these have shown that all students can benefit from using reading strategies, especially those who have had trouble in the past with reading (Palincsar and Brown, 1984; cf. Barton, 1997).

Strategies that help readers "take out and dust off" prior knowledge before reading directly affect learning. Readers who have that information available can make more connections and learn more while they read. Those readers whose prior knowledge is accessible and well-developed remember more from their reading than readers whose prior knowledge of the topic is limited (Anthony and Raphael, 1989).

Using these prereading strategies in class benefits not just the students whose prior knowledge is well-developed, however.

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Students whose backgrounds are more limited can learn from their more experienced peers. In effect, the students teach one another as they engage in these strategies.

Incorporating strategies to access prior knowledge can yield useful information for teachers, as well. As students express what they already know, teachers can determine which students might need a more thorough grounding in a topic before reading. Additionally, these prereading strategies can reveal if the information students "know" is accurate. Studies show that readers who have misperceptions about a topic often overlook, misinterpret, or don't remember text information that disagrees with their background information, however incorrect that might be (Anderson and Smith, 1984; cf. Barton, 1997). Using prereading strategies can expose any misperceptions, and teachers can correct these before assigning text.

The ultimate goal of strategy instruction is independence. We want students to recognize which strategies work well for them, and we want them to practice those strategies to the point where they will use them naturally when reading on their own. Consequently, anything teachers can do to foster this independence is beneficial. For example, when explaining the impact that prior knowledge has on learning, teachers might also discuss with students how one's prior experience can influence his perceptions and judgment. Literature, history, current events, even television programs contain a wealth of illustrations, both comic and tragic, of how people's past experiences color the way they view the world. Students can reflect on times when their own background and experience caused them to misjudge another person, group, or situation. When students recognize that perceptions are not fact, and that schema can be revised as we learn new information, they also will see that they have the power to control what they think and what they learn.

Mental Disposition

A second component in the reader's role in comprehending text is his mental disposition, or affective response toward reading. The reader's mental disposition encompasses such things as:

- how motivated he is to do what is required;

- how confident he feels about his ability to succeed at reading;

- how interested he is in actively pursuing meaning while reading;

- how he feels about what he is reading; and

- how much new learning he wants to integrate into his current schema (Frager, 1993).

Our mental habits influence everything we do. For example, if a reader has a poor attitude toward reading because she thinks she reads poorly and can't understand unfamiliar text, chances are that this attitude will become a self-fulfilling prophecy: in continuing to maintain that attitude, she will approach difficult text reluctantly, give up easily if she meets any obstacles, and therefore, not understand what she was assigned to read.

Even skilled readers can encounter problems if they haven't developed effective mental habits. For example, an individual might possess knowledge and skill in reading fiction, but run into difficulty reading a computer manual. He may not be skilled at or enjoy reading technical material; in this case, he needs to apply the mental habits of maintaining an open mind, pushing the limits of his knowledge and abilities, and persevering.

These mental habits are referred to as "intelligent behaviors" (Costa, 1991), or "habits of mind" (Marzano, Pickering, Arredondo, Blackburn, Brandt, Moffett, Paynter, Pollack, and Whisler, 1997). Quite simply, these are life skills that can help learners not only in school but throughout their lives. Productive mental dispositions outlined by Marzano and Pickering et al. (1997), Costa (1991), Perkins (1993), and Paul (1990) include:

- being open-minded and flexible about ideas and solutions;

- being aware of your own thinking, behaviors, and feelings;

- being accurate and seeking accuracy;

- being clear and seeking clarity;

- being able to monitor and control your behavior, learning, and work;

- planning appropriately;

- responding appropriately to feedback;

- identifying and using necessary resources; and

- restraining impulsivity.

How can we help students acquire these habits? First, explain what these behaviors are and that they enhance learning; lower-achieving students may not realize that their attitude, mental habits, and frame of mind affect their learning, or that they have the power to regulate these feelings, attitudes, and behaviors. Second, provide clear examples for students: model productive habits of mind, discuss real world examples that appear in the news or other media, and reinforce their use in class. Learners who practice these behaviors become self-directed learners who are aware of their mental disposition, monitor it, and modify it as needed.

