Reading
In the
Content Areas:
A Facilitator’s Guide
About the Developers
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Introduction
What the schools seem to be doing is avoiding reading in science and math. . . . Beyond the primary grades, students need to grapple with texts that are expository, dense, and full of new, more difficult vocabulary, especially in math, science, and social studies. . . . But students are not taught how to read those types of texts. . . . Students can often bypass homework reading assignments and instead rely on teachers covering the material in class.

— Donna Ogle

ASCD Curriculum Update
Summer 2000

Reading has become the focus of most educators today, no matter what subject they teach. School districts are striving toward the common goal of improving students’ reading levels. Middle and secondary school students in particular are performing poorly, as test scores nationwide show. In an effort to address the challenge of improving the reading scores of secondary students, districts are increasingly offering staff development programs that show teachers ways to improve students’ reading skills in order to increase their learning.

Teaching reading is no longer just the job of the reading teacher: It is everyone’s responsibility. It must be a united effort. Teachers need to work together as a team to combat the problem of poor literacy skills in many of today’s schools. Isolated, low-level reading classes are no longer the answer. Reading can be successfully integrated across the curriculum. Amy McCann began a reading program in a Chicago high school five years ago, and it remains strong and stable today as the students’ reading scores continue to improve. She started with a core team of teachers who had formed a reading task force; these teacher volunteers were trained to become staff development facilitators who in turn trained other teachers.

When interested teachers of core subjects come together as a team to learn about reading strategies, the knowledge they gain can be shared with other teachers in a coordinated professional development program. There are many such schools today. This video-based professional development program features just a few of them.

As schools and districts engage in unified efforts to improve reading levels, school districts need to provide their teachers with time, funding, and support. These elements are critical if reading is to become a top priority. Staff development sessions need to demonstrate how teachers should
incorporate prereading, during-reading, and postreading strategies into lessons in order to help students connect with expository text in a meaningful way.

This series of videotapes shows how teachers can implement prereading, during-reading, and postreading strategies in core content areas. Additional strategies are described in the Readings and Resources section. The strategies shown in the videotapes and described in the readings demonstrate how reading can successfully become part of a teacher’s daily lessons so students gain a greater understanding of texts.

**Purpose of the Series**

This video program is designed to help schools, districts, and individual teachers integrate reading into the content areas, enabling students to improve their comprehension of dense texts, especially expository ones. The videotapes and online facilitator’s guide can be used to introduce principals, supervisors, teachers, parents, and others to strategies that help students connect to texts and draw meaning from them. The videotapes demonstrate new knowledge about enhancing students’ reading abilities by incorporating reading into every subject area. They explain common problems and issues that arise as content-area teachers are introduced to reading strategies and begin implementing them, and they show how teachers in grades 5–12 can work with a reading specialist to make reading instruction a regular part of their lessons. The workshops in this guide are designed to stimulate exploration, discussion, and collaboration. An individual may also use the videotapes and exercises for personal reflection and growth.

**About the Series**

The series will guide the viewer through a learning process much like the International Reading Association’s well-established process for reading informational text. Each tape will address one phase of the reading process and illustrate strategies specific to that phase. Tape 1 focuses on prereading strategies; Tape 2 focuses on during-reading strategies; and Tape 3 focuses on postreading strategies. Each tape represents a variety of subject areas and grade levels and illustrates several strategies particular to the featured reading phase.
After viewing this series, participants will be able to

- Understand the challenges that content-area teachers face due to students’ low reading abilities.
- Demonstrate strategies to use before, during, and after reading.
- Identify ways to integrate reading strategies into regular classroom lessons.

Your role as the facilitator is to create an environment that allows participants to understand the material presented. Spend a few moments assuring participants that the environment will support a variety of learning activities; that there will be opportunities for all participants to engage in conversation with others; and that a warm and inviting atmosphere exists. Invite participants to discuss, reflect on, and revise their understandings of reading in the content areas.

As facilitator of this viewing process, you could be a staff developer, principal, central office administrator, teacher, parent, or community member. As the leader, your preparation for the workshop and discussion will help your group to benefit from this program. Remember, you may be showing the tapes to a group of individuals who have varying levels of knowledge and experience with reading in the content areas. Your background knowledge and outside reading will be beneficial.

This guide is designed to help you get the best possible benefits from this video program on reading in the content areas. The workshop activities and discussion questions included here can serve as a starting point. However, as the facilitator, your choice of activities and questions should certainly not be limited to those contained in this guide. Indeed, you should encourage participants to raise their own questions based on the particular needs or concerns of their school, district, or community.

As the facilitator, you have several major responsibilities:

**Read and View the Materials**

- Your initial preparation should include viewing the videotapes you are going to use in your workshop, reading the Introduction and Workshop sections of this guide, and studying the workshop format you plan to use.
Prepare the Program Activities

• Read over the materials in the Readings and Resources section of this guide.
• Review the workshop handouts and overheads.
• Duplicate materials as necessary.
• Obtain needed equipment and supplies for the workshops.

Check the Room and the Seating Arrangements

• Reserve a room that is large enough, with ample seating for the number of participants you expect to attend; ensure that it is conducive to small-group discussions.

Arrange for the Necessary Video and Audiovisual Equipment

• Arrange for a working VCR and monitor, ensure proper electrical fitting, and make sure you have sufficient power cords with adapters for the VCR. (One 23- to 25-inch monitor will suffice for up to 25 participants.) Plug in both machines to ensure their working condition — and make sure that the electrical outlets in the reserved room are in working order.
• If the room is large, you may need a microphone and speakers.
• If you plan to use overheads, make sure you have a working overhead projector, screen, and extra transparencies and markers, if you need them.
• Provide a flip chart and markers or chalk and eraser for a chalkboard.

Prepare Materials

• Duplicate enough handouts for all participants, as well as any supplementary readings you would like to distribute.
• Prepare transparencies of any overheads you intend to show via projection.
Announce the Program

- In your announcements or invitations, give sufficient notice and clearly specify the day of the week, date, time, and location for the program. Remind participants to bring pencils and notepads.

- If parents, business leaders, or community members are invited, they may need more advance notice than school or district staff members.

Make Other Arrangements

- Prepare an agenda, with times for breaks.

- Arrange for refreshments, if desired.

This section of the facilitator’s guide provides step-by-step directions for facilitating six possible workshops to explore the ideas presented in the Reading in the Content Areas video series.

For each of the three videotapes in the series, there is a short workshop (60 minutes) and a long one (3 hours). The short workshop provides an overview of the concepts in the video, whereas the long workshop allows participants to experience some of the practices advocated in the video through hands-on activities.

These workshops are designed to build on the experience of viewing the videotapes. Facilitators should feel free to modify these workshops as their circumstances warrant.

Downloading Handouts and Overheads

Each of the handouts is available for customization. They are offered in a zip file that can be downloaded onto your computer. To download the file, click on the link and save the file to a directory on your computer. When the download is complete, double-click on the file and choose the directory where you want the files to be stored. Once you have extracted the files, you can open them using a word processing program (MS Word, AppleWorks) and customize them as needed.

If you download the zip file, you’ll need a file compression utility program such as WinZip (PC) or StuffIt Expander (Mac) to unzip the files and store them on your computer. You may download shareware versions of these programs from http://www.cnet.com.
Workshops
Workshop 1

This 60-minute session introduces the concepts presented in Tape 1, *Prereading Strategies.*

**Agenda and Time Guide**

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<tr>
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**Objectives**

In this session, you will

- Examine the need for reading in the content areas.
- Consider effective ways of presenting prereading and thinking strategies across the curriculum.
- Explore research findings on teaching comprehension.

**Workshop Materials**

For this session, you will need copies of Handouts 1 and 2 for each participant. You will find the masters in the Handouts section of this guide. Materials needed for this workshop include flip chart paper and an easel or an overhead projector, transparencies, and pens; Tape 1; and a TV and VCR. You may also want to display an agenda map — that is, a sheet of flip chart paper with the workshop agenda and objectives.

**Welcome and Introductions (10 minutes)**

1. Introduce yourself to the participants and explain the purpose of the workshop. You might want to say the following:

   - *The purpose of today’s session is to consider the types of struggles that content-area teachers face when their students do not read well. It is also to demonstrate the use of prereading strategies that teachers can build into regular classroom lessons to activate students’ prior knowledge and to draw them into a text.*
2. Distribute Handout 1, Teacher Voices Across the Curriculum. Give participants 4–5 minutes to read the handout and to respond to it by discussing with the person sitting next to them, or in a small group, the challenges they have faced in working with struggling readers in their classrooms.

**View Tape 1: Prereading Strategies (30 minutes)**

1. Tell participants that the videotape focuses on several lessons that show teachers using prereading strategies in regular classroom lessons.

2. Show Tape 1, *Prereading Strategies*.

**Reactions to the Tape (20 minutes)**

1. Distribute Handout 2, Guidelines for Conversations: Tape 1, and ask participants to form small discussion groups of four or five people. Have each group select a spokesperson to share responses with the large group. Allow 10 minutes for groups to discuss the questions on Handout 2. Each spokesperson should record the group’s responses.

2. Reconvene the large group and ask the spokespersons to share the small groups’ answers. Record responses on a sheet of flip chart paper or on an overhead transparency.
This 3-hour session introduces the concepts presented in Tape 1, *Prereading Strategies*.

### Agenda and Time Guide

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<td>Story Impressions</td>
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<td>Final Discussion</td>
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<td><strong>Total Approximate Workshop Time</strong></td>
<td><strong>3 hours, 15 minutes</strong></td>
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**Objectives**

In this session, you will

- Examine the need for reading in the content areas.
- Consider effective ways of presenting prereading and thinking strategies across the curriculum.
- Explore research findings on teaching comprehension.

**Workshop Materials**

For this session, you will need copies for each participant of Handouts 1, 2, 5, 7–8, and 13–15; Readings 1 and 2; and a transparency of Overheads 1–3. You will find the masters in the Handouts, Readings and Resources, and Overheads sections of this guide. You will also need a history and a science textbook used by the school. Materials needed for this workshop include flip chart paper and an easel; masking tape; felt-tip markers; an overhead projector, transparencies and pens; Tape 1; and a TV and VCR. You may also want to display an agenda map — that is, a sheet of flip chart paper with the workshop agenda and objectives.
Welcome and Introductions (10 minutes)

1. Introduce yourself to the participants and explain the purpose of the workshop. You might want to say the following:

   ◆ The purpose of today’s session is to consider the types of struggles that content-area teachers face when their students do not read well. It is also to demonstrate the use of prereading strategies that teachers can build into regular classroom lessons to activate students’ prior knowledge and to draw them into a text.

2. Distribute Handout 1, Teacher Voices Across the Curriculum. Give participants 4–5 minutes to read the handout and to respond to it by discussing with the person sitting next to them, or in a small group, the challenges they have faced in working with struggling readers in their classrooms.

Reading 1 (30 minutes)

Distribute Reading 1 articles and Handout 13, Discussion Questions for the Readings. Have participants read the articles silently and answer the discussion questions on Handout 13. They can work through the questions with a partner or in small groups.

Anticipation Guide (30 minutes)

1. Display Overhead 1, Anticipation Guide, and explain that this sample of anticipation guides illustrates how teachers can implement this strategy in science.


3. Next, have participants complete the anticipation guide (Handout 14) before reading the information from the American Cancer Society (Handout 15).

4. Once they have read the American Cancer Society information, participants should compare their responses on the anticipation guides with what they learned from the reading, correcting any answers that were wrong.
View Tape 1: Prereading Strategies

1. Tell participants that the videotape focuses on several lessons that show teachers using prereading strategies in regular classroom lessons.

2. Show Tape 1, Prereading Strategies.

Reactions to the Tape (20 minutes)

1. Distribute Handout 2, Guidelines for Conversations: Tape 1, and ask participants to form small discussion groups of four or five people. Have each group select a spokesperson to share responses with the large group. Allow 10 minutes for groups to discuss the questions on Handout 2. Each spokesperson should record the group’s responses.

2. Reconvene the large group and ask the spokespersons to share the small groups’ answers. Record responses on a sheet of flip chart paper or on an overhead transparency.

Reading 2 (30 minutes)

1. Distribute Handout 5, Research Quotes, and review the quotes with participants.

2. Distribute Reading 2, “Reading Comprehension: What Works,” and Handout 13, Discussion Questions for the Readings. Have participants read the article silently and work through the discussion questions with a partner or in small groups.

Story Impressions (30 minutes)

1. Distribute Handout 8, Strategy 2: Story Impressions, and have participants read through the description of the second strategy as you read it aloud.

2. Show Overhead 2, Story Impressions for Earth Science, and ask participants to create a paragraph using the chain words in order. Have two or three participants share their paragraphs. Read a description of volcanic activity from a science textbook that the school uses; compare the accuracy of the participants’ paragraphs with facts about volcanic activity.

3. Show Overhead 3, Story Impressions for History, and ask participants to create a paragraph using the chain words in order. Have two or three participants share their paragraphs. Read a description of
Teddy Roosevelt’s accomplishments from a history textbook that the school uses; compare the accuracy of the participants’ paragraphs with the facts about Teddy Roosevelt’s accomplishments.

**Final Discussion (15 minutes)**

1. Allow participants time to discuss in their small groups Reading 2 and the story impressions strategy.

2. Close by having each group’s spokesperson share two things that the group learned from the session. Record statements on flip chart paper or on an overhead transparency.
Workshop 3

This 60-minute session introduces the concepts presented in Tape 2, 
During-Reading Strategies.

### Agenda and Time Guide

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<tr>
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### Objectives

In this workshop, you will

- Examine strategies to use while students are reading so they are engaged in the text.

- Consider the applications of such strategies in content-area classrooms.

- Explore research findings on the frustrations teachers experience as they try to teach their content to struggling readers.

### Workshop Materials

For this session, you will need copies of Handout 3 for each participant. You will find the master in the Handouts section of this guide. Materials needed for this workshop include flip chart paper and an easel or an overhead projector, transparencies, and pens; Tape 2; and a TV and VCR. You may also want to display an agenda map — that is, a sheet of flip chart paper with the workshop agenda and objectives.

### Welcome and Introductions (10 minutes)

Introduce yourself to the participants and explain the purpose of the workshop. You might want to say the following:

- **The purpose of today’s session is to demonstrate reading strategies to use while students are reading so they remain engaged in the text. It will also present ways to build these strategies into regular classroom lessons in order to improve students’ comprehension and retention of the text.**
**View Tape 2: **During-Reading Strategies (30 minutes)

1. Tell participants that the videotape shows teachers using strategies to help students connect with the text more effectively as they read.

2. Show Tape 2, *During-Reading Strategies*.

**Reactions to the Tape (20 minutes)**

1. Distribute Handout 3, Guidelines for Conversations: Tape 2, and ask participants to form small discussion groups of four or five people. Have each group select a spokesperson to share responses with the large group. Allow 10 minutes for groups to discuss the questions on Handout 3. Each spokesperson should record the group’s responses.

2. Reconvene the large group and ask the spokespersons to share the small groups’ answers. Record responses on a sheet of flip chart paper or on an overhead transparency.
This 3-hour session introduces the concepts presented in Tape 2, *During-Reading Strategies*.

### Agenda and Time Guide

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<td>View Tape 2: <em>During-Reading Strategies</em></td>
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<td>Final Discussion</td>
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### Objectives

In this workshop, you will

- Examine strategies to use while students are reading so they are engaged in the text.

- Consider the applications of such strategies in content-area classrooms.

- Explore research findings on the frustrations teachers experience as they try to teach their content to struggling readers.

For this session, you will need copies for each participant of Handouts 3, 9–10, 13, and 15; Reading 3; and a transparency of Overheads 4–6. You will find the masters in the Handouts, Readings and Resources, and Overheads sections of this guide. Materials needed for this workshop include flip chart paper and an easel; masking tape; felt-tip markers; an overhead projector, transparencies and pens; Tape 2; and a TV and VCR. You may also want to display an agenda map — that is, a sheet of flip chart paper with the workshop agenda and objectives.
Welcome and Introductions (10 minutes)

Introduce yourself to the participants and explain the purpose of the workshop. You might want to say the following:

- The purpose of today’s session is to demonstrate reading strategies to use while students are reading so they remain engaged in the text. It will also present ways to build these strategies into regular classroom lessons in order to improve students’ comprehension and retention of the text.

Reading 3 (30 minutes)


2. Have participants read the sections “Teacher voices across the curriculum” (chart) and “Learning new lessons” in Reading 3 silently and work through the discussion questions with a partner or in small groups. If time permits, the rest of the article can be included as optional reading.