In summary, effective readers know that comprehension is not something that just happens. Readers have a role in the reading process. Ideal readers:

- understand that activating prior knowledge of the topic will help them understand and remember more of what they read;

- actively pursue meaning;

- interact with the text, asking questions like "What is this about? How does it fit with what I already know? What point is the author trying to make? How do I feel about what the author is saying?"

- monitor their attitude, and know how to modify their mental habits when difficulties arise.

The Role of Climate

Three Interactive Elements of Reading

Reader

Climate

Text
Features
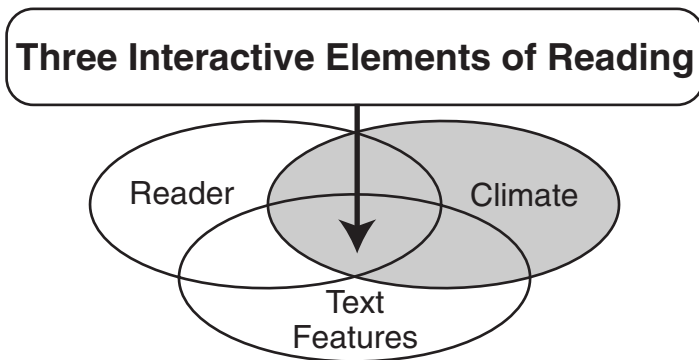
Picture the following scenario: you are returning from a conference on comprehensive school reform and have a binder full of conference material you need to read. You are expected to give a report to your superintendent summarizing the conference materials an hour after you land. You are nervous about air travel, and the captain has just announced that the turbulence you feel will be getting worse. Everyone is to remain in their seats for the duration of the flight, seatbelts tightly fastened. The young mother sitting next to you is trying vainly to soothe her 10-month-old baby, who is squalling and pulling at his ear; the woman apologizes for the noise, explaining that the baby has an ear infection.

How well would you be able to focus on reading?

This scenario illustrates the role that climate can play in reading comprehension. Clearly, the environment in which reading occurs influences learning. In this manual, we use the term *climate* to refer to physical conditions, such as temperature or noise level in the area, and also affective dimensions, such as how safe the reader feels, how competent, even how he feels about others around him.

While teachers have little control over the environment in which students do their homework, they are able to create an environment in their classrooms that enhances learning. Research suggests that students learn best in a pleasant, friendly climate where they

- feel accepted by their teachers and their peers;

- feel a sense of safety and order because academic expectations, instructions, and the purpose for assignments are clear;

- feel confident in their ability to complete tasks successfully; and

- see the value in the learning activities

(Marzano and Pickering et al., 1997; McCombs and Barton, 1998).

Acceptance

Teachers can create a climate of acceptance in a number of ways. Students report feeling accepted when their teachers listen to them and respect their opinions. Teachers communicate acceptance when they are interested not only in how students perform in class but also in their extracurricular activities. Calling students by their preferred name, making eye contact, planning varied activities that address different learning styles and that capitalize on individual differences, encouraging even the unassertive students to participate in class discussion—all of these help students feel like they matter.

Even a simple, sincere gesture can help students feel connected to their teacher and school. For instance, a Kansas middle school teacher reported she made a point of standing at the classroom door at the end of class every day. As each student left the room, she would either shake his hand or give him a "high five." She didn't realize the impact this had on her students until she was absent one day. When she returned, students complained that her substitute didn't follow her end-of-class routine. On a whim, the teacher subsequently made a photocopy of her hand and left it in her "sub" folder with instructions to tape it to the classroom door frame on days she was out of the building. Substitutes reported in some amazement that students would "high five" the hand print as they left the classroom.