Structured Note Taking (45 minutes)

1. Show Overhead 4, Structured Note Taking for Science, and Overhead 5, Structured Note Taking for History. Explain that these two samples of structured note taking illustrate how teachers can implement the strategy in history and science.

2. Distribute Handout 9, Strategy 3: Structured Note Taking, and Handout 15, The Smoke Around You: The Risks of Involuntary Smoking. Have participants read the description of the structured note taking strategy (Handout 9) as you read it aloud.

3. Next, have participants use structured note taking as they read through Handout 15. Once they have read the article and finished note taking, participants should form small groups and share their notes with each other.

View Tape 2: During-Reading Strategies (30 minutes)

1. Tell participants that the videotape shows teachers using strategies to help students connect with the text more effectively as they read.

2. Show Tape 2, During-Reading Strategies.
Reactions to the Tape (20 minutes)

1. Distribute Handout 3, Guidelines for Conversations: Tape 2, and ask participants to form small discussion groups of four or five people. Have each group select a spokesperson to share responses with the large group. Allow 10 minutes for groups to discuss the questions on Handout 3. Each spokesperson should record the group’s responses.

2. Reconvene the large group and ask the spokespersons to share the small groups’ answers. Record responses on a sheet of flip chart paper or on an overhead transparency.

Save the Last Word for Me (30 minutes)

1. Show Overhead 6, Save the Last Word for Me, and explain that this is an example of what the “save the last word for me” strategy looks like.

2. Distribute Handout 10, Strategy 4: Save the Last Word for Me, and have participants read through the description of the “save the last word for me” strategy as you read it aloud. Have participants implement this strategy as they read through Handout 15, The Smoke Around You: The Risks of Involuntary Smoking.

Final Discussion (15 minutes)

Close by having each group’s spokesperson share two things that the group learned from the session. Record statements on flip chart paper or on an overhead transparency.
Workshop 5

This 60-minute session introduces the concepts presented in Tape 3, *Postreading Strategies*.

### Agenda and Time Guide

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### Objectives

In this workshop, you will

- Examine strategies to use after students have completed reading so they improve their retention and understanding of the material.
- Consider the applications of such strategies in content-area classrooms.
- Explore research findings on the frustrations teachers experience as they try to teach their content to struggling readers.

### Workshop Materials

For this session, you will need copies of Handout 4 for each participant. You will find the master in the Handouts section of this guide. Materials needed for this workshop include flip chart paper and an easel or an overhead projector, transparencies, and pens; Tape 3; and a TV and VCR. You may also want to display an agenda map — that is, a sheet of flip chart paper with the workshop agenda and objectives.

### Welcome and Introductions (10 minutes)

Introduce yourself to the participants and explain the purpose of the workshop. You might want to say the following:

- The purpose of today’s session is to demonstrate reading strategies you can use after students have completed their reading assignments to help them understand and retain material from the text. The session will also demonstrate ways to build these strategies into regular classroom lessons.
View Tape 3: *Postreading Strategies* (30 minutes)

1. Tell participants that the videotape shows teachers using strategies after students have finished reading that help them connect with the text more effectively.


Reactions to the Tape (20 minutes)

1. Distribute Handout 4, Guidelines for Conversations: Tape 3, and ask participants to form small discussion groups of four or five people. Have each group select a spokesperson to share responses with the large group. Allow 10 minutes for groups to discuss the questions on Handout 4. Each spokesperson should record the group’s responses.

2. Reconvene the large group and ask the spokespersons to share the small groups’ answers. Record responses on a sheet of flip chart paper or on an overhead transparency.
Workshop 6

This 3-hour session introduces the concepts presented in Tape 3, *Postreading Strategies*.

### Agenda and Time Guide

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<tr>
<td>Readings 4 and 5</td>
<td>30</td>
</tr>
<tr>
<td>Semantic Feature Analysis</td>
<td>30</td>
</tr>
<tr>
<td>View Tape 3: <em>Postreading Strategies</em></td>
<td>30</td>
</tr>
<tr>
<td>Reactions to the Tape</td>
<td>20</td>
</tr>
<tr>
<td>Discussion Web</td>
<td>30</td>
</tr>
<tr>
<td>Final Discussion</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total Approximate Workshop Time</strong></td>
<td><strong>2 hours, 45 minutes</strong></td>
</tr>
</tbody>
</table>

### Objectives

In this workshop, you will

- Examine strategies to use after students have completed reading so they improve their retention and understanding of the material.

- Consider the applications of such strategies in content-area classrooms.

- Explore research findings on the frustrations teachers experience as they try to teach their content to struggling readers.

### Workshop Materials

For this session, you will need copies for each participant of Handouts 4, 6, 11–13, and 15; Readings 4 and 5; and transparencies of Overheads 7–9. You will find the masters in the Handouts, Readings and Resources, and Overheads sections of this guide. Materials needed for this workshop include flip chart paper and an easel; masking tape; felt-tip markers; an overhead projector, transparencies and pens; Tape 3; and a TV and VCR. You may also want to display an agenda map — that is, a sheet of flip chart paper with the workshop agenda and objectives.
Welcome and Introductions (10 minutes)

1. Introduce yourself to the participants and explain the purpose of the workshop. You might want to say the following:

   ◆ The purpose of today’s session is to demonstrate reading strategies you can use after students have completed their reading assignments to help them understand and retain material from the text. The session will also demonstrate ways to build these strategies into regular classroom lessons.

Readings 4 and 5 (30 minutes)


2. Have participants read the articles silently and work through the discussion questions with a partner or in small groups.

Semantic Feature Analysis (30 minutes)

1. Distribute Handout 6, What Good Readers Do, and explain to participants that this is a summary of skills that good readers exhibit.

2. Have participants check the strategies they use on a regular basis while they are reading.

3. Show Overhead 7, Semantic Feature Analysis: Grid, and Overhead 8, Semantic Feature Analysis: Government Officials. Explain that the semantic feature analysis is a way to organize information so that you can retain it more easily.

4. Distribute Handout 11, Strategy 5: Semantic Feature Analysis, and have participants read through the description of Strategy 5 as you read it aloud.

5. Ask participants to use Handout 11 to organize the information from Handout 15, The Smoke Around You: The Risks of Involuntary Smoking. Participants should distinguish between the negative effects of secondhand smoke and not being around smokers.

6. Have participants share grids with a partner.
View Tape 3: *Postreading Strategies* (30 minutes)

1. Tell participants that the videotape shows teachers using strategies after students have finished reading that help them connect with the text more effectively.


Reactions to the Tape (20 minutes)

1. Distribute Handout 4, Guidelines for Conversations: Tape 3, and ask participants to form small discussion groups of four or five people. Have each group select a spokesperson to share responses with the large group. Allow 10 minutes for groups to discuss the questions on Handout 4. Each spokesperson should record the group’s responses.

2. Reconvene the large group and ask the spokespersons to share the small groups’ answers. Record responses on a sheet of flip chart paper or on an overhead transparency.

Discussion Web (30 minutes)

1. Show Overhead 9, Discussion Web. Explain that this is a format for comparing opposite points of view in a controversial issue and that this postreading strategy can help students stay focused during a discussion. Show Overhead 10 as an example of how to use a discussion web in a social studies lesson.

2. Have participants take turns giving both sides of the secondhand smoke issue (e.g., whether there should be restrictions on where people are allowed to smoke), referring to the article if they wish. They should create discussion webs at their seats and as they express the various viewpoints.

3. Ask participants to record the information on their discussion webs as you display it on Overhead 9.

Final Discussion (15 minutes)

Close by having each group’s spokesperson share two things that the group learned from the session. Record statements on flip chart paper or on an overhead transparency.
Handouts & Overheads
A High School Science Teacher:

My nightmare is reading comprehension. Students don’t comprehend well because many are very behind with reading abilities to begin with, plus a majority of science textbooks are written on a level above most high school students.

A Middle School Math Teacher:

How can I use children’s books in math? How can I teach reading in my math class without getting away from the math material I’m supposed to teach?

A Middle School Administrator:

Teachers do not have enough training in the reading process and do not see all the connections involved in skills instruction.

A High School Social Studies Teacher:

Students don’t read assigned material. Often reading a textbook chapter brings an “I’d rather take a zero” from most students. Social studies is not the least bit interesting to students.

A High School English Teacher:

How do I make sure that students grasp the important concepts in reading?

A High School Art Teacher:

I am assigning drawing and painting projects students must complete by reading. They learn that drawing provides evidence of comprehension.

After viewing Tape 1, discuss and record the answers to the following questions in small groups or with a partner.

1. Discuss what you learned about the process of reading and about prereading strategies.

2. How will you be able to apply what you have learned to your own lessons?

3. How will you change your teaching to use prereading strategies?

4. Describe any prereading strategies that you are already using in your classroom.
After viewing Tape 2, discuss and record the answers to the following questions in small groups or with a partner.

1. Discuss what you learned about the process of reading and strategies that you can use while you are reading.

2. How will you be able to apply what you have learned to your own lessons?

3. How will you change your teaching to use during-reading strategies?

4. Describe any during-reading strategies that you are already using in your classroom.
After viewing Tape 3, discuss and record the answers to the following questions in small groups or with a partner.

1. Discuss what you learned about the process of reading and strategies that you can use after you have finished reading a text.

2. How will you be able to apply what you have learned to your own lessons?

3. How will you change your teaching to use postreading strategies?

4. Describe any postreading strategies that you are already using in your classroom.
“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.”

— Linda G. Fielding and P. David Pearson

“In one of the biggest success stories of the time period [1980s], 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)
- 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.

Focus and do NOT let yourself become distracted.

Preview the text.

Try to connect the information you read with what you already know about the subject.

Filter out the information that is more important from the information that is less important.

Try to picture in your mind what is happening in the text.

When reading a text, try to predict what will happen next.

To help you remember what you read, create a cluster of important points.

To help you remember what you read, draw simple sketches of the important points as you read.

Use stick-on notes to help you highlight important points in a text.
What It Is

The anticipation guide consists of five to seven statements about a topic that students will explore in a text. Before students read the text, they mark whether they agree or disagree with each of the statements.

Why It Is Used

The strategy is used to

- Activate students’ prior knowledge.
- Assess students’ prior understanding of a topic.
- Motivate students to read by stimulating their interest in a topic.
- Promote active reading.
- Foster critical thinking.
- Identify misperceptions students have.

Steps for the Teacher

1. Set aside the concepts that you want students to learn from reading.

2. Create five to seven statements that support or challenge students’ beliefs about the topic under study. The statements should address important points, major concepts, controversial ideas, or misconceptions.

3. Ask students to complete the guide by indicating whether they agree or disagree with each statement.

4. Have students read the text to find evidence that supports or disconfirms their responses on the guide.

5. When students have completed the reading, lead a discussion on what they learned.
**What It Is**

Story impressions begin with 10 to 12 words that are listed in a given order. Students then write a paragraph using the words in the same order; they should focus on creating a summary similar to the text that they are going to read.

**Why It Is Used**

The strategy is used to

- Activate students’ prior knowledge.
- Assess students’ prior understanding of a topic.
- Motivate students by having them predict what the text will be saying.
- Promote active reading.

**Steps for the Teacher**

1. Preview a text section or story and identify important terms.
2. List the words in the order they will appear in the text.
3. Have students work independently or with partners to brainstorm connections of clues on the list.
4. Ask students to create a possible version of the text.
5. Have students test their impressions of the story or text by having them read the text and compare it to their summaries.
6. Have students rewrite their summaries after they have read the text and compare their initial summaries with the rewritten summaries.
What It Is
Structured note taking is a method of taking notes by using graphic outlines to organize and retain important information.

Why It Is Used
The strategy is used to
- Guide students toward taking more effective notes.
- Create a visual framework for taking notes.
- Teach students how to make meaningful connections between various pieces of information.
- Provide an efficient way of recording important information from texts, videos, lectures, and discussions.
- Allow students to collaborate in a meaningful way.

Steps for the Teacher
1. Preview the content students will be learning.
2. Choose from the following six text frames in order to organize the notes in a meaningful way:
   - Problem/Solution
   - Compare/Contrast
   - Cause/Effect
   - Proposition/Support
   - Goal/Action/Outcome
   - Concept/Definition
3. Create a graphic organizer using boxes, circles, and other visual structures that would best fit your text frame.

4. Use the following terms to label the organizer: causes/effects, similarities/differences, problem/causes of the problem, or problem/possible solutions.

5. Call attention to the type of text frame being followed.

6. Have students take notes by recording relevant information in the appropriate spaces in the organizer.
What It Is

“Save the last word for me” requires students to read a text and record five statements from it that they find interesting or significant. After each statement, they record their own comments about the statements. Students then work in groups, taking turns sharing their statements and comments.

Why It Is Used

The strategy is used to

- Stimulate students to reflect on what they read.
- Develop active and thoughtful readers.
- Encourage students to talk about what they read.
- Allow students to participate in a discussion.
- Elicit differing opinions or multiple interpretations from a text.

Steps for the Teacher

1. Distribute five index cards to each student and assign a text to read.
2. Have students select and record five statements that they find interesting; they should write each statement on a separate card.
3. On the reverse side of each card, have the students write their comments about each statement.
4. Divide the class into groups of four or five members.
5. Have students take turns reading a statement, allowing others to react to it, and then sharing their own comments about the statement with the group.
What It Is

Semantic feature analysis calls for students to complete a guide with concepts or vocabulary words they have been studying. The guide gives students visual representation of the information that they are to learn.

Why It Is Used

The strategy is used to

- Help students develop a strong conceptual understanding of information.
- Visually represent key words or concepts.
- Differentiate between related or similar words.
- Analyze key vocabulary as concepts rather than as short definitions.

Steps for the Teacher

1. Using an overhead transparency, show a blank grid for the semantic feature analysis; choose a familiar category to illustrate the principles of the strategy.

2. Have students direct you as you code the grid. For example, you can list various sports in the vertical column and their features in the upper horizontal column; elicit from students which features are found in each sport.

3. Select from your lesson the concepts that you would like to analyze.

4. Have students code each concept on their grid to show which features are connected to each concept. Use a plus (+) sign when a word exhibits that feature and a minus sign (-) when a word does not exhibit the feature.

5. Discuss similarities and differences between each of the terms and develop generalizations when possible.
What It Is
The discussion web allows teachers and students to record two opposing views of a discussion in a meaningful way. The diagram helps students organize the information from a classroom discussion and it makes it easier for them to stay focused on the information presented.

Why It Is Used
The discussion web is used to
• Enable students to actively participate in a discussion.
• Provide a framework for evaluating both sides of an issue or question.
• Help students develop support for their positions.
• Allow students to organize their support for their positions.

Steps for the Teacher
1. Select a text for students that presents opposing viewpoints.
2. Activate students’ prior knowledge on the topic and set their purpose for reading.
3. After students have read the selection, present a focusing question for them to use with the discussion web.
4. Assign students to work in pairs to develop opposing sides of a question. Students should create the strongest possible arguments on both sides of the web.
5. Once each pair has completed its web, group each set of partners with another pair and have them develop a consensus on the question. The group then writes its conclusion at the bottom of the page.
6. A spokesperson from each group presents the group’s conclusion along with one reason the group has reached that conclusion.
7. Students write personal responses to the focusing question.
1. What did you learn from the article that you just read?

2. How has what you learned affected your view of reading?

3. Are there any changes you will make in your teaching as a result of the article?
Indicate whether you agree or disagree with each of the statements below. Next, read the information from the American Cancer Society (Handout 15) to see how accurate your knowledge of secondhand smoke was.

<table>
<thead>
<tr>
<th>Agree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>______</td>
<td>_________</td>
</tr>
<tr>
<td>1. Four thousand lung cancer deaths per year have been caused by involuntary smoking.</td>
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<td></td>
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<tr>
<td>______</td>
<td>_________</td>
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<tr>
<td>2. Involuntary smoking can cause heart disease.</td>
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<td></td>
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<tr>
<td>______</td>
<td>_________</td>
</tr>
<tr>
<td>3. Being married to a smoker can increase your chances of getting lung cancer.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>______</td>
<td>_________</td>
</tr>
<tr>
<td>4. Living with a smoker can increase your chance of getting lung cancer.</td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>______</td>
<td>_________</td>
</tr>
<tr>
<td>5. The children of smokers have a greater risk of developing certain illnesses.</td>
<td></td>
</tr>
</tbody>
</table>
What Should You Know?

Have you ever breathed the smoke that curls up from the tip of someone’s cigarette? Have you ever breathed the smoke exhaled by a smoker? If so, then you have breathed most of the same harmful, cancer-causing parts of smoke inhaled by smokers. As an involuntary smoker—a nonsmoker breathing the smoke from others—you are at increased risk. Former US Surgeon General C. Everett Koop said, “It is now clear that disease risk due to inhalation of tobacco smoke is not limited to the individual who is smoking.”