Students are more receptive to learning if they feel accepted by their classmates as well as their teacher. Collaborative learning activities call for teamwork and can be an excellent means for students to

learn about one another's strengths, aptitudes, and personalities. Another strategy that teachers have said students respond well to is "home court advantage." Students are asked to view their classroom as a basketball court and class time as a home game. In this analogy, students are teammates working together to achieve a common goal: succeeding in class. Therefore, the classroom atmosphere should be just as supportive as that of a home court.

Safety and Order

Naturally, individuals need to feel safe from physical harm in order to be receptive to learning. Across the nation, teachers, administrators, and parents are working together to introduce and enforce school-wide procedures aimed at violence prevention. Students also need to feel a sense of emotional safety—that is, that they are safe from emotional abuse. Within their individual classrooms, teachers can create a healthy climate by making it clear that any form of put-down or abusive behavior will not be tolerated.

Often, students feel open to ridicule by their classmates when asking questions about class work they don't understand. A middle school math teacher in Colorado gave us the following solution: she reserves a large table in the classroom for students who need extra help during class. At the beginning of each school year, she explains to her classes that this table is "sacred," a place where anyone can join her and receive help without worrying about what other students might say. Students quickly learn to regard this space with respect, knowing that there will be times when they need to use it. The teacher reports that at times there may be several students with her at the table, and at other times there may only be one or two; however, all of her students treat with respect those classmates who elect to be there.

A sense of order is enhanced when teachers clearly articulate classroom rules and the purposes for each reading assignment. Students should know ahead of time what they will be doing with

the information they read in the text; for example, will they be taking a true-false quiz, writing a summary, collaborating with others on an extended performance activity, or participating in a discussion of the material? **How** one reads a text will vary, depending on whether her purpose is to learn specific facts, to acquire a general understanding of a concept, or to interpret and evaluate the author's message. Ineffective readers do not differentiate among reading assignments. They read all textbooks in the same fashion. It is important that students learn that a reader's purpose determines which strategies he employs, the pace at which he reads, the type of mental questions he asks and answers while reading, how he monitors his comprehension, and so on.

Competence and Value

Students are more likely to learn when they feel capable of succeeding and when they see the relevance of the learning activities. Teachers can engender feelings of competence by:

- helping students develop confidence in their ability to access prior knowledge;

- filling in any gaps in necessary background knowledge prior to assigning reading;

- showing students how to "chunk up" assigned work into manageable pieces;

- acknowledging small successes as well as large ones;

- encouraging risk-taking in answering questions about what they have read; and

- validating responses, giving credit for correct aspects of an incorrect response.

Lastly, students need to see value in what they are asked to do. Although content area teachers are fascinated by their subject area, their students may not share that excitement, yet. Enthusiasm can be contagious. Explanations about what students will gain from learning content material also help to increase motivation.

The Role of Text Features

Three Interactive Elements of Reading

Reader   Climate
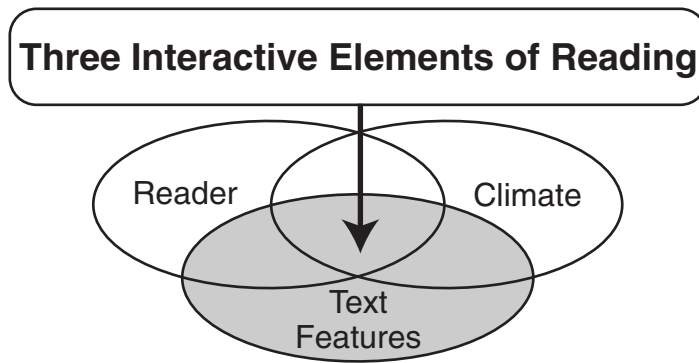
Text
Features

Just as facial features distinguish one person from another, text features are those aspects of a page of text that differentiate it from others. Text features not only make printed pages unique; they can also significantly affect comprehension. For example,

- A page of printed instructions describing how to assemble a child's bicycle is much easier to comprehend if those instructions are accompanied by detailed diagrams.