The risk of developing disease depends on the amount of tobacco smoke exposure. As an involuntary smoker, you breathe less tobacco smoke than an active smoker because the smoke mixes with the air around you. But the Environmental Protection Agency estimates that 4,000 lung cancer deaths annually—nearly 3 percent of the annual lung cancer death toll—have been caused by involuntary smoking.

Involuntary smoking also causes heart disease, aggravates asthmatic conditions, and impairs blood circulation.

Why Should You Know?

The Surgeon General and the National Academy of Sciences have examined the evidence surrounding involuntary smoking. Both studies agreed: Exposure to other people’s smoke increases the risk of developing lung cancer.

Other studies have also shown dangers for nonsmokers who breathe the smoke from cigarettes. The studies found that

- Overall, nonsmoking wives of husbands who smoke have a 30 percent increased risk of lung cancer compared with women whose husbands don’t smoke.
- Nonsmokers married to heavy smokers were found to have 2 to 3 times the risk of lung cancer compared with those married to nonsmokers.
- Nonsmokers exposed to 20 or more cigarettes a day at home had twice the risk of developing lung cancer.

These studies have focused on people who live with smokers; if you live with just one smoker, you are at risk for lung cancer.
Though legislation has been passed reducing smoking in the workplace, there’s still cause for concern. Tobacco smoke spreads quickly, and a workday is more than enough time to expose most people within many working environments. Even if you don’t sit next to smokers, the smoky air within a building may be harmful.

What About Kids?

Lung cancer is not the only hazard that faces involuntary smokers. For instance, the children of smokers have a greater chance of developing certain illnesses such as:

- Colds
- Bronchitis and pneumonia, especially during the first two years of life
- Chronic coughs, especially as children get older
- Ear infections
- Reduced lung function.

As with adults, the more smoke a child is exposed to, the more that child’s risk is increased. Therefore, if it is the smoking parent who handles most of the child care, the child’s chances of developing the ailments listed above are greater. And of course, the risk is highest if both parents smoke.

Who’s Taking Action?

- As of 1993, 45 states, including the District of Columbia, restrict smoking in public places.
- Forty-four states, including the District of Columbia, have enacted laws that address smoking in public workplaces. Twenty-three have enacted laws that address it in private workplaces.
- On April 8, 1994, the U.S. Department of Defense banned the smoking of tobacco products in all DoD work facilities worldwide. The
DoD is the largest employer in the country, with nearly 3 million military and civilian employees.

- In 1991, a nationwide survey of 833 companies found that 85 percent of all companies have adopted a policy on smoking (Society of Human Resource Management—Bureau of National Affairs, Survey No. 55).

- Smoking has been banned on all U.S. flights of six hours or less. Some carriers offer smoke-free international flights on their own. In addition, an agreement between the United States, Canada, and Australia was signed on November 1, 1994, banning smoking on flights between these countries. The agreement applies to nonstop flights and went into effect 120 days after the signing.

- Twenty-nine states have restrictions on the placement of vending machines containing tobacco products.

What Can You Do?

Now that you know that all smoking is harmful, what can you do to help fight the problem?

- If you smoke, stop.

- If others in your household smoke, help them stop.

- Ask to be seated in the nonsmoking sections of restaurants and public transportation.

- Make certain that your children’s schools and their child-care situations are smoke-free.

- Help negotiate for a smoke-free work environment.

- Ask visitors not to smoke in your home.

- Let your legislators know where you stand on nonsmokers’ rights issues and that you will support their efforts to pass laws designed to protect the nonsmoker.

- Call your local American Cancer Society and ask how you can become active in the effort to reduce smoking in your community.
The American Cancer Society’s materials and programs are supported by public contributions. No endorsement of any product or service is implied or intended by publishing this information.

Anticipation Guide

Anticipation Guide for Science: Acid Rain

Directions:

- Read the following statements concerning problems associated with acid rain.
- Put a check next to each statement you agree with.
- Be prepared to support your views about each statement by thinking about what you know about acid rain and its effects. You will be sharing this information with other members of your group when you discuss the following six statements.

   _____ 1. Acid rain kills fish.
   _____ 2. The major cause of acid rain is fuel emissions from automobiles.
   _____ 3. Stopping acid rain will cause some people to lose their jobs.
   _____ 4. Acid rain problems are not yet serious in our region of the United States.
   _____ 5. Acid rain is made up of sulfur oxides.
   _____ 6. If acid rain is not controlled, we will experience a major environmental disaster.

Source: From Classroom Strategies for Interactive Learning (2nd ed.) (p. 29), by D. Buehl, 2001. Adapted with permission of Doug Buehl and the International Reading Association. All rights reserved.
Your version of what the textbook might say:
Write a paragraph using the chain words in order.

Volcanic activity → Igneous rock → Temperature → Ground water → Boiling → Steam → Pent-up pressure → Fissure → Hot springs → Constricted tube → Eruption → Geyser → Old Faithful
# Story Impressions for History

<table>
<thead>
<tr>
<th>Key Terms</th>
<th>Roosevelt Era</th>
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</thead>
<tbody>
<tr>
<td>Teddy Roosevelt</td>
<td>Story Summary: After Reading Section 2—Write your summary paragraph about Theodore Roosevelt below. Add five additional terms from Section 2; write them in the place you feel they belong in the left column. Again, you must use all the terms in your summary—including your five new ones—in the order that they appear on the list.</td>
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<tr>
<td>progressive</td>
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<td>Square Deal</td>
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<td>reform</td>
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<td>corruption</td>
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<td>regulate</td>
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<td>trustbuster</td>
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<td>lawsuits</td>
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<td>consumer</td>
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<tr>
<td>dangerous</td>
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<tr>
<td>Food and Drug Act</td>
<td></td>
</tr>
<tr>
<td>national parks</td>
<td></td>
</tr>
<tr>
<td>reclamation</td>
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</tbody>
</table>
Structured Note Taking for Science

Endangered Animals

What kind of problem is this animal having?
Dolphins are being caught in underwater tuna nets and are being killed.

Who or what is causing the problem?
Commercial fisheries that use this type of underwater net to catch tuna.

Write the name of an endangered animal here:
Dolphin

Where does this animal live?
Dolphins live in deep sea waters in the Atlantic Ocean and Mediterranean Sea.

What can be done to help this animal?
We can buy tuna that is marked "dolphin-safe."
We can write letters to government leaders for international fishing controls.

Source: From Classroom Strategies for Interactive Learning (2nd ed.) (p. 139), by D. Buehl, 2001. Adapted with permission of Doug Buehl and the International Reading Association. All rights reserved.
Structured Note Taking for History

Life in the South Before Migration North

- Many lived in shacks
- Poor food
- Segregation
- Low wages
- Few jobs
- Jim Crow laws
- KKK harassment
- Poor schools
- Second-class status
- Discrimination
- Boll weevil ruined cotton
- Racial violence
- Lack of protection from courts and law
Factors that Encouraged African Americans to Move North to Chicago

- Recruited to the North by factories needing laborers.
- Were provided with free transportation (railroads).
- Agents sent to the South encouraged African Americans to come to the North.
- World War I caused need for workers and brought about new jobs and new factories.
- New laws restricted immigration from other countries.
- The *Chicago Defender* newspaper spoke to African Americans.
- Hangings and lynchings were increasing in the South.

Life in Chicago for African Americans

- Last hired, first fired.
- Had jobs but little money.
- Postwar depression put people out of work.
- Created neighborhoods for all African Americans.
- Housing shortages.
- Culture flourished: music, food, churches.
- African American city leaders and business leaders emerged.
- Competed for jobs with returning WWI soldiers.
- Race riots, bombs, killings.
Save the Last Word for Me

1) As you read, make a check mark in pencil next to five statements that you
   • Agree with,
   • Disagree with,
   • Have heard of before,
   • Found interesting, or
   • Want to say something about.

2) After you finish reading, write each statement on the front of a separate index card.

3) On the back of each card, write the comment you would like to share with your group about each statement.

4) When you meet in your group,
   a. Select a group member to go first;
   b. The selected member reads the statement from the front of one of his or her cards, but is not allowed to make any comment;
   c. All other group members talk about the statement and make comments;
   d. When everyone is done commenting, the member who wrote the statement makes comments; and
   e. A second group member is selected, and the process is repeated until all cards are shared.

## Semantic Feature Analysis: Grid

<table>
<thead>
<tr>
<th>Category</th>
<th>Features</th>
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</table>

*Source: From Classroom Strategies for Interactive Learning (2nd ed.) (p. 128), by D. Buehl, 2001. Adapted with permission of Doug Buehl and the International Reading Association. All rights reserved.*
## Semantic Feature Analysis: Government Officials

<table>
<thead>
<tr>
<th>Category</th>
<th>Is an elective office</th>
<th>Is an appointive office</th>
<th>Has term lengths</th>
<th>Has limits on service</th>
<th>Can be held by any legal voter</th>
<th>Passes laws</th>
<th>Vetoes laws</th>
<th>Administers laws</th>
<th>Declares laws unconstitutional</th>
<th>Serves the entire U.S.</th>
<th>Works within the U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>President of United States</td>
<td>+</td>
<td>–</td>
<td>+</td>
<td>+</td>
<td>–</td>
<td>–</td>
<td>+</td>
<td>+</td>
<td>–</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Governor of Wisconsin</td>
<td>+</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>+</td>
<td>+</td>
<td>–</td>
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<td>+</td>
</tr>
<tr>
<td>U.S. Senator</td>
<td>+</td>
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*Source: From Classroom Strategies for Interactive Learning (2nd ed.) (p. 128), by D. Buehl, 2001. Adapted with permission of Doug Buehl and the International Reading Association. All rights reserved.*
**Discussion Web Example**

**The Industrial Revolution**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machines now did most of the heavy work.</td>
<td>Workers received very low pay and could barely make a living.</td>
</tr>
<tr>
<td>The Industrial Revolution provided jobs for many people, especially immigrants.</td>
<td>Mass production work in a factory dehumanized the worker, who was just a cog in a machine.</td>
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<tr>
<td>More products were now affordable for the common people.</td>
<td>Working conditions were often unhealthy or dangerous.</td>
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<tr>
<td>The costs of living dropped, which helped working people.</td>
<td>Workers had to work long hours, with very little time off for their families.</td>
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<tr>
<td>Labor-saving devices became available and were used in factories and homes.</td>
<td>Workers had less control over their working conditions.</td>
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<tr>
<td>Many Americans had a tough existence under an agricultural economy.</td>
<td>Workers were no longer skilled laborers and could not look forward to owning their business.</td>
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**Reasons**

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<th>Did the Industrial Revolution help working people?</th>
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**Conclusions**

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Workers were crowded into cities and lived in tenements.
Readings and Resources
Before It’s Too Late: Giving Reading a Last Chance

by Rick Allen

In 1999, the California Department of Education became so concerned about the lack of analytical reading skills of high school graduates entering the state’s university system that it commissioned a study to examine how its middle schools and high schools are trying to beef up students’ reading abilities.

California is not alone. High-stakes exit testing has forced school districts in other states to confront the long-standing problem of poor reading among significant numbers of middle and high school students. “It’s a pretty widespread issue around the country. What the schools seem to be doing is avoiding reading in social studies, science, and math,” says Donna Ogle, a reading and language professor at National-Louis University in Evanston, Ill.

Beyond the primary grades, students need to grapple with texts that are expository, dense, and full of new, more difficult vocabulary, especially in math, science, and social studies, says Ogle. But students are not taught how to read those types of texts, she asserts, nor are they given clues about interpreting the increasing number of visuals in textbooks—the colorful charts, graphics, or maps—the inclusion of which has been driven by a pervasive, image-oriented electronic popular media.

“Reading is harder now,” Ogle concludes.

Moreover, textbooks may be losing ground to other media. In the classroom, the image-rich world of the Web, CD-ROMs, videos, or hands-on projects has joined the old standby of “chalk and talk,” muscling in on time students previously spent reading for content knowledge. Students can often bypass homework reading assignments and instead rely on teachers covering the material in class, says Ogle.

So it’s not surprising that great numbers of students don’t fully understand what they read. The 1998 Nation’s Report Card on Reading, issued by the National Assessment of Educational Progress (NAEP), shows that 26 percent of U.S. 8th graders and 23 percent of 12th graders were reading below the basic level. This means they could not necessarily demonstrate an understanding of the literal meaning of a text, draw out its main idea, make inferences, and relate their reading to personal experience. In some inner-city schools, 80 percent or more of the students can fail to meet grade-level reading standards, according to researchers.

For the last eight years, national attention has been focused on the problem of teaching elementary students to read, overshadowing the reading problems of middle and high school students. Although there has been some research on the reading problems of older students, there’s still a need for extensive, long-term studies, experts admit.

Camouflage and Diagnosis

Weak reading comprehension, rather than an outright inability to read, is the main affliction of most struggling readers in middle schools and high schools, say teachers and researchers. A student’s comprehension—his ability to make meaning from what is read—may be poor because of lack of fluency in reading, limited vocabulary or background knowledge, or minimal interest in the material he’s reading.

Only a minority of students have problems decoding, that is, understanding the relationship between letters and their sounds. Decoding problems can result from a lack of phonics training or, in some cases, dyslexia.
Students with limited English proficiency have additional reading obstacles to overcome, depending on their level of literacy in their native language and acculturation into mainstream society. (See “Give Me Shelter.”)

Amy McCann, a reading specialist at Evanston Township High School, north of Chicago, suggests that reading difficulties often go undetected for several reasons. In high school, McCann notes, teachers rarely ask students to read aloud. And if they do ask, many peer-conscious students avoid doing it because they lack fluency or see it as an elementary school activity.

Also, social promotion—or advancing students regardless of whether they’ve met grade-level standards—lulls teachers into believing their students don’t have reading problems, McCann says. “For the most part, high school students are reluctant to ask questions or say they can’t understand. They don’t want others to make fun of them,” she adds.

As a result, until the first exams are graded, teachers, and even parents, don’t realize how little some students understand.

But just “getting by,” unfortunately, can work. One California teacher in an inner-city district learned in a focus group of 9th grade students that they would “fake” silent reading periods in middle school by busily turning book pages.

Middle school and high school teachers maintain the assumption that elementary teachers teach reading while their job is to focus on content. Nonetheless, secondary teachers feel they lack expertise in teaching reading. “So they ‘enable’ kids not to read. [Students] grow up not practicing reading,” says Connie McGee, instructional supervisor for language arts and reading in the Miami-Dade, Fla., public schools.

**Kindling a Desire to Read**

Teachers need to create a safe, supportive environment in which students can overcome many years of failure and reading below grade level, reading experts agree.

On the personal level, McCann says, teachers need to address the issues students are facing. “If you allow class time to deal with these issues, even reading articles about a problem—say, alcoholism in a parent—helps students to know they have someone who’s listening to them and cares,” she says.

For the least-motivated students, McCann will “come on stronger.” She reminds them that after graduation they’ll need to negotiate all types of real-world reading material that affect their lives. This year she gave out samples of the 2000 Census form, federal tax forms, and job applications.

Cynthia Fischer, an English teacher and reading specialist at Western Albemarle High School in Crozet, Va., invites any reluctant students to first sit in on her remedial reading elective to allay their worries.

She also trains community volunteers and peers as tutors who use lessons tailor-made for their students to increase the personal attention her students get. Tutors learn reading engagement strategies such as Survey-Question-Read-Recite-Review (SQ3R) and K-W-L (Know—Want to know—Learn) to help students tap prior knowledge and actively think as they read. These techniques and rapport-building activities allow tutors to eventually write lessons based on their students’ interests.

Although research-based reading strategies may be applied in schools on a piecemeal basis, some researchers believe that success in solving older students’ comprehension problems depends on their inclusion in a strategic framework that will move students from “word calling” to a deeper understanding of the information they read.

The following reading improvement programs show how various strategies are woven into larger frameworks that attempt to meet students’ needs on an academic and personal level.
**Reading Apprentices**

Academic Literacy, a 9th grade reading program at Thurgood Marshall Academic High School in San Francisco, is one comprehensive framework that involves reading strategies on four levels—personal, social, cognitive, and content-specific—to encourage students to actively engage the text.

The school—which prepares students from San Francisco’s poorest neighborhoods for college—is ethnically diverse, with a student body that is about 30 percent African American, 25 percent Latino, 24 percent Chinese American, and 8 percent Filipino American, with smaller percentages of whites and other ethnic groups. Nearly 43 percent of Marshall’s students fall below the 40th percentile on tests for either basic reading or math skills. Consistently poor student grades in various disciplines convinced teachers that inadequate reading ability was the culprit.

Establishing a community of readers who value reading is the initial goal of Academic Literacy. Students read works by authors such as Frederick Douglass, Emily Dickinson, or Maxine Hong Kingston to learn about the transformative power that reading had on these writers. Students then look for links between reading and goals in their own lives.

In the Academic Literacy course, teachers use the reading apprenticeship approach, in which the teacher as “master reader” works with students as “reader apprentices” to dissect the process of reading and make sense of a variety of mainly nonliterary texts.

Students come into the program thinking that “reading is an all-or-nothing proposition that’s decided by the 3rd grade, so they don’t see themselves as good readers by the 9th grade. We’re able to fight against that,” says English teacher Lori Hurwitz, who has been teaching Academic Literacy for four years. All readers struggle with some texts “whether you’re Einstein or Betty Boop,” she adds.

In the course, students learn the importance of metacognition, or thinking about what “you are understanding and what you are not understanding while you are reading or thinking,” according to *Reading for Understanding: A Guide to Improving Reading in Middle School and High School Classrooms*, written by a team of researchers and teachers, including Hurwitz.

This year, Hurwitz’s students examined 20 unidentified text excerpts ranging from the back of a cereal box to a standard 1040 federal income tax form. The selections included a variety of academic texts as well as commercial writing, from Web pages and CD liner notes to instructions for programming a VCR and even a teen magazine quiz (“Are You the Flirty Type?”). Students categorized each text selection—offering a justification—then explained under what circumstances they might use each text. Students also rated their degree of understanding of each text on a scale of 1 to 10. Then, they faced the challenge of deciding which reading strategies they would apply to ratchet up their understanding of texts they found difficult.

The Reciprocal Teaching techniques of predicting, clarifying, questioning, and summarizing are among the many research-based strategies students learn to use in Academic Literacy. For example, clarifying techniques could include rereading the text, reading on until the meaning becomes clearer, looking for connections to your own life, or talking about the text with others.

As students and teacher learn to puzzle through the text and ask questions about what they read, they also learn to recognize that each discipline has its own vocabulary, writing style, and concepts—the mastery of which becomes a key to comprehension.

Another important part of Academic Literacy is silent sustained reading (SSR). On average, incoming 9th graders read at the 6th or 7th grade level, and only a quarter of them read for pleasure, says Hurwitz. The relative freedom of choosing what to read for twice-weekly SSR fosters a student’s self-identification as a reader, she adds.

Students must read 200 pages monthly and write about the weekly SSR sessions in reading
logs. They also complete a monthly culminating project in which they reflect on themselves as readers.

Christine Cziko, head of Thurgood Marshall’s English department during the Academic Literacy pilot program, recalls that the first several weeks of SSR were “torture” because students would talk, fool around, and ignore their reading. These were kids who didn’t like to read and told us so, Cziko says. At one English faculty meeting, teachers even considered throwing out the silent reading requirement. But instead, they dug in their heels, because “all the research shows that kids really need [silent reading] to improve.”

Only after nine weeks did silent reading click with students. And students have brought their newfound discipline with them to the 10th grade, Cziko says.

Using the Degrees of Reading test for comprehension, teachers at Thurgood Marshall have found that scores have increased “across ethnicities,” says Hurwitz. The average jump in grade-level reading ability is two years.

“Teaching kids to be metacognitive, in context, helps them identify when they have not ‘gotten it.’ It helps them take control of their reading and take control of their learning,” says Hurwitz.

When Students Own the Strategies

Miami-Dade County Public Schools in Florida, the fourth largest school district in the United States, serves more than 180,000 students in grades 6–12. Students come from all over the world and speak more than 90 languages besides English. As in many urban areas, there is also a high concentration of poverty.

Before tackling the issue of secondary reading, Connie McGee, instructional supervisor for language arts and reading for Miami-Dade, recalls that her office interviewed a range of students about “what good readers do when they read.”

Describing the responses of proficient readers, McGee remembers that “one girl said she had a video in her head as she was reading.”

“Other students said, ‘Good readers read fast. They know lots of words.’ These kids were on the outside [of the reading process], using the third person. It was very telling that they didn’t consider themselves good readers,” McGee says.

Miami-Dade’s two-year-old Comprehensive Reading Plan marshals all subject-area departments into making reading a priority, says Alicia Moreyra, district director for Miami-Dade’s division of language arts and reading. The county’s scores on the new statewide exit exam, the Florida Comprehensive Assessment Test, and the Stanford Achievement Tests indicated “a crisis,” she says. About 40 percent of Miami-Dade students read below grade level, she notes.

The two pillars of Miami-Dade’s reading efforts at the secondary level are Project CRISS and Reciprocal Teaching. CRISS, an acronym for Creating Independence through Student-Owned Strategies, trains teachers to teach students how to learn actively by connecting new material to prior knowledge, practicing strategies to engage the text, and monitoring their own learning.

Along with all teachers at North Miami Middle School, assistant principal Monique Devereau is trained to use CRISS strategies among the school’s population of 1,900 mainly Haitian- and Hispanic-background students.

Devereau offers to model lessons for teachers who are frustrated with their students’ low achievement. “All you can say is, ‘Would you be willing to try?’ You don’t dictate to teachers. You help them list the pros and cons of different strategies,” says Devereau.

Her colleague, 7th grade social studies teacher Tami De James, teaches students several CRISS strategies. For example, De James inverts K-W-L to K-L-W to use when her students start reading new material. After students activate what they know of a subject (K) and take notes of what they learned as they read (L), they write questions about what else they want to know (W). De James then homes in on “want to know” issues that students have consistently raised.
In a recent six-week unit on black history, De James used CRISS’s “think, pair, share” strategy. Students wrote down personal reactions to slave quotations, then gave their written thoughts to a partner, who wrote a reaction to that student’s comments. “Students really enjoyed that because they see that somebody thinks like them. Or if somebody thinks the opposite from them, they see it’s OK to have a different opinion,” De James says.

At Miami-Dade’s Barbara Goleman High School, math teacher Carolyn Guthrie uses various CRISS strategies, including “the author’s craft,” in which students need to identify why an author writes a certain way.

For example, in math texts, there are lots of drawings and figures and small expository sections of text, but “students don’t know how to attack it at all. They try to read the math book in the same way they read other books,” says Guthrie.

In tackling math word problems, Guthrie teaches students to look for key words that point to the math operations. She even encourages students to draw sketches of the problems or personalize them by visualizing themselves as characters within the problems.

Miami-Dade teachers who have used Project CRISS’s principles and strategies say their students now anticipate using certain methods when they read new material, moving toward the goal of making the arsenal of CRISS strategies the students’ own. “I give them the freedom to use what strategies they feel are appropriate. Maybe some of those will be carried over into other classes,” says Guthrie.

Ideally, teachers should infuse CRISS strategies across the curriculum, says Kit Granat, Miami-Dade’s language arts supervisor and one of 11 master trainers for CRISS in the United States. “My dream would be to have a certified CRISS trainer in every school,” says Granat. “It’s very, very easy to go back to the classroom and do what you’ve been doing for 15 years.” On-site trainers and principals who encourage ongoing implementation of CRISS are crucial for its success, she contends.

Along with CRISS strategies, Miami-Dade schools also want teachers to use Reciprocal Teaching approaches across the disciplines. For example, for any subject material, a student could make predictions based on a reading passage’s title, topic paragraph, or even accompanying illustrations. To clarify, a student might stop and check if she understands all the words. Questioning strategies could simply be comprehension questions that a student generates for a classmate to answer. A written summary could cap the Reciprocal Teaching approach to reading. In the process, the student refers to the text three or four times, says McGee.

Miami-Dade has also added a fifth element to the Reciprocal Teaching process, which it calls “the Miami element”: Visualization. This helps students use their imagination to create an internal picture of what they read, says McGee, referring to the mental video mentioned by a student.

Reading Problems in Suburbia

Although adolescent reading problems are often associated with students in poor, urban schools, they also exist in suburban campuses.

Penn High School is a predominantly affluent, white school in Mishawaka, Ind., a suburb of South Bend. From 1994 to 1996, the school was named a Blue Ribbon School of Excellence by the U.S. Department of Education, and it regularly receives state awards for improvement and innovation. Penn’s reading specialist, Rebecca Hartman, runs a comprehensive reading program that serves 200 of its 2,900 students.

For students reading three to four years below grade level, Hartman runs five Reading Lab classes. Students from one-and-a-half years to six months below grade level attend a Developmental Reading course. Those reading at or above grade level can elect to attend a Reading Strategies class, where they concentrate on improving reading.
speed, comprehension, and SAT vocabulary and on reading for pleasure.

Penn’s aim to accommodate students’ reading needs at all levels is “unique,” says Hartman. Reading problems occur, she says, “because students just stop reading. They want to play football or Nintendo.” The lack of reading “affects all their work,” she adds. About a third of the students in her five Reading Lab classes also have poor spelling and can’t articulate well orally and in writing. Vocabulary is low “across the board.”

With her struggling readers, Hartmann stresses phonemic awareness, spelling, reading, and writing using Language!, a course being used on a pilot basis this year. She has found it to work well in a small class where students are starting out at the same level.

To encourage struggling students to “read, read, read for pleasure,” Hartman starts them out with 4th grade level books with eye-catching titles such as *Microman; Baby, Baby; Dope Deal*; and *Hot Cars*—books with high-interest topics and ethical endings. Students get hooked and move up to more difficult books.

“Reading is not supposed to be painful,” says Hartman.

**Tall Friends Learn—Then Tutor**

To tackle reading problems for two groups of at-risk readers, one Illinois school has developed a unique variation of the peer-tutoring model.

At MacArthur Middle School in Prospect Heights, Ill., reading specialist Mary Ann Duderstadt, who has taught remedial reading for 28 years, developed a tutoring program called “Tall Friends.” What’s unique about the program is that struggling readers in the 7th and 8th grades are given the reading remediation they need and, in turn, tutor kindergarten and 1st grade students who are considered at risk.

Tall Friends started as a summer school program that invites at-risk middle school students with low reading scores or learning disabilities to a five-week reading course. The summer sessions run five mornings a week from 8:30 a.m. to noon.

Tall Friends middle school students face a variety of challenges in their reading, including a weak understanding of phonics, limited decoding strategies, or poor long-term memory. Some students are just not visual or auditory learners, says Duderstadt.

The middle school reading component, which takes place in a session’s first two hours, can include silent reading and discussion of a novel; vocabulary exercises; workbook exercises focusing on comprehension; and a technology activity that might involve using skill-and-drill programs; playing vocabulary-building games with Carmen San Diego, Word Detective; or writing summaries of their novels with word-processing software.

For the next hour-and-a-half, the Tall Friends middle school tutors then turn their attention to their young charges, providing 30 minutes of one-on-one tutoring to each of three primary students. Fifteen middle school students will work with up to 45 primary students. Instruction consists of reading to the younger students, practicing the alphabet and consonant sounds, or using word-sort activities to group words according to particular phonemes. Another activity consists of writing a sentence, cutting it into parts, and then challenging the primary students to put it back in order, which the tutor then reviews, supplying correction as needed.

Middle school students deficient in phonics or decoding skills get reinforcement in the basics as they work with the younger students, using manipulatives such as alphabet tiles and sets of word sort cards that help students focus on how consonants and vowels function within words that look similar, Duderstadt says.

Tutors write in daily journals to mark the progress of their primary students. These journals are then passed on to the relevant primary teachers when the school year starts.

Middle school students must also write a two-page paper reflecting on what they learned
about themselves and their students, which includes documenting their evaluation with examples.

An additional motivator, notes Duderstadt, is that students receive a stipend of $4.50 an hour for their tutoring sessions, courtesy of a local bank. “Students are docked if they don’t turn up. They’re getting on-the-job career training,” Duderstadt says.

Test results over three years show that students in Tall Friends grow one year on average in vocabulary, comprehension, and the writing process, she adds. Tall Friends is also now offered during the school year.

Teachers of the primary students in Tall Friends tell Duderstadt that students have more confidence in reading and are better decoders. Although she has not formally evaluated self-esteem among the middle school students in the program, Duderstadt says that parents tell her of an improved attitude toward school and an overall rise in grades.

One student said in his reflective paper that “I felt important for the very first time.”

Duderstadt, who runs Tall Friends with support from other middle school teachers with primary certification, admits that the program is a lot of work, between buying and making materials, re-evaluating methods, and ensuring quality control, but “when it worked better than I thought, I just about cried.”

“To me it’s worth every single minute I’ve put into this,” Duderstadt says. “It has been the highlight of my career.”

Reading Ahead: Challenges

Recognition of reading problems in middle and high school students seems to be gaining critical mass, say educators and researchers.

Last year, the International Reading Association’s Commission on Adolescent Literacy urged schools to provide students the needed training in advanced reading skills and called for increasing government money for intervention at the upper grades.

This year, the National Reading Panel’s report on the best ways to teach young children how to read also suggested that teaching reading comprehension techniques in the content areas is important. But more research needs to be done to learn which comprehension strategies work best with which age groups, the report concludes.

Using the model of the National Reading Panel, the U.S. Department of Education plans to convene a similar group of reading experts in August to evaluate current research about reading problems at the high school level. The group will also lay the groundwork for a possible long-term study on adolescent reading, says Ann Sweet, director of teaching and learning for the Office of Educational Research and Improvement (OERI).

At the state and local levels, preservice and inservice teacher preparation in reading also have come under scrutiny. Some states have increased the reading instruction requirements of preservice teachers and introduced a similar requirement for certified teachers in all content areas. (See “Preparing Teachers to Teach Reading.”)

A recent survey of 520 California high schools found that 57 percent of them had a reading intervention program to help the struggling reader. Further, 21 percent of the schools surveyed had instituted some type of program of reading across the curriculum. But Robert Pritchard, the project’s researcher and a professor of education at California State University, Fresno, tempers the “surprising” number of reading intervention programs by pointing out that they can vary from self-directed reading software to courses organized and staffed by a reading specialist.

Pritchard also points out a drawback to many of the programs he surveyed: students are usually taught as a group.

“You’re never going to get the [desired] payoff with that,” says Pritchard. Students’ reading problems are too varied to be dealt with by the “cookie cutter” approach, he adds.

But whatever the class setting, ideally, students must learn to think about the complexities of the
reading process and then actively apply appropriate strategies, reading researchers agree.

Christine Cziko, on a leave of absence from Thurgood Marshall High School to work as academic coordinator for the University of California, Berkeley’s English M.A. program, believes schools should capitalize on the resilience of students who persevere in school despite inadequate help for their reading problems.

Cziko, a teacher for 28 years, thinks that teenagers’ characteristic self-absorption can be turned to focus on their thinking processes. “They’re extremely sensitive to nuance and tone,” notes Cziko, referring to the complex ways that teenagers interact with one another in school. Adolescents “bring so much to the table in terms of ‘smarts’ from nonacademic areas,” she adds.

The goal should be to transfer that sensitivity to reading, she says. “Young people, in spite of their outward cynicism, are idealistic and want to change the world. I think it’s crucial that we look at them as the solution to literacy, not the problem.”
Give Me Shelter:
Reading and Limited English Proficiency Learners

by Karen Rasmussen

High school teachers from every subject gather at a workshop to learn how to help their students who are not native English speakers. But when the presenter arrives, she begins giving a geography lecture in Chinese. The confused teachers exchange nervous glances while they futilely try to understand what the presenter is saying.

This lesson in cultural awareness helps teachers understand what many of the non-English speakers and readers in their classrooms experience every day. In an education system that increasingly mainstreams adolescents with various levels of English proficiency into subject classes as soon as possible, literacy in English is vital for students to succeed academically and socially.

A Matter of Time

In the United States, it’s understood that children learn to read in elementary school. In secondary school, young people read to learn, say experts.

But expecting young people from different cultures and with a variety of literacy experiences to improve their reading ability in English—while also learning content important for high school graduation—challenges both students and educators. English language learners at the secondary school level fall into four categories: (1) illiterate in their primary language and in English, (2) literate in their primary language but not in English, (3) literate in English but not in their native language, or (4) literate in English and in their native language.

The more literate a child is in her native language, the more literate she will be in the second language, research suggests. “Reading is like driving a car: whether you learn to drive with a stick shift or automatic transmission, you know the basic rules of driving and can switch to the other type fairly easily,” explains Mary Ellen Vogt, who directs the graduate studies in reading program at California State University, Long Beach. “You don’t need to learn to drive all over again.”

Nevertheless, the transition to learning in English can take time. Research shows that it takes four to seven years for individuals “to deal with the academic demands of a new language,” says Vogt. “Older high school kids don’t have that kind of time,” especially if they don’t receive content instruction in their native language, she says.