- Research articles in scholarly medical journals can be confusing to the average layperson because they contain technical terminology.

- A novel that jumps from one time frame to another and then back again is harder to follow than one written chronologically.

These examples illustrate three types of text features that affect comprehension. Wise teachers consider these when they plan instruction. Specifically, we are referring to

- **Reader aids:** any pictorial, typographical, graphic, and structural representations whose purpose is to convey information;

- **Vocabulary:** terminology the author uses to express ideas and concepts; and

- **Text structure:** the organizational pattern the author employs to express his ideas.

Text features vary from one content area to another. For instance, mathematics texts require students to use subject-specific reading skills, such decoding symbols in an equation. In fact, learning "to communicate mathematically" is one of the five general student goals identified by the National Council of Teachers of Mathematics.

Reading skills students need to employ can vary even within a subject area. For example, many students find that reading authors like Melville, Hawthorne, and Conrad is "slow going" because they aren't accustomed to the sentence structure and vocabulary used.

Miller (1997) notes that science and social studies textbooks selected for a grade level are often above the reading level of many students in that grade. Similarly, an examination of math textbooks reveals that even though the mathematical concepts may be grade-level appropriate, the reading level can be one, two, even three years too advanced for the students for whom the books are written (Braselton and Decker, 1994).

In order to anticipate problems that students may have with unique text features, teachers need to take a figurative step back from their subject area during their planning, and look through text material they plan to assign as if they were students rather than content area experts. Next, they need to determine how to help students learn the reading skills they will need to comprehend their content area assignments.

Reader Aids

Learning to be aware of features like bold print, headings, italics, bulleted material, and pictures can help students become more effective readers. Strategies such as Reciprocal Teaching (p. 128) and Survey, Question, Read, Recite, Review (SQ3R, p. 130) require that students notice and work with text features before reading. Previewing text passages for reader aids can give the reader clues about concepts that are important and require attention. It can also

provide her with a mental framework to use for organizing ideas as she reads, which aids retention and recall.

Two other types of text features that impact comprehension, vocabulary and text structure, will be examined in detail in the pages that follow.

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Section 5

Reading Strategies

Strategies for the Three Phases of Cognitive Processing		Preactive Preparation Before Reading	Interactive Assistance During Reading	Reflective Reflection After Reading
Vocabulary Development	**Page Number**			
1 Concept Definition Mapping	70	x	x	x
2 Frayer Model	74	x	x	x
3 Prereading Predictions	78	x		
4 Semantic Feature Analysis	79	x	x	x
5 Semantic Mapping	82	x	x	x
6 Stephens Vocabulary Elaboration Strategy (SVES)	85		x	x
7 Student VOC Strategy	87	x	x	
8 Word Sorts	89	x	x	x
Narrative Text				
9 Character Map	90		x	x
10 Directed Reading/Thinking Activity (DR/TA)	92	x	x	x
11 Probable Passages	93	x		
12 Story Frame	95			x
13 Story Grammar/Maps	97		x	x
14 Story Mapping through Circular Pictures	100		x	x
15 Venn Diagram	102	x	x	x
Informational Text				
16 Anticipation Guide/Prediction Guide	104	x	x	
17 Directed Reading/Thinking Activity (DR/TA)	107	x	x	x
18 Graphic Organizers	109	x	x	x
19 Group Summarizing	112			x
20 Informational Paragraph Frames	114	x		x
21 K-W-L—What I Know; Want to Learn; Learned	116	x		x
22 Pairs Read	119		x	
23 Prereading Plan (PreP)	121	x		
24 Problematic Situations	122	x		
25 Proposition/Support Outlines	124		x	x
26 Reciprocal Teaching	128	x	x	x
27 SQ3R (Survey, Question, Read, Recite, Review)	130	x	x	x
28 Search Strategy	132		x	
29 Semantic Mapping	134	x	x	x
30 Sensory Imagery	136		x	
31 Structured Note-taking	137	x	x	x
32 "Think-alouds"	139		x	
Reflection Strategies (Questioning; Writing; Discussion)				
33 Concept Question Chain	142			x
34 QAR—Question-Answer Relationships	145			x
35 Learning Logs	148	x	x	x
36 RAFT—Role/Audience/Format/Topic	151			x
37 Writing-to-Learn	154	x	x	x
38 Creative Debate	158			x
39 Discussion Web	160			x
40 Scored Discussion	163			x

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Vocabulary Development

8. Word Sorts

What is it?