To help these students, teachers need to “use strategies,” says Deborah Short, director of the English language and multicultural education division at the Center for Applied Linguistics in Washington, D.C. “Native speakers of English know words because they’ve heard them all their lives. English language learners don’t have this benefit. We have to develop their oral and reading skills.”

This is especially true for students who have limited literacy in their native language, adds Suzanne Barton, teacher director of the International Newcomer Academy in Fort Worth, Tex. “Limited-literacy students face a double challenge: they don’t have the academic skills, and they don’t understand how reading takes place,” she explains.

Teaching these skills to older students differs from how they are presented to elementary-age children. “When you teach elementary kids to read, you can be playful and physical and do funny things with the As and Bs,” notes Nancy Shewe, an ESL teacher at Huron High School in Ann Arbor, Mich. “With more mature kids, you can’t treat it that way. There is a shame these students feel because they know that their peers can read. You have to be careful of their egos.”

“Older kids can learn more analytically, and you can talk about reading strategies more explicitly,”

adds Jo Ann Aebersold, professor of English to speakers of other languages (ESOL) and ESOL teacher education at Eastern Michigan University.

Juli Kendall, a reading development teacher at Hill Middle School in Long Beach, Calif., recommends that teachers teach students in small groups of no more than five students, employ instructional conversation, create a comfortable learning environment, and differentiate instruction to address the level of each student.

Students also need to read from different kinds of texts that meet students’ needs and interests. For example, a boy who works as a gardener can learn to use a gardening encyclopedia and to look up specific flowers on the Internet. “If we torture them with reading, they—like all kids—will lose interest,” says Ellie Paiewonsky, supervisor of the Bilingual/ESL Technical Assistance Center in Nassau County, N.Y.

Sheltered Instruction

Despite the importance of learning to read in English, few secondary schools have reading specialists on staff. Because young people need exposure to content knowledge to learn and, often, to pass tests so they can graduate from high school, a common approach to teaching literacy is sheltered instruction (see box).

In sheltered instruction, the teacher modifies vocabulary and grammar and uses visual aids to help students understand content using the English that students know, Aebersold explains. Although some teachers might balk at adding another strategy designed to meet the needs of one segment of learners, all teachers who have English language learners in their classes can benefit from using sheltered instruction. “It is based on principles of good instruction, on experience in the classroom, and on best practices in second language acquisition,” says Jana Echevarria, professor of education at California State University, Long Beach. Sheltered instruction allows teachers to “make the curriculum comprehensible, not to water it down,” Paiewonsky adds.

When Nancy Shewe began teaching ESL more than 25 years ago, she drilled students in grammar and in speaking patterns. Now she uses sheltered instruction. The only ESL teacher at her high school, Shewe works with 67 students who speak 22 languages. She teaches four sections of ESL and one section of U.S. history for ESL students.

Shewe began offering the history class because her students were failing the mainstream class. On top of learning the language, “U.S. history is new for most of these kids, unlike their native English-speaking classmates who have studied the subject before,” she explains.

To teach U.S. history, Shewe uses the same textbook as the mainstream classes. She spends the first week showing students how to use the table of contents, maps, and charts. Then students read a chapter—to get the general idea, not to translate every sentence. Shewe reviews each chapter’s content through lecture, writes main points on the board, and assigns speaking and writing exercises to help students extract meaning from the text.

“‘In regular classes, multiple-choice tests are hardest for these students because they have to read every sentence and try to figure out the differences,’” Shewe says. So she also teaches students techniques for demonstrating their content knowledge, such as using time lines and graphic organizers.

Whole People

In addition to helping students academically, the schools need to meet the social needs of adolescents who are not native English speakers. “Remember that these kids are whole people, and at this age, the social aspects of their lives are tied into reading and academic success,” says Shewe.

And although adolescence can be rough for any child, new immigrants have more hurdles to overcome. “These students are coming into a different value system, culture, and education system,” says Aebersold. “The child’s family is trying to adjust to a new situation, and the child is trying to adjust to school. There is tremendous upheaval in every
aspect of the student’s life.” In addition, before immigrating, some children have experienced trauma such as war, notes Barton.

Educators also should remember that these children often need to learn “how to ‘do school’ in the United States,” notes Echevarria. “If a teacher rattles off the daily bulletins in the morning, the kids with a low English proficiency miss them.”

Through her work, Shewe’s main goal is to help the students “pass classes and to adjust socially.” However, since these young people are at an important age socially, she wishes that her district offered “a newcomer center where kids can catch up with other high school students.”

**Newcomer School**

One such place is the International Newcomer Academy in Fort Worth, Tex. The school serves 400 students, grades 6–12, who are new to the school district and who speak a language other than English. Students attend the school for about one year, except those students with low literacy skills who may need to stay for up to two years, according to Suzanne Barton, the school’s teacher director. All courses are taught in an ESL context.

A child of middle school age who has few literacy skills might take science, math, social studies, reading, ESL, and an elective, such as art. The school follows a block schedule to allow teachers and students to spend more time together. Reading and ESL are blocked together, as are social studies and science—and students have the same teacher for both.

All students participate in districtwide activities such as science fairs and choral and theater performances. (Newcomer students in regular schools often miss out on these opportunities because they spend elective class time in ESL programs or have to compete for slots with native English speakers, Barton notes.) Students are later mainstreamed to language centers in their home schools, where they transition from ESL and sheltered instruction classes into general classrooms.

“Our job is to prepare students to go to their home school,” says Barton. “We try to prepare them quickly but know that it is within a continuum of learning a second language. Our job is to shorten that time frame, through spending longer time in the class and being in smaller classes with strong teacher-student relationships.”

Native language populations are diverse and are growing, say experts. And although requirements for teaching non-native speakers of English to read vary widely across states and districts, educators are optimistic that young people can succeed—even those who arrive with few literacy skills.

As with any child, “figure out what the child wants and what’s best for them,” Short advises. “At the middle school level, students have time to learn English and to eventually go to college if they want. At the high school level, they can succeed if they are at grade level in skills but need to learn the language. For lower literacy students, they may need extra time to finish high school.”

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**What Is Sheltered Instruction?**

_Sheltered instruction_: “An approach in which students develop knowledge in specific subject areas through the medium of English, their second language; teachers adjust the language demands of the lesson in many ways, such as modifying speech rate and tone, using context clues and models extensively, relating instruction to student experience, adapting the language of texts or tasks, and using certain methods familiar to language teachers (e.g., demonstrations, graphic organizers, or cooperative work) to make academic instruction more accessible to students of different English proficiency levels.”

_Source_: From *ESL standards for pre-K–12 students*, Teachers of English to Speakers of Other Languages, Inc., 1997, Alexandria, VA.
Preparing Teachers to Teach Reading

by Rick Allen

A 1996 survey published by the International Reading Association reported that 47 states and the District of Columbia require specific reading coursework or have established a competency in reading methods for preservice middle school and high school teachers. But the study concludes that unless the courses “encourage actual implementation of effective instructional techniques” there would be “little positive change” in the reading performance of U.S. content-area classrooms.

In an effort to help struggling secondary school readers, some states have decided to increase the reading coursework requirement of their teacher training institutions.

For example, in 1998 Maryland doubled the reading requirement from three to six credit hours, or about two courses, for preservice secondary teachers. All Maryland teachers who are up for recertification will need to fulfill the same requirement, either through on-site staff development courses or local colleges.

“Our state assessments were showing that kids were not reading well enough year after year. Teachers were telling us they didn’t have the preparation to teach reading,” says Virginia Pilato, chief of program approval and assessment for the Maryland Department of Education.

The Maryland Department of Education is developing a model reading course. After January 2001, Maryland’s 22 colleges and universities that prepare teachers must submit their reading courses for state approval.

To help California teachers cope with the full spectrum of reading problems, the state’s department of education recently published a 200-page compendium of research-based reading strategies.

The handbook, Strategic Teaching and Learning: Standards-Based Instruction to Promote Content Literacy in Grades 4–12, outlines the theoretical underpinnings of reading research and provides 55 instructional strategies for teachers. Strategies range from dealing with issues in phonemic awareness, decoding, and vocabulary-building to providing how-tos for setting up literature circles and tutoring programs.

“For the last 25 years, there has been a renaissance in promoting comprehension and learning from texts,” says Beth Breneman, who coauthored the handbook with Robert Pritchard.

But classroom strategies are only part of the reading improvement process, stresses Breneman, so the handbook offers a model that identifies integral areas to be addressed at a school or district level:

1. Strong English language arts core program
2. Content literacy (i.e., reading and writing across the curriculum)
3. Reading intervention for struggling readers to catch up
4. Time for independent reading during school hours
5. Well-stocked and staffed library or media center
6. Real-world uses of literacy (e.g., community service, workplace, civic, or environmental settings)
7. Home, school, and community partnerships
8. Professional development for educators
9. Evaluation

Schools can tailor the model to “capitalize on creativity while still maintaining an emphasis on rigor, best practices, standards, and a safety net that will catch the kids who fall through the cracks,” Breneman emphasizes.

Source: “Preparing Teachers to Teach Reading,” by R. Allen, Curriculum Update, Summer 2000, p. 6. Copyright 2000 by ASCD.
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.

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
- 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 1980s 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 1980s 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 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 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)
- 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 collaboration 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 (Meloth 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 antici-
pating 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 revalued 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
- 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 in-service 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 instruction 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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References


Exploring Reading Nightmares of Middle and Secondary School Teachers

by William P. Bintz

Teachers often feel unable or unwilling to teach reading in the content areas. By viewing reading as a lifelong process, these teachers can begin to support one another in helping students become better readers.

My nightmare is that I am insecure because as an English teacher, somehow I am expected to know about reading, but at the college level I was only trained in English content.

(High school English teacher, 1996)

My nightmare is that many middle school students aren’t reading at grade level, or if they are, won’t read the class assignment anyway. Consequently, I find myself trying to avoid getting students involved in reading by assigning as little reading as possible. I teach around reading in order to make sure students understand science.

(Middle school science teacher, 1996)

I have been a middle grade and high school English/language arts teacher for over 10 years. During this time, I have had many nightmares, like the ones above, lurking in my reading closet. One nightmare in particular just never seemed to go away.

I was educated as a middle and secondary school English teacher. This experience taught me, among other things, how to plan reading assignments for junior and senior high school students. Unfortunately, it didn’t teach me how to deal with students who were not very interested in or very good at reading these assignments. Many students flatly refused to read them. Others read the material, but only reluctantly, and more out of fear of reprisal from their parents for not completing their assignments than out of burning desire to learn specific information. Still others read the material, but understood very little.

Even worse, this experience didn’t teach me how to deal with students who wanted to read the assignments but struggled because they weren’t very good readers. I didn’t know how to help them because my teacher education program included no courses in reading. I knew that reading was critical to my content area, yet I knew very little about the reading process. Over time, I became increasingly frustrated and ineffective. Finally, I realized that I needed to learn more about the nature of reading.

Since then, I have spent much of my professional life learning about the complex nature of reading, reading instruction, and reading assessment in middle and secondary school. Specifically, I have tried to use my own experiences, as well as those of others, to think differently about my reading nightmares. The purpose of this article is threefold: (a) to share some nightmares that have plagued the field of reading education for some time by situating my nightmare within a larger historical context; (b) to share what junior high and senior high school teachers say about their own reading nightmares; and (c) to share what I have learned from these teachers about some old problems and new possibilities in reading across the curriculum in middle and secondary school.

Reading nightmares in national and state levels

Recent U.S. research at both the national and state levels indicates that students experience a declining interest and slowing development in reading through the junior high and senior high
school grades (Farr, Fay, Myers, & Ginsberg, 1987). For example, the 1986 National Assessment of Education Progress (Applebee, Langer, and Mullis, 1988, p. 6) reported:

- Students have difficulty with tasks that require interpretations of what they have read.
- Poor readers have insufficient time in school for independent reading and do less independent reading than good readers.
- Poor readers use a narrower range of strategies to guide their own reading than good readers.
- Students from at-risk populations perform poorly when compared to the national population at each grade level.

Similarly, the 1990 National Assessment of Education Progress (Humphrey, 1992, pp. 4–5) reported:

- Reading proficiency increases substantially from grades 4 to 8 but less dramatically between grades 8 and 12.
- Students do little reading in school and for homework.
- Interest in books decreases as students advance through school.
- Two-thirds of 4th graders use the library at least weekly, compared to 24% of the 8th graders and 12% of 12th graders.
- Approximately one-third of 8th and 12th graders say they never discuss reading at home.

Finally, the 1994 National Assessment of Education Progress (p. 1) reported:

- There is a slight decline in reading skills among 12th graders.
- Twenty-four percent of 4th graders, slightly more 8th graders, and more than 33% of 12th graders scored at a “proficient” level.
- Across 4th, 8th, and 12th grades, fewer than 5% reached an “advanced” level.
- At least 30% at each grade level failed to reach a “basic” level.

Similarly, Chall (1983) notes that “although students demonstrate gains in reading during the early years, these gains seem to taper off in the middle and upper grades, and decline during the high school years” (p. 4). Likewise, Anderson, Tollefson, and Gilbert (1985) use appetite as a metaphor to describe how “the reading diet of primary students far exceeds that of intermediate and secondary students—the primary students clearly demonstrate a much more voracious appetite for reading than do their older counterparts” (p. 189). How do we explain this trend? Here are some hints and hunches.

Goodlad (1984) suggests that part of the problem might exist in the relationship between reading decline and time spent on reading instruction, noting that “excluding the common reading activity of oral turn taking from a common text, reading occupies only approximately 6% of class time in elementary school, 3% in junior high school, and 2% in senior high school” (pp. 106–107).

Humphrey (1992a) indicates that reading is a losing battle for time against an increasing amount of outside student interests, most notably television, noting that “nationally, 8th grade students spend an average of 21.4 hours per week watching television, but only 1.8 hours per week reading non-school materials” (p. 23). How much time are they spending per week reading school-based materials, assuming they are reading them at all?

Moreover, in a survey of the current status of reading in middle, junior, and senior high schools in one state, Humphrey (1992b, p. 2) reported the following:

- Teachers said that, on average, they spend less than 4 hours per year in staff development activities related to reading, including conferences, college or university classes, visitations, and locally sponsored meetings.
- Prior to the advent of junior high schools in the 1940s, most students had a reading
period every day from the 1st through the 8th grades. Today, older students do not participate in reading classes or, when they do, they spend less time than in the past because reading has been merged with English/language arts. Almost one out of every five middle, junior, and senior high school students was not enrolled in a class where reading was emphasized during the 1991 school year.

- Thirty-eight percent of students whose reading ability falls two or more grade levels below their actual placement are not provided any special assistance. A quarter of the surveyed schools do not have remedial programs, while the others do not have enough support to provide help to all the students who need it. High schools offer the least assistance.
- Most of the schools surveyed reported that they provide neither programs that encourage teachers to share and discuss books nor programs that allow them to stress the value of reading books.
- Middle grades schools spend, on average, US $1.92 per student per year on reading materials other than textbooks—less than the cost of one paperback.

**Reading nightmares in reading education**

Reading education, as a professional field of study, has also been plagued by nightmares. For instance, consider that over 50 years ago Bond and Bond (1941) stated, “The fact that in the secondary school the continued improvement in reading has been left to chance is a dark cloud on the reading horizon. No better results should be expected from this procedure than from leaving a vegetable garden to grow itself without any outside care after it is once started” (p. 53).

These educators were challenging a number of important assumptions about reading and reading instruction. These assumptions include: (a) reading instruction is primarily, if not exclusively, the role of elementary, not middle and secondary, school teachers; and (b) reading is an isolated skill; once it is mastered in the elementary grades, students require no further direct instruction in the upper grade levels.

What is nightmarish is that these assumptions, and many others like them, remain prevalent in middle and secondary school. It is assumed that providing reading instruction is the job of elementary, not secondary, teachers, and that students should be entering junior and senior high school already knowing how to read proficiently and strategically. But they aren’t.

In addition, consider the following: In 1963, Umans wrote: “One of the most difficult tasks is to help subject-matter teachers see the necessity of teaching skills directly related to the reading of the particular subject. Somehow, the feeling persists that reading is always taught ‘elsewhere’ and ‘at another time’” (p. 7).

Similarly, in 1965, Andresen (in Burnett, 1966) stated: “High school teachers must face their responsibilities as teachers of reading as well as teachers of history, literature, science, and homemaking if they are to prepare students for the demands of further education or for the experience of life” (p. 323).

In 1964, Artley (in Burnett, 1966) wrote: “Secondary reading is changing as large numbers of secondary school people—administrators, curriculum consultants and coordinators, teachers, and reading specialists—are beginning to concede that to accept anything less than the eventual involvement of every teacher in the reading program of the high school is to fall short of meeting the needs of today’s students” (p. 323).

In 1965, Summers (see also Muskopf & Robinson, 1966, p. 76) stated: “Perhaps the most immediate concern in meeting the reading needs of secondary students is staffing schools with teachers who have the necessary training to provide adequate instruction in reading in their content subjects” (p. 94).

These educators were challenging a number of assumptions driving the role of teachers in
secondary school, as well as calling for substantive changes in teacher education programs. For instance, Andresen and Artley were challenging the assumption that secondary school teachers are strictly subject specialists, teachers of content, and not teachers of reading. They were calling for a new perception and a new definition of what it means to teach in secondary school. Specifically, they were proposing that every secondary school teacher be perceived as, and educated to be, both a subject specialist and a teacher of reading. Thus, teachers who assigned reading in their content area were obligated to help students read the materials that were assigned. Summers (1965), however, warned that in order to do this preservice teachers would need “the necessary training” in reading in the content areas as part of their teacher training program.

What seems nightmarish is that many of these calls have gone virtually unanswered. Today, several trends remain prevalent in secondary education: (a) secondary school teachers continue to see themselves primarily, if not exclusively, as teachers of content, not teachers of reading; (b) to a large extent secondary school teachers believe that if reading needs to be taught in secondary school, it should be integrated into the language arts curriculum and taught by English teachers; and (c) students (typically English majors) majoring in secondary education and enrolled in teacher education programs continue to receive very little education (typically one course) in the area of reading in general, and reading across the curriculum in particular.

Finally, consider the following: In 1964, Artley (in Burnett, 1966) predicted: “When the history of reading instruction is written it will show that one of the major points of emphasis of the 1960s will be the organized extension of the developmental reading program into the secondary grades” (p. 323). Likewise, in 1966 Burnett predicted: “Perhaps the teaching of reading will become accepted as an integral part of the high school curriculum before the elapse of another 25 years” (p. 328).

At the time, these educators were making powerful and hopeful predictions for the future of reading and reading instruction in secondary school. These predictions, however, appear not to have been correct. On the one hand, Artley (in Burnett, 1966, p. 323) predicted that “the organized extension of the developmental reading program into the secondary grade,” a major emphasis of the 1960s, would continue into the 1970s, 1980s, 1990s, and into the 21st century. Excluding remedial reading programs, very little progress has been made on extending developing reading programs into secondary education. Similarly, Burnett (1966) predicted that reading would become an integral part of the high school curriculum. Yet, 30 years later, the teaching of reading in secondary education continues to be at best an infrequent visitor, and at worst a total stranger, across the high school curriculum.

Reading nightmares in teacher voices

Secondary teachers experience reading nightmares every day in the classroom. One way to understand these nightmares is to listen to a variety of teacher voices.

Over the past 3 years, I have conducted a number of professional development workshops on reading across the curriculum for middle school and high school teachers. I began these workshops with an oral reading of There’s a Nightmare in My Closet (Mayer, 1968), a humorous fantasy about a little boy who confronts his fear of the dark by planning to “get rid of the nightmare once and for all.” After reading, I explained that I wanted to use this story as a metaphor for hearing some new voices and starting some new conversations about reading. To this end, I modified the title to read There’s a Nightmare in My Reading Closet, and used it as an invitation to teachers to explore and share reading nightmares.

Specifically, I invited teachers to spend a few minutes thinking about their past experiences with reading in the classroom. Then, I asked them to write responses to the following prompts:

- There’s a nightmare in my reading closet…
- Some pluses…
• Some questions…
• And one wish…

The first prompt invited teachers to jot down some reading nightmares; some problems, issues, or concerns with which they were struggling. The second prompt invited them to share some successes with reading that they had experienced in the classroom. The third prompt invited teachers to record some questions that they were currently asking themselves for which they did not have answers. The fourth prompt invited teachers to make a wish that would enable them to “get rid of my nightmare once and for all.”

A total of 131 teachers provided responses across these four prompts. Of these, 29 taught in middle school and 102 in high school.

First, I read nonstop through all the responses, recording no comments and not stopping for any length of time to reflect on what I was reading. At this point I was trying to get a preliminary understanding and intuitive feeling by constantly asking “What are these teacher voices really saying?”

Second, I read through the responses more critically and reflectively, trying to construct working hypotheses. Here, I was trying to see some preliminary categories and patterns by constantly asking “What do these teachers really mean?”

Third, I read through the responses focusing on refining emerging patterns by constantly asking “What do these teachers mean collectively?”

The figure is a sample of teacher voices across content areas. For identification purposes, MS indicates middle school teacher and HS indicates high school teacher. Different content areas are also identified.

Learning New Lessons

I have learned several new lessons about the current status of reading from listening to middle and secondary school teachers talk about reading nightmares across the curriculum. These nightmares will be very familiar to many middle and secondary school English/language arts teachers, which suggests that little has changed over the years; indeed, if anything, it indicates that things have gotten worse.

However, what seems most problematic is that these voices have become more collective and less individual. That is, different teachers across the curriculum use different words to describe their individual nightmares, but they are all saying essentially the same thing. For example, math teachers state that students can’t read and understand math problems; science teachers state that students can’t read texts to conduct laboratory experiments; home economics teachers state that students don’t understand and therefore can’t follow instructions; industrial arts and vocational education teachers state that students can’t read and don’t follow procedures and thus often put themselves in physical danger when operating certain machinery and equipment; English teachers state that students can’t read and don’t comprehend poems, short stories, and novels.

Each personal voice describes a shared professional reality: increasing numbers of middle and secondary school students do not perceive reading as meaningful, and thus do not value the act or the process. These students are apathetic, almost disdainful, about reading. As a result, increasing numbers of teachers are left feeling bewildered and frustrated, almost paralyzed, about how to teach. This situation is further exacerbated for teachers working in a climate of high-stakes assessment where the improvement (or lack thereof) in test scores across individual content areas determines the extent to which schools and teachers are rewarded or punished. Students’ reasons for devaluing reading as they progress through middle and secondary school are complex. Yet, these voices indicate that teachers across the curriculum share a common conception of what the problem is and a set of interrelated beliefs that partially explain why it currently exists.

By breaking down any complex problem into components and discussing each one there is the risk of oversimplifying, and even diluting, the very
# Teacher Voices Across the Curriculum

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<td><strong>Science</strong></td>
<td>My nightmare is reading comprehension. Students don’t comprehend well because many are very behind with reading abilities to begin with, plus a majority of science textbooks are written on a level well above most high school students (HS).</td>
<td>Using groups to do reading assignments, and tying assignments to everyday life.</td>
<td>Why can’t the state revise its textbook adoption list? How can I get students to read assignments in science textbooks when the text can often be very difficult to understand?</td>
<td>I wish that all kids coming to us could read, I also wish that all students would strive for learning and read instead of watching television and playing video games.</td>
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<td>I have a two-part nightmare: One, very few of my students will actually read the textbook. They depend on me for lecture notes or simply read a question and search for similar words in the text. Two, most students are not intrigued with science literature. They pass it off as boring. I feel this may come due to their lack of vocabulary and reading skills (HS).</td>
<td>Using role-playing models, getting students to read an article dealing with science and then describe what it has to do with their life, and writing a children’s science book and illustrating it.</td>
<td>How can I get vital information across without reading? How do I make factual reading more interesting?</td>
<td>I wish every student would come to high school still hungry to team like small children are.</td>
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<td><strong>Math</strong></td>
<td>My nightmare is that students will have trouble comprehending and I won’t know how to help them, and/or students won’t be motivated to read and I’ll have to make them (MS).</td>
<td>Exploring whole language and selecting materials that related to students, not teachers.</td>
<td>How can I use children’s books in math? How can I teach reading in my math class without getting away from the math material I’m supposed to teach?</td>
<td>I wish I knew how to teach reading and math together.</td>
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<td>Having uninteresting textbooks, and no experience choosing material that gets students involved and reaches all levels of students (MS).</td>
<td>I’m increasing the use of word problems that reflect everyday life.</td>
<td>How do I get more involved in reading when I don’t read much myself?</td>
<td>I wish to have total class participation.</td>
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<td><strong>Math (cont.)</strong></td>
<td>Working with students with large differences in reading ability, being able to help poor readers enjoy reading which, in turn, will keep their attention, and helping students use reading to broaden their interests (MS).</td>
<td>I am trying to spark student interest by finding more interesting reading materials.</td>
<td>How do I learn about strategies that incorporate reading and math?</td>
<td>I wish that all students enjoyed reading and were competent readers. This would make teaching subjects a lot easier.</td>
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<td>Many students can read; in fact, they want to read all the time. I have to make them put down their books in order to have math class.</td>
<td>How am I able to help students comprehend what they are reading when no one else has?</td>
<td>I wish elementary teachers would recognize problems in reading and correct them early.</td>
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<td>Many students make it through elementary and middle school and still do not know how to read. Others can call out all of the words, but they don’t understand what it means.</td>
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<td>I wish I had more resources for reading in math. Also, I wish I had an English teacher with my class to help with reading and writing.</td>
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<tr>
<td><strong>Social Studies</strong></td>
<td>Students don’t read assigned materials. Often, reading a textbook chapter brings a &quot;I’d rather take a zero&quot; from most students. Social studies is not the least bit interesting to students (HS).</td>
<td>Doing journal writing, reading newspapers, and making children’s books about historical people and events.</td>
<td>How can I get students to read something and relate the information to the class?</td>
<td>I wish all students had that certain something inside themselves to motivate themselves and realize the importance of education and how much they’re missing now instead of realizing later on in life.</td>
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<td>I am allowing them more time to read in class.</td>
<td>How can I reach those students who have little ability in reading and also supply the needs of those students who are proficient readers?</td>
<td>I want to be effective in helping students to understand the importance of history enough that they will be interested in reading about it.</td>
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<tr>
<td>Social Studies (cont.)</td>
<td>My nightmare is that I really don’t know how to choose literature that both the high and low level children can enjoy and understand (MS).</td>
<td>Literature today seems more diverse and there is more integration in the classroom.</td>
<td>How do you find a balance between assigning good literature and assigning literature that will be of interest to students?</td>
<td>I wish history teachers would incorporate more fiction/literature into the curriculum.</td>
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<td>My nightmare is not only that I might have a student who can barely read, but also students who read better than I do. While reading out loud, I am afraid I will stammer, stutter, or mispronounce a word (MS).</td>
<td>Setting aside time for reading, and making books accessible to all ranges of students.</td>
<td>How do I get students to read when they are so apathetic? How can I get my students interested in reading about history when most history books are so boring, and that’s why students have such dislike for the subject?</td>
<td>I wish that I could instill in my students a love for reading.</td>
</tr>
<tr>
<td>English</td>
<td>Students are not motivated to read the assignments I give, or if they do read they are often uninformed or get a confusing view of the material (MS).</td>
<td>Using prereading strategies and guiding questions during free reading time.</td>
<td>How do I make sure that students grasp the important concepts in reading?</td>
<td>I want to be able to motivate students to want to read for more than just because they have to.</td>
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<td>My nightmare is that kids will leave this high school and never read again because they don’t value reading. It doesn’t seem important to them (HS).</td>
<td>Using reading logs, reading aloud, and integrating reading and writing.</td>
<td>How do we teachers get away from depending on only one way of teaching reading?</td>
<td>I wish that every teacher regardless of the content area would recognize the importance of reading.</td>
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<td>My nightmare is that students can read the words on the page, but have difficulty comprehending what they are reading (HS).</td>
<td>Allowing students choice in required reading. Ownership is important in reading.</td>
<td>What is the best method for assessing reading comprehension?</td>
<td>I wish I had the power to motivate students to read and love it.</td>
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<td><strong>Art</strong></td>
<td>My nightmare is that people will grow less and less aware of the importance and power of words— that they will read only insofar as they must and will not know the joy and triumph of being able to share subtle, precise thoughts and feelings by reading.</td>
<td>I am assigning drawing and painting projects students must complete by reading. They learn that drawing provides evidence of comprehension.</td>
<td>What do I do about the great discrepancy between students of different reading and ability levels?</td>
<td>I wish students could see words as elements of art, as lines, texture, colors, shapes, which compose beautiful individual statements from the heart.</td>
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<td><strong>Title I</strong></td>
<td>I have a fifth grader reading at a third-grade level. I help him pronounce words, and he’ll get it once, but when asked a minute later he can’t remember (MS).</td>
<td>I am using the accelerated reading program. It’s helping.</td>
<td>How can I get curiosity and excitement towards a textbook?</td>
<td>I wish I could stop time so I could catch all kids up in reading.</td>
</tr>
<tr>
<td><strong>Home Economics</strong></td>
<td>My nightmare is that many of my students’ parents read and write so poorly that they are unable to help their own children with simple tasks (HS).</td>
<td>I have students develop lessons where they read to children in our preschool program.</td>
<td>How do I actually teach reading skills within a content area like home economics?</td>
<td>I wish that students would be able to use what they learn in school to have a more viable life.</td>
</tr>
<tr>
<td><strong>Foreign Language</strong></td>
<td>Finding ways to get my students to read about other cultures that will interest them without sacrificing the integrity of what I want them to know. This is becoming increasingly more difficult because as a rule students read even less than they did in the past (HS).</td>
<td>I am using simple novels that students enjoy reading. It seems that everyone can get involved in a good story.</td>
<td>How can I teach foreign language to students who have no grasp of English?</td>
<td>I wish reading were an inborn, genetic gift that did not have to be taught, but rather could be expanded on through interest surveys and discussion.</td>
</tr>
<tr>
<td><strong>Vocational Education</strong></td>
<td>Students do not absorb what they read and usually do not pass a test or quiz over what they just read. Also, some students do well at reading and like to read while others sit and stare into space.</td>
<td>Using reading in labs, and providing time to read.</td>
<td>How much time should I spend on reading? How do students respond to reading?</td>
<td>I wish I had more time for reading and that students would enjoy reading and take time to do it.</td>
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<td>Industrial Arts</td>
<td>My nightmare is that students can’t comprehend the materials selected for my course, including reading simple instructions and taking tests (HS).</td>
<td>I’m trying to connect industrial arts to real life situations.</td>
<td>Exactly what should students be able to understand when reading?</td>
<td>I wish I had time to read what I want rather than what I must, and that students would read and comprehend all assignments.</td>
</tr>
<tr>
<td>Administrator</td>
<td>As a principal my nightmare is students that are nonreaders or whose reading performance is far below their peers, and that fewer of these students now qualify for assistance through special education (MS).</td>
<td>Our school is now emphasizing trade books and using Reading is Fundamental and Book It.</td>
<td>How do we give individualized reading instruction without pullout programs like Title I?</td>
<td>I wish that children would have print-rich home environments with timers on TV and video games.</td>
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<td>Reading scores are low and declining, and yet due to staff reduction and cutbacks, we have had to reassign and lay off our sixth-grade-reading teachers (MS).</td>
<td>Reading accountability has been moved up to seventh grade.</td>
<td>How can we better integrate reading across the curriculum?</td>
<td>I wish we could raise our reading scores.</td>
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<td>Children are learning to read, but the pressures of standardized testing and educational reform soon have us focusing on other disciplines such as math and science, saying we are “integrating” reading when in fact we slight the advances that would assist students later in life (HS).</td>
<td>Some teachers are using the accelerated reading program.</td>
<td>Will the controversy between whole language and phonics take center stage rather than focus on improved reading skills?</td>
<td>I wish that every student would be reading at grade level or above.</td>
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complexity of the problem. Therefore, readers are urged to keep in mind the advice of Carolyn Burke (personal correspondence, 1993): “We certainly can talk about complex problems in simple terms, but that no less reduces their complexity.”

Problem: Students can’t read, won’t read, or will read but fail to comprehend most important information from text.

Belief 1: “It’s a student thing...” Teachers across the curriculum see the problem with reading...
as a student thing. Students can’t read, are passive, and are reluctant to read because they do not find school-based reading personally meaningful or socially relevant to their lives. To a large extent, this is due to the fact that many students do not have a history of success and enjoyment with reading. Over time, students do not gain the positive experiences necessary to be successful readers. As a result, as they progress through formal schooling, students become less able to comprehend increasingly complex texts. Frustration begets frustration and failure begets failure, until, at the high school level students not only devalue, but virtually dismiss, reading as a tool to learn.