Word sorts (Gillett & Temple, 1983) help students recognize the semantic relationships among key concepts. Students are asked to sort vocabulary terms into different categories. The strategy can be used in two different ways. In a "closed sort," the teacher provides the categories into which students are to assign the words. In an "open sort," students group words into categories and identify their own labels for each category. Word sorts help students develop a deeper understanding of key concepts, and also are an excellent method of teaching the complex reasoning skills of classification and deduction.

How to use it:

1. Students copy vocabulary terms onto 3"x 5" cards, one word per card.

2. Individually or in groups, students then sort the words into categories. With younger students or complex concepts, the teacher should provide students with the categories and have students complete a "closed sort."

3. As students become more proficient at classifying, teachers should ask them to complete "open sorts"; that is, students sort words into labeled categories of their own making. At this stage, students should be encouraged to find more than one way to classify the vocabulary terms. Classifying and then reclassifying helps students extend and refine their understanding of the concepts studied.
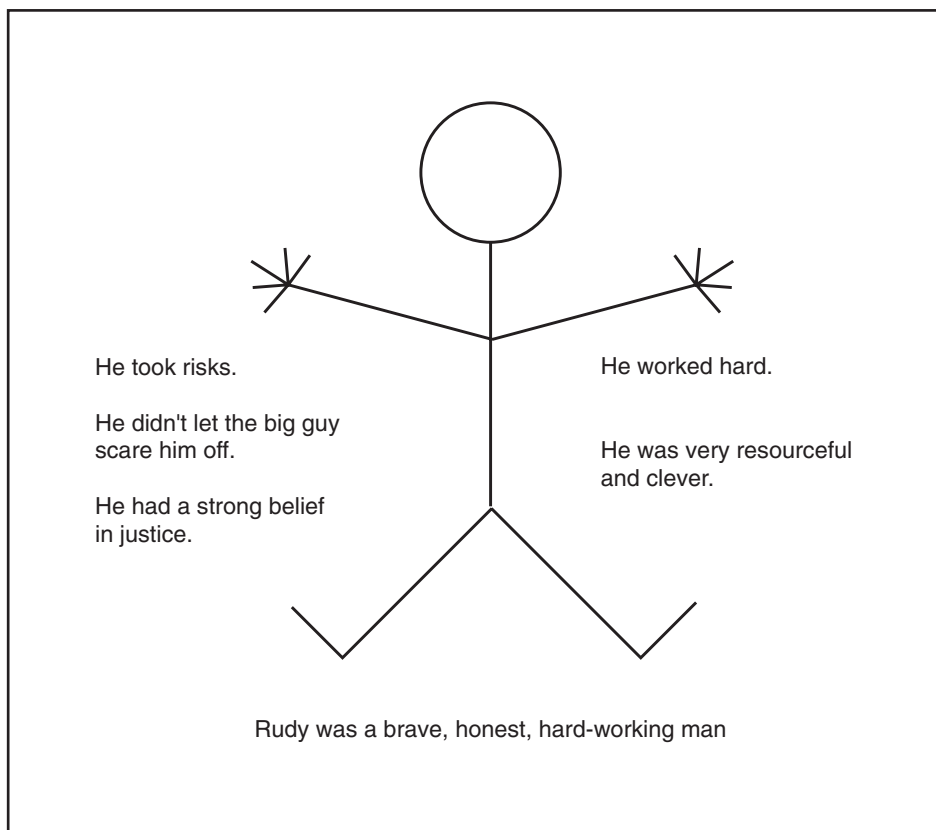
9. Character Map

What is it?

One good way to better understand the characters in a story is to make a character map. The visual image created by such a drawing enhances understanding and promotes retention.

How to use it:

1. Read the story.

2. Draw a simple picture of the character of interest.

3. Near the picture, make four or five lines for writing what the character does or say.

4. Make a long line beneath the picture for writing a sentence that tells what kinds of person the character is.
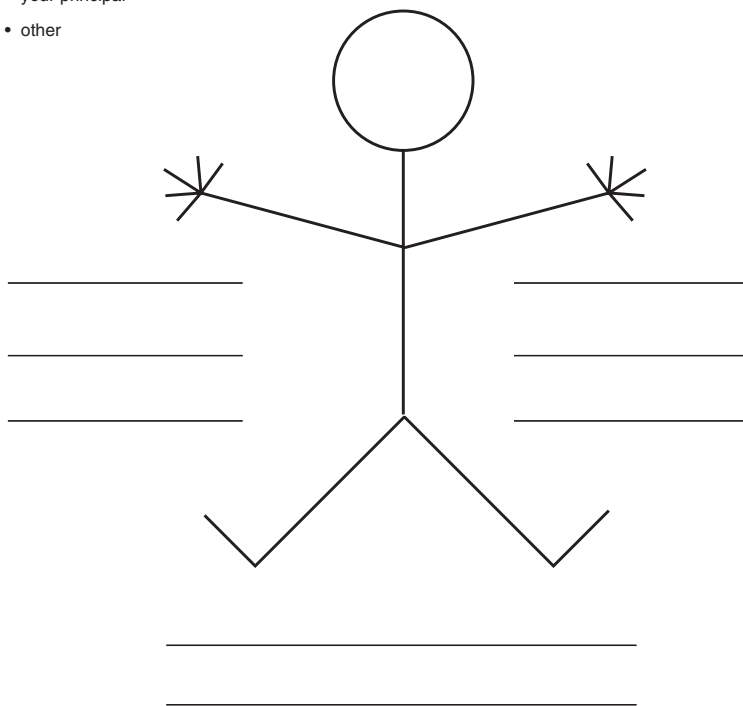
Examples of Visual Representations: **Character Maps**

He took risks.

He didn't let the big guy scare him off.

He had a strong belief in justice.

He worked hard.

He was very resourceful and clever.

Rudy was a brave, honest, hard-working man

Character Map

Now it's your turn!

Practice making a character map of

- a friend
- a loved one
- your principal
- other

Informational Text

30. Sensory Imagery

What is it?

Comprehension, recall, and retention can be enhanced through sensory imaging while reading.

Imagining what something looks like, smells like, feels like, even tastes like can become a hook to connect new information to prior knowledge. Many younger children are adept at imaging, judging from their fantasy play. Transferring this skill to content area reading can stimulate interest in reading and learning.

How to use it:

1. Select a text passage that contains sensory details (e.g., a sheep shearing).

2. As students follow along in their texts, read the passage aloud. At appropriate points, stop and ask students to imagine the scene: "The text describes a farmer shearing his sheep. Have you ever seen a sheep up close, maybe on a farm or on TV? What did its coat look like? What color was it?" Allow some time for students to share their experiences. Continue to prompt them to visualize the scene. "What does the book say about how the sheep behaves during the shearing?"; "What sounds do you think they'd make?"; "Has anyone here ever smelled a farm that has sheep? Can you describe that smell? Just thinking of it makes my nose wrinkle!"

3. Select another vivid passage for the class to read aloud. This time have students volunteer their images.

4. Ask students what they discovered about using their imagination while reading. Periodically revisit this strategy to reinforce its use during independent reading.

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Reflection Strategies

35. Learning Logs

What is it?