Belief 2: “It’s a teacher thing...” Teachers in middle and secondary school believe some of the problems associated with reading are really a teaching thing. On the one hand, they believe that if students at age 16, for example, would bring to the classroom the same curiosity about reading and teaming that children do at age 6, then they would not have to deal with reading at all. However, since it is clear that reading needs to be addressed, they prefer that others deal with the problem (e.g., “I wish I had an English teacher with my class to help with reading and writing”). Few believe that all teachers are ultimately teachers of reading, despite the obvious need to be so.

Teachers expressed a number of personal and professional reasons for having difficulty dealing with reading. Surprisingly, many teachers do not necessarily see themselves as voracious and sophisticated readers, unless perhaps when reading in their specific content area. Not surprisingly, then, they find it difficult to see themselves teaching reading, much less being able to motivate others to read.

It is also not surprising that at a professional level teachers express betrayal, frustration, and confusion. In an interesting turn of events, it is now teachers who feel “at risk.” Teachers feel betrayed because they were given no formal knowledge of reading in their teacher education training, frustrated because they have no personal experience with the teaching of reading, and confused because the number of reading specialists in schools is being reduced at the same time administrators are calling for improvements in reading scores. Moreover, teachers feel overwhelmed because they were “trained and hired to teach content, but are now being asked to also teach reading.”

The bottom line is that teachers feel they are being asked to teach what they do not know how to teach in addition to an already bloated curriculum in their content area. Individuals who know the least about reading are being asked to teach reading to students who need it the most.

Belief 3: “It’s a textbook thing...” Teachers also believe that reading problems may be related to textbooks. Increasing numbers of teachers are starting to seriously question the efficacy of using a single text as the basis for instruction in content areas. Teachers believe that many textbooks are written at a level far above the current reading abilities of students, and thus are unnecessarily confusing and complex. They also believe that textbooks are strictly content driven, and therefore are boring and uninteresting to students.

In addition, teachers believe that the use of a single textbook is driven by a “one size fits all mentality.” The assumption is that one book can accommodate different personal interests and varied reading abilities. Teachers across the curriculum know firsthand that students bring with them into the classroom different histories of reading, and therefore different values about reading and the role it plays in their lives. They also know that a single textbook can’t and doesn’t accommodate the students’ wide range of reading abilities. A more powerful assumption is that varied reading materials can better accommodate varied reading abilities.

What is problematic about this assumption is that for the most part middle and secondary school teachers have had little experience and even less formal education in selecting alternative or supplementary reading materials. Another problem is that in moving to a multiple-text versus a single-text mentality teachers feel caught between (a) trying to accommodate students’ reading needs while
meeting the curricular demands of the school and (b) trying to balance reading of student-selected materials with teacher-assigned materials deemed important for content area knowledge.

**Belief 4: “It’s a somebody else thing...”**

Finally, middle and secondary school teachers believe parents, colleagues, and elementary school teachers contribute to the problem of reading in junior and senior high school. Parents, for example, do not seem to stress and support reading at home as in years past. Instead, reading at home has been replaced by watching television and playing video games to the point where reading struggles, mostly unsuccessfully, to compete for young people’s time. Similarly, many teachers believe that colleagues do not recognize and stress the importance of reading and teaching reading across the curriculum in middle and secondary school. The pervasive view is that teachers don’t and won’t take responsibility for what they believe was the irresponsibility of others who were obviously remiss in their duty to teach children how to read. This view is perhaps best expressed by one high school teacher who stated: “It seems that not only am I now expected to teach what I don’t know, which is reading, because those who preceded me didn’t teach it, but also I am now being held accountable with reading, which is like me being held responsible for others’ irresponsibility.”

In many cases, the “others” referred to are elementary school teachers. To a large extent, upper level teachers believe that primary grade teachers simply aren’t teaching children the basic skills of how to read, or are not recognizing and remediating reading problems early enough. As a result, when elementary teachers promote children who can’t or don’t like to read, middle and secondary school teachers feel they, not parents or the elementary teachers, have to suffer the consequences.

**Exploring new possibilities**

I began this article by identifying some old reading nightmares of middle and secondary teachers. Their voices, heard collectively, represent a constellation of individual realities that, up to this point, depict the current status of reading mostly in terms of problems. Now, I want to focus on exploring new possibilities because, as Harste (see Crafton et al., 1995) once stated, “when reality becomes synonymous with possibility, it is time to get out of the teaching profession.” In essence, exploring new possibilities means creating new realities for teachers and students. To this end, I want to propose several starting points for seeing new possibilities in reading.

It seems obvious that colleges and universities need to reevaluate and rethink the role reading education plays within the teacher education curriculum. Otherwise, universities will continue to graduate students who are not only unaware of the nature of reading and the important role it plays in learning, but also ill-equipped to reach reading in a content area, much less across the curriculum. Clearly, preservice teachers need significantly more understanding of reading and experience teaching it to meet the complex demands of teaching reading in middle and secondary school. Therefore, universities need to increase the quantity and enhance the quality of experiences that preservice teachers have in teacher education programs.

Moreover, school districts and state departments of education need to reexamine the current level of commitment in the area of reading. Teachers need and want more information about and more experience with teaching reading. Otherwise, they will continue to feel uninformed and therefore unable to help those students who need help the most. Teachers will also continue to feel frustrated given the fact that, with or without additional help in reading, school districts and departments of education are still holding them accountable for students’ reading across the content areas. Schools, school districts, and state departments of education also need to hold themselves accountable. This means providing ongoing professional development that will support teachers in better understanding the complex nature of reading and the art of teaching reading to adolescents in middle school and young adults in secondary school.
Schools can help themselves by intentionally and systematically making reading a high priority with students and teachers. Schools can intentionally create a climate that says to teachers in professional ways and to students in practical ways that “we value reading in this school.” For example, schools can (a) plan ongoing professional staff development for teachers in reading across the curriculum; (b) organize in-school programs that encourage students and teachers to read; (c) assist teachers in building collaborative relationships with representatives of trade book companies to explore what reading materials beyond textbooks are currently available for use in the classroom; (d) create a faculty library replete with a variety of resources on recent advances in reading, reading instruction, and reading assessment in middle and secondary school; (e) invite teachers from across the curriculum to share reading strategies with colleagues at faculty meetings; and (f) provide teachers with time and encouragement to discuss with colleagues what new insights about reading and teaching they learned from trying new strategies in the classroom.

On a practical level, teachers can (a) use minilessons on reading as a part of their daily or weekly lesson plans, to provide powerful demonstrations to students of what good readers do when they read; (b) use different frameworks to support reading across the curriculum such as literature circles (Harste, Short, & Burke, 1988), readers workshop (Atwell, 1987), reading aloud, paired reading, and reading response logs (Rief, 1992); (c) set up a Readers in Residence program as a part of a library media center, in which student volunteers help other students with reading; and (d) begin faculty meetings and even the school day with an oral reading of a children’s picture book, poem, short fable, or an excerpt from a short story, novel, or play. The idea here is to help teachers and students change their old perception of reading in order to create a new reality that sees reading less as a nagging problem, and more as a tool for learning and thinking.

Changing perceptions of reading, however, is no small task. For instance, all too often teachers in middle and secondary school assume that the solution to reading problems is primarily an instructional issue. That is, teachers feel they lack a variety of reading strategies that they could use to spark student interest, which, in turn, could help them better comprehend complex reading assignments. This assumption partially explains why teachers associated reading pluses mostly in terms of individual reading activities and popular reading programs (see figure). These pluses are important. They indicate that teachers are aware of reading problems, and are exploring different strategies to incorporate reading into their content area. Perhaps teachers will start some new conversations about the power and potential of teaching reading across the curriculum, based on experiences using these strategies in the classroom.

Changing perceptions of reading, however, has to occur on at least two levels—one instructional, the other theoretical and curricular. Solving reading problems is not just a matter of teachers using more informed instructional techniques, although that is clearly a step in the right direction. It also involves a commitment by teachers to interrogate assumptions about learning and conceptions of curriculum that underpin different methods of reading instruction. Teachers should question to what extent these assumptions represent the best we currently know about learning and reading. The solution also requires teachers to see their instructional strategies as expressions of their personal values about how people learn in general, and learn to read in particular, and to reflect on the extent to which these values reflect recent advances in learning and reading theory.

What teachers value most can be seen by looking at what they devote the most time to. Conversely, what teachers don’t value tends not to be included in the curriculum or present in the classroom. In this instance, teacher voices across the curriculum echoed some discomfort with what they have valued over the years, and teachers are starting to change what they value most with reading.
This shift was expressed by one high school teacher who said, “I’ve been a social studies teacher now for 25 years, and I’m starting to think that maybe, just maybe, students have a problem in reading because as teachers we’ve been valuing the wrong things all this time.”

For instance, some teachers are placing more value on the social nature of reading, that is, on the view that reading is not strictly an individual activity, but a social engagement. Others value integrating reading with other disciplines, such as writing, art, and drama. Still others are using a wider variety of materials and supporting self-selection, and using reading materials that are personally meaningful and socially relevant to students.

Perhaps most important, however, is that teachers are placing more value on the notion that an interest in reading is ultimately an interest in learning. For instance, elementary, middle, and high school teachers all believe that learning to learn is a lifelong process, and that schools are designed to help students become more informed and more sophisticated learners as they progress through different grade levels. Teachers have not necessarily believed that learning to read is also a lifelong process, and that one of the purposes of schools is to help students become more strategic readers. Rather, teachers have assumed that students learned to read in elementary school and then read to learn in middle and secondary school.

Now, middle and secondary school teachers are placing more value on the notion that learning to read and reading to learn are actually the same process. This means that individuals of all ages have the potential to learn about reading and from reading. In this sense, reading isn’t something children learn to do just in elementary school. Rather, learning to read and reading to learn are interrelated processes that lifelong learners do to outgrow what they currently know and believe about the social world.

Interestingly enough, placing more value on the interrelationship between learning to read and reading to learn also opens up the door for new relationships between elementary school and middle and secondary school teachers. By seeing reading as a lifelong process, teachers in grades K–12 can start some new conversations about how they can support one another in helping all students become better readers and better learners. Moreover, by seeing reading as a tool for learning, teachers can help one another not only to use reading to spark student interest in content area learning, but also to use content area learning to spark interest in reading.

In this sense teaching reading in middle and secondary school isn’t just an addition to an already bloated curriculum; it also provides the potential for teachers to use reading to create personally meaningful curriculum with students. In the long run, these new values may not be a cure for all our reading nightmares, but at least we will be able to teach better by day and sleep better at night.

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Using Visuals to Enhance Secondary Students’ Reading Comprehension of Expository Texts

by Glenda Rakes, Thomas A. Rakes, and Lana J. Smith

Of the skills necessary to help students understand and remember what they read, the ability to interpret visual presentations in text and produce related visuals may be frequently overlooked. Referred to as graphic literacy or visual literacy, it can be defined as the ability to interpret visual messages accurately along with the ability to create such messages. Visuals typically include charts, graphs, diagrams, maps, and photographs, and they are found in abundance in content area texts, perhaps due in part to the USA Today influence on the publishing industry. Visuals provide a wealth of information that both reinforces and supplements text content. The ability to read, interpret, and construct graphic displays is of growing importance in an increasingly visual world as students interact more with computers and electronic texts which often rely heavily on graphic interfaces and graphic aids.

Students are not necessarily proficient in using and interpreting visual displays. A national study (Kirsch, 1985; Kirsch & Jungeblut, 1986) that investigated the ability of students to use visuals indicated that the majority of seventeen-year-olds and young adults could perform only moderately well with visuals, and very few could perform adequately at more advanced levels (Gillespie, 1993). Many students have difficulty interpreting visuals, yet the development of visual literacy typically receives limited attention in basals and content area texts. Addressed under the topics of study skills or illustrative aids, visuals are usually relegated to a place of lesser importance than other comprehension skills. Since visuals are found frequently in all types of expository text materials, and since they provide an abundance of text-related information, the need for instructional activities that help students understand and use them seems clear. The discussion here presents strategies that can enhance reading comprehension by helping students use graphic aids more effectively and by helping students create their own graphic aids.

Why should teachers use visuals?

Visuals can play an important part in learning. Humans are typically very visually oriented, and the retention of information presented in visual form usually exceeds the retention of information presented verbally (Levie & Lentz, 1982). Learners can enhance what they read by reading and interpreting visuals accurately, and by creating their own related visuals. Vacca and Vacca (1993) believe that when students learn how to use and construct graphic representations, they are in control of a study strategy that allows them to identify what parts of a text are important, how ideas and concepts encountered in text are related, and where they can find specific information to support more important ideas (p. 267). Learners need to see these relationships and learn how to link ideas. When students use graphics while studying a concept, they build these links.

Why are visuals effective?

Several authors support the value of using visual materials with text. Craik and Lockhart (1972) and Pavio (1986) agree that the use of visuals with text creates both verbal and nonverbal codes as well as connections between the two. Individuals can process information in a variety of ways, and these processes determine what is learned and how well. There appear to be qualitatively different levels of processing, and information more deeply processed is likely to have a stronger memory path,
and therefore, will be remembered longer (Craik & Lockhart, 1972).

Breadth of processing (Craik & Tulving, 1975) also occurs when identical content is used in two different forms (connected discourse and visual representation). This should lead to better memory because understanding of one form is likely to improve understanding of the other form—something that cannot occur with repetition of the same form. Thus, the spatial nature of illustrations opens a range of learning possibilities not available when language is used alone.

Since students tend to expend the least possible effort on academic tasks, effective instruction should require them to engage in deep, meaningful processing. Meaningful learning requires that the material be processed effectively, rather than simply recycled by rote. Instructional activities involving graphic aids help learners attend to stimuli, access earlier knowledge, restructure that knowledge, and place the new information into memory.

How can teachers use visuals?

Mayer (1980) views illustrations as “potential vehicles for helping students understand expository text” (p. 240) using three primary cognitive processes that can enhance reading comprehension: (a) direct learner attention to critical information in the text; (b) direct learners to build internal connections among ideas found in the text; (c) build connections between ideas in the text and the learner’s existing knowledge.

Although illustrations can facilitate learning verbal information, students tend to ignore illustrations because they believe they can get all the information they need from what they read (Olson, 1977). Teachers may reinforce this behavior by also focusing on the text and ignoring graphic aids in the classroom. It appears, too, that even when students look at illustrations, they frequently do not learn from them unless they are specifically directed to do so (Levie & Lentz, 1982). If they notice anything, students normally notice only the general aspects of an illustration, often failing to attend to the details (Friedman, 1979). Readers, therefore, need practice in applying specific strategies for using illustrations effectively.

If the ways students see, interpret, and use illustrations can be guided, then learning should increase because their attention will be directed to relevant content and will not as likely be misdirected. There are two specific ways teachers can achieve this: using textbook visuals and using student-made visuals to reinforce and expand concepts.

Strategies for using textbook visuals

To produce a detailed inspection of text illustrations, teachers should use strong cueing strategies that direct attention to relevant information (Holiday & Harvey, 1976). One strategy is to provide written or oral directions immediately before using illustrations. For example, “On the map, notice the following features.” or “As you read this passage, note this aspect of the accompanying chart.” These verbal commands are effective appeals for learner attention. A second strategy involves the use of study questions that indicate important features in accompanying visuals. Students tend to pay more attention to the illustration and learn the information in the text better when this strategy is employed (Holiday, 1983; Winn, 1987). The cues must be precise because, as Winn and Holiday (1984) discovered, students who are cued to look at all the information provided in an illustration learned no more than students with no questions to study. Students whose attention was directed to specific items learned much more. These findings suggest that unless directions are carefully devised, they can actually misdirect attention away from important details.

Winn and Holiday (1984) also report that study questions that were too explicit resulted in diminished learning. Questions should not have such obvious answers that students do not have to think about what they are reading. Such over-prompting can reduce student inspection of the
material, reduce attention to the object of the study questions, and cause fatigue and boredom due to a lack of new information. Questions should be used to help readers pay attention to and learn only critical information.

A third strategy for using textbook visuals involves student evaluation of graphics in content area materials. Reinking (1986) used this component of graphic literacy in what he calls the Graphic Information Lesson (GIL), designed to help students interpret and think in different ways about graphics and their relationship to the text.

The evaluation component of the GIL asks students to judge the validity of a graphic based on what they have read. Reinking suggests that a teacher might create a pseudograph—a graphic that may or may not be accurate or believable based on the text. Students, working either alone or in small groups, compare the pseudograph to one in the text. This allows students to review text information and demonstrates how effective readers use graphic information. In addition, it can provide assessment of how well students use graphic skills.

For example, if students had just read that during the Civil War period, the South had only 14% of the factories in the country and had seen a graph similar to that shown in Figure 4, the teacher might construct a pseudograph like the one seen below to provoke critical thinking.