One of the most effective means of writing-to-learn is keeping a learning log. Learning logs foster reflection on either text content or on students' reading and learning processes. Learning logs differ from journals in that they focus on content covered in class, not students' personal and private feelings. Students may reflect on how they feel, but it is always in relation to what is being studied in class.

How to use it:

1. Select the concept or process you want students to explore.

2. A learning log entry can be assigned at any time during class, depending upon the topic and your purpose. For example, you would assign the following topic in the middle of a reading assignment in class: Based upon what you have read thus far, explain whether your initial predictions about the story/passage were correct.

3. Assign the topic, and give students three to five minutes "think time" to consider their response.

4. Have students write for five minutes on the learning log topic.

5. You might have students reread their learning log entries at a later date and reflect on how their ideas have changed.

Possible learning log topics:

*   Explain which prereading strategy we learned has made the most difference in your reading comprehension, and why.

*   Which "fix-up" strategies do you use most often when you read? Explain how they have helped your comprehension.

*   Advise a younger brother, sister, or friend on ways to stay focused when reading at home.

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Reflection Strategies

- Which of the textbooks you are using this year is the most difficult for you to understand? Analyze what it is about that particular text that makes it hard to comprehend.

- Which story or text passage we read during this unit have you found the most interesting? Explain your answer.

- One topic we have studied during this unit is _____. Why do you think this topic has been included as part of this course?

- Write about the importance of _____ (an idea or concept students have read about) to the world in general, and to you in particular.

- Write about an idea or concept in the text that confuses you. What is it that you find particularly hard to understand? What could you do to gain a better understanding of this idea or concept?

- Summarize the text material we read in class today. Explain how it relates to or reminds you of information or skills you have learned elsewhere.

- Write a letter to the editor of the school paper in which you argue for or against a controversial issue we are studying or have studied this year.

- Write about an upcoming test or quiz. List the questions that you think might be asked, and develop answers for each.

- Consider how your opinions have changed as a result of what we have studied during this unit. How have class discussion, reading, or class activities influenced the way you think about the topic of the unit?

- Discuss what we have been reading with a specific audience— a teenager from another time period, a young child, a new student.

Reflection Strategies

- Write a 30-second ad for station _____ (the radio station you listen to most) in which you "sell" the listeners on the benefits of learning about an idea we have studied during this unit.

About the Authors

Internationally known educational/business consultant Rachel Ann Billmeyer has extensive experience putting educational theory into practice. Dr. Billmeyer has taught at elementary, secondary and university levels, and worked with renowned educational researchers. She has served in leadership positions, including as Director of Staff Development and Instruction for a nationally recognized school district, member of the Nebraska Association of Supervision and Curriculum Development (ASCD) Board, and Program Chair for the Midwest ASCD Regional Conference. Dr. Billmeyer has conducted training sessions in Reading in the Content Areas, Dimensions of Learning, Performance-Based Assessment, Cognitive Coaching, Creating Fine-Tuned Teams, and New Teacher/Mentor Programs. She was the 1993 recipient of the Nebraska Literacy Award, and is author of *A Growing Curriculum.*

A senior associate at McREL, Mary Lee Barton has provided technical assistance and training to teachers, curriculum developers, and school administrators nationally in the areas of content area reading instruction, writing across the curriculum, and complex reasoning skills. She brings a wealth of practical experience to her workshops; prior to joining McREL, Barton taught English, developmental reading, and communication skills for 12 years at the middle school and high school levels. She earned her master's degree in adult continuing education with a focus on staff development. In addition to training and consulting, Barton writes extensively on issues in education. She is the lead author of *Helping Students Acquire and Integrate Knowledge: A Facilitator's Guide,* which she wrote with Dr. Robert Marzano for an ASCD video series. Barton is author of "Addressing the Literacy Crisis: Teaching Reading in the Content Areas" and is co- author with Dr. Barbara McCombs of "Motivating Secondary School Students to Read their Textbooks," both published in the National Association of Secondary School Principals *Bulletin.*

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