Figure 1

Advertisement in an Atlanta newspaper in 1862.

Manufacturing jobs available
Hiring up to 500 men. Inquire at
25 Lee Avenue, Atlanta, Georgia

If there are several related visuals in a text, students can determine which is best and defend their decision. They can also discuss the relationships between several visuals. Finally, they can critique a visual and make suggestions for changes that could make the graphic more clear or more useful.

Strategies for using learner-generated visuals

Learners can also benefit from creating their own visuals. In general, those who create their own illustrations learn more than those who are simply directed to read the text (Fleming & Levie, 1978). Levin, Anglin, and Carney (1987) note, however, that learners deficient in comprehension and word-recognition skills may not benefit from instructions to create visuals. However, when the vocabulary is modified so readers can decode the passage adequately, benefits of visual elaboration strategies become apparent.

Creating visuals is a form of elaboration in which the learner creates some type of symbol and, in doing so, engages in deeper processing of text which, in turn, leads to better memory for the information (Holley & Dansereau, 1984). Learning should be enhanced since the new information is incorporated into the students’ experiences.

There are several ways that teachers can use learner-generated visuals in the classroom.

Creating illustrations for embedded questions. Instructions direct students to pause and draw a picture of important sections of the text while they read a passage, thus processing the information a second time as shown in Figure 2. Scores on post-tests in two studies were generally higher for those who created such illustrations than for those who simply read the text (Cox, Smith, & Rakes, 1994; Snowman & Cunningham, 1975).
The only governmental function that is not locally or tribally administered is the matter of tax collection. This is handled through tax collectors appointed directly by the national government. Payment is usually made in wheat and beets which are grown in the hilly region. 

Upon the death of a tribe member, the last of the rituals takes place. The ceremony takes place in the Night Cave. His body is placed on a funeral pyre inside the cave, around which the adult villagers assemble in a circle and perform a funeral chant. They wail and shout throughout the night. When the sun rises, the pyre is lit and the body is cremated.

Using illustrations to summarize text. After some experience with the drawing strategy, students can be asked to draw pictures of the most important events in a selected text or asked to evaluate the illustrations created by their peers (McConnell, 1993; Reinking, 1986). Simplicity, or lack of artistic quality does not interfere with the effectiveness of the strategy. In fact, attempting too much detail may actually divert attention away from the text. It is important that students understand they are not evaluated on the quality of their drawings, and that the process is more important than the final product.

Creating semantic maps. The effectiveness of semantic mapping and related forms of graphic organizers based on the long-advocated ideas of Ausubel (1963) has been well documented. Semantic mapping helps students focus on important ideas in text and shows them how they relate. As an organizational tool, it illustrates categories and relationships that accompany a core question or idea (Vacca & Vacca, 1993). However, many of these graphic organizers are created by teachers and simply supplied to the students. Some suggest that such graphic aids may be more effective if they are generated by students or if students are encouraged to manipulate the graphic in some way (Norman and Rumelhart, 1975). Teachers could create a skeleton map with only main topics supplied and ask students to complete the map. With practice, students could later be asked to create their own complete graphic organizers.

Completing partial drawings or labeling drawings. Similar to the suggestion above, teachers can provide partial diagrams or drawings and have students complete them. In one study (Snowman & Cunningham, 1975) middle school students were given a drawing already labeled with 15 parts of a balloon discussed in the text. These students remembered less of the location of these parts on a post-test than students who were given the drawing and told to label the balloon themselves and complete the drawings.
**Tracing a text illustration.** When undergraduate college students traced and studied a related illustration for five minutes after reading a text, those who constructed the visual scored consistently higher on post-tests than did students who were simply instructed to read the text (Snowman & Cunningham, 1975).

**Creating flowcharts.** Picturing the steps in a procedure so as to put the directions into flowchart form can improve students’ speed in performing those procedures and reduce the number of errors. Having students put directions into flowchart form can improve comprehension of the directions as compared with the use of written or oral directions (Heinich, et al., 1993). The example in Figure 3 is adapted from an experiment described in a science text.

**Figure 3**

[Flowchart diagram]

**Creating maps.** Students can construct a rough map that represents major features of territory described in a passage and then combine these with illustrations of people and places depicted in a story. Creating maps consistently improves memory for related text information (Kulhavy, Stock, Peterson, Pridemore & Klein, 1992).

**Creating charts and graphs.** Teachers can have students create a variety of charts and graphs with as few as two or three pieces of information that summarize specific data in the text. They can create their own charts and graphs or use one of many simple computer programs. These visuals can also be used for comparisons of interval type information that students may encounter, for example, in social studies or science texts.

Students are asked to construct the graph, analyze it, and draw conclusions based on the information presented there. From the graph shown in

"Take four wooden blocks and make sure they are exactly the same size. Screw a cup hook into the middle of the large face of each block. Place the blocks in pairs, and glue each of the pairs together with one of the glues to be tested. Let the glues dry overnight. Suspend each pair of blocks with strings. Then add weights to another string tied to the lower side of the blocks. Continue adding weights till one pair of blocks pulls apart."

Figure 4 students might be asked: What category showed the greatest difference between the assets of the North and those of the South? How might this affect the fighting of a war? Does the graph indicate which side had more soldiers? If not, what assumptions could be made about this?

Figure 4

“The Union had 71% of the total population, while the South had only 29% at the start of the Civil War. Many other differences also influenced the war. For instance, the South trailed greatly in the number of factories, having only 14% of them. This factor accounts for the gap in the value of manufactured goods of the North and the South. The Union accounted for 92% of the value of manufactured goods, while the Confederacy had a mere 8%. In regard to farm acreage, the amounts were somewhat more even: the South had 35% of the land devoted to farming. The North also led in the number of railroad miles, having 71% of the total.”


**Creating icons that symbolize main ideas in text.** Students can create and use icons or symbols that represent the main idea of a content area passage. For example, students who read a passage on empathy could then be asked to create a poster containing an icon for the main idea, perhaps a shoe meaning that one should “walk a mile in another’s shoes” before judging another. The posters could be used to stimulate group discussion.

**Solving mathematics and science word problems.** For solving word problems in mathematics and science classes, students can draw sketches and diagrams that illustrate the situations before attempting to solve the problems mathematically. Picturing a problem in this way facilitates understanding (Heinich, et al., 1993).

**Using internal visual images.** Several studies have documented the positive effects of instructing students to generate images internally— picturing something in their mind’s eye based on what they have read (Cox, Smith, & Rakes, 1994; Dansereau, 1978; Snowman & Cunningham, 1975; Steingart & Glock, 1979). Imaging allows students to use their knowledge, attitudes, skills, and experiences to establish a personal meaning for what they read, thus increasing learning.

If a teacher instructs students to form their own mental image of a concept, recall can greatly improve. Recall of text information in some studies that used this technique ranged from 50% to 100% greater than recall for those who simply read the text, far exceeding differences for many other kinds of strategies (Fleming & Levie, 1978).

For unskilled readers, this strategy may be more effective than are student-made visuals. Several studies suggest that learners who are lower in verbal abilities have greater difficulty processing redundant information (Allen, 1975; Cox, Smith, & Rakes, 1994; Winn, 1980). The process of drawing an image adds another level of processing that may confuse these readers. Using internally generated images may reduce this redundancy for less skilled readers and produce more positive learning gains.

The type of thinking processes produced by the various graphic techniques will determine what the learning outcome will be. It is important for teachers to determine exactly what specific instructional objectives they want students to achieve, what level of comprehension (Vacca & Vacca, 1993) they
want students to achieve, and to match that desired outcome with the appropriate graphic technique. See Figure 5, Guide to Selecting Appropriate Graphic Techniques, that follows.

Visual strategies such as those suggested above can be used easily in most classrooms. Most graphic strategies can be implemented without special materials or technology. Once students understand the strategies and have some experience with them, they can be used with little intervention on the part of the teacher.

**General suggestions for using visuals in the classroom**

Students need incentives to try different learning strategies. All students need encouragement, but lower ability students are typically less willing to give the extra effort required to use new ways of learning. Teachers can try visual elaborations in large group activities, small group settings, and then in individual projects. They should model the use of visuals with textbooks or supplemental materials (e.g. newspapers, maps, photographs) in their own classroom presentations. Allowing sufficient time in class and incorporating visuals into graded assignments and tests can also encourage students to explore these strategies. The use of visuals in tests, particularly tests which measure analysis and application of information, can provide excellent forms of evaluation which are closely matched to instructional objectives. Use illustrations like the one below to test understanding of concepts. Let students create examples of such test questions and share them with their peers to review concepts.

<table>
<thead>
<tr>
<th>If desired learning outcome is</th>
<th>and desired level of comprehension is</th>
<th>and thinking processes involved are</th>
<th>then use graphic techniques like</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recall/Remembering Facts (getting information directly from the text)</td>
<td>Literal: “Reading the lines”</td>
<td>Analysis, Organization, Categorization</td>
<td>● Semantic maps&lt;br&gt; ● Flowcharts&lt;br&gt; ● Labeling&lt;br&gt; ● Tracing&lt;br&gt; ● Text cues&lt;br&gt; ● Adjunct questions&lt;br&gt; ● Drawings</td>
</tr>
<tr>
<td>Interpretation/Inference (perceiving relationships)</td>
<td>Interpretive: “Reading between the lines”</td>
<td>Elaboration: ● creating images&lt;br&gt; ● creating examples&lt;br&gt; ● paraphrasing</td>
<td>● Drawings&lt;br&gt; ● Charts/Graphs&lt;br&gt; ● Maps&lt;br&gt; ● Icons</td>
</tr>
<tr>
<td>Application/Use/Transfer (expressing opinions; forming new ideas)</td>
<td>Applied: “Reading beyond the lines”</td>
<td></td>
<td>● Drawings&lt;br&gt; ● Test questions with visuals&lt;br&gt; ● Pseudographs</td>
</tr>
</tbody>
</table>
1. Each of the containers A, B, and C contain a different liquid. An identical plastic cube has been placed in each container. Which one of the materials is the more dense?
A. Liquid A  
B. Liquid B  
C. Liquid C  
D. The plastic cube

Individual differences that are revealed in the construction of visuals must be embraced. There can be no one single standard of right or wrong. However, it is important to monitor student-made visuals to ensure that no incorrect information is incorporated into the visuals and to provide feedback regarding student understanding. Student-produced visuals show important differences in point of view that can be used to help students accept and value diversity and the range of understanding and experiences within a group.

**Summary**

Rigney (1978) suggests that merely instructing students to “learn” something from text does not necessarily ensure that learning will take place. However, it is possible to enhance comprehension by teaching learners to gain better control over the kinds of information processing in which they engage. Using strategies that direct learner attention to critical aspects of text illustrations and that direct them to create their own graphic organizers and illustrations can help students understand and remember what they read.

Using strategies that increase learner efficiency with graphic aids are particularly impressive because they can quickly help students learn how to learn. These strategies can demonstrate to students that they can control the ways in which they learn and remember. They can also emphasize the value of organization and active involvement in the learning process.

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Improving the Reading Skills of Adolescents

by John H. Holloway

Reading skills are essential to the academic achievement of middle and high school students. After seven or eight years of elementary education, however, many students still lack sufficient proficiency as readers. Although 8th and 12th graders have steadily improved on a U.S. national assessment that measures fundamental skills, such as reading for literary experience, reading to gain information, and reading to perform a task (National Center for Education Statistics, 1999), many adolescents continue to perform at unacceptable levels. What can secondary educators do to help these learners improve?

To address this problem, Nancy Collins (1996) searched for underlying causes. She found that the major reasons for lack of reading comprehension among remedial readers at the secondary level are poor motivation, lack of experience, and egocentricity. Collins concluded that students who are not successful in the classroom have not had experiences with language in meaningful situations.

Motivation Matters

As in Collins’s report, intrinsic motivation, which involves having an interest in content and wanting to learn for learning’s own sake, is a theme that runs through research on improving adolescent reading skills. According to Guthrie, Alao, and Rinehart (1997), intrinsic motivation for literacy and other academic subjects declines in middle school. Teachers, however, can help students regain their motivation and improve their reading performance by connecting reading assignments to real-world learning experiences. In addition, Guthrie and his colleagues believe that teachers must give students self-directed activities, invite collaborative learning, and allow for varied forms of self-expression.

What are secondary schools doing to improve students’ reading skills? When Arlene Barry (1997) conducted a national survey on the status of high school reading programs, she discovered a significant reduction in reading services at this level. Further, her research showed that schools rely heavily on standardized tests for program placement and evaluation. In addition, she found a movement away from pullout programs. Instead, survey respondents expected educators to teach students reading in their content classes. Barry found, however, that many content teachers resist their role as reading teachers, citing a lack of time, skill, and support.

One Success Story

At least one school seems to be an exception to those described in Barry’s study. Joyce, Showers, Scanlon, and Schnaubelt (1998) conducted a study at San Diego’s Morse High School. In fall 1996, more than half of the 9th and 10th graders were reading below the 50th percentile, as measured by the Abbreviated Stanford Achievement Test (ASAT). Despite a significant number of dropouts in grades 11 and 12, fewer than 45 percent of the remaining students scored at or above the 50th percentile on the ASAT.

In spring 1996, teachers established a formal reading course in the secondary curriculum. The reading teachers received extensive staff development, and they designed and implemented curriculum and instructional strategies with a high probability of success for older beginning readers. The new reading course included extensive reading and vocabulary development, comprehension exercises, and writing. In addition, the new reading course stressed vocabulary building through natural language and through reading in school.
and at home. Listening to teachers read was a significant component of the instructional strategy.

At the end of the first semester, students gained more than one grade level in reading achievement. This gain was more than four times what we would expect had there been no intervention. At the end of the second semester, the gain was about five times the mean gain that these students had made during a comparable period of time in school.

**Fostering Improvement**

The success of students at Morse High School has been impressive. Ballash (1994) maintains that high school teachers must constantly show remedial readers their progress. She also states that to help students develop metacognition, teachers must show them how reading strategies are effective in improving their reading comprehension. Finally, she found that teachers must direct students to reread for meaning, provide plenty of content for language learning, and allow students to use a speaking vocabulary that is greater than their reading vocabulary.

Nancy Farnan (1996) believes that a similar repertoire of teaching strategies should be used at the middle school level. She contends that reading skills will improve only when literature leaves lasting impressions on the students and when students begin to monitor their own understanding. When they realize that they do not understand what they are reading, they must be capable of mobilizing strategies to correct the problem. Students master these skills when they actively construct meaning, learn more about themselves and others, read from a variety of sources, and view reading as an enjoyable experience.

Researchers agree that to improve the reading skills of adolescents, teachers should consider using any medium that stimulates students’ interests and involvement in language. As Nancy Collins (1996) says, “The only way to improve reading skills is to read.”

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About ASCD

Founded in 1943, the Association for Supervision and Curriculum Development is a nonpartisan, nonprofit education association, with international headquarters in Alexandria, Virginia. ASCD’s mission statement: ASCD, a diverse, international community of educators, forging covenants in teaching and learning for the success of all learners.

Membership in ASCD includes a subscription to the award-winning journal Educational Leadership; two newsletters, Education Update and Curriculum Update; and other products and services. ASCD sponsors affiliate organizations in many states and international locations; participates in collaborations and networks; holds conferences, institutes, and training programs; produces publications in a variety of media; sponsors recognition and awards programs; and provides research information on education issues.

ASCD provides many services to educators—prekindergarten through grade 12—as well as to others in the education community, including parents, school board members, administrators, and university professors and students. For further information, contact ASCD via telephone: 1-800-933-2723 or 1-703-578-9600; fax: 1-703-575-5400; or e-mail: member@ascd.org. Or write to ASCD, Information Services, 1703 N. Beauregard St., Alexandria, VA 22311-1714 USA. You can find ASCD on the World Wide Web at http://www.ascd.org.

ASCD’s Executive Director is Gene R. Carter.

Belief Statements

Fundamental to ASCD is our concern for people, both individually and collectively.

- We believe that the individual has intrinsic worth.
- We believe that all people have the ability and the need to learn.
- We believe that all children have a right to safety, love, and learning.
- We believe that a high-quality, public system of education open to all is imperative for society to flourish.
- We believe that diversity strengthens society and should be honored and protected.
- We believe that broad, informed participation committed to a common good is critical to democracy.
- We believe that humanity prospers when people work together.

ASCD also recognizes the potential and power of a healthy organization.

- We believe that healthy organizations purposefully provide for self-renewal.
- We believe that the culture of an organization is a major factor shaping individual attitudes and behaviors.
- We believe that shared values and common goals shape and change the culture of healthy organizations.

2002–03 Executive Council

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