Reading Strategies to Support Struggling Readers

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When Students Struggle We Must Ask Ourselves Why?

1. Would he understand it if you read it to him?

2. Does oral reading seem effortless?
Figure 1. Two Questions to Consider When Students Display Reading Comprehension Difficulties, from Essentials of Assessing, Preventing and Overcoming Reading Difficulties by David Kilpatrick (2013).
Diagnostic Decision Tree for Reading, adapted from CORE Assessing Reading: Multiple Measures by Literacy How, Inc.
Primary Characteristics of Struggling Readers 
in Middle and High School

• Less fluent readers

• Sight word vocabularies many thousands of words smaller than average readers

• Usually know the meanings of fewer words

• Usually have less conceptual knowledge

• Less skilled in using strategies to enhance comprehension or repair it when it breaks down
To maintain grade level reading skills between grades 3 and 10, students must:

- Learn to recognize many thousands of new words “by sight” in order to maintain fluency
- Learn the meaning of many thousands of new words
- Grow in knowledge of the world and how it works
- Improve their thinking and reasoning skills.
- Learn to utilize more complex reading strategies

In middle and high school, reading can be increasingly defined as “thinking guided by print.”
Many Strands Are Woven into Skilled Reading

Word Recognition
- Phonological Awareness
  - syllables, phonemes, etc.
- Decoding
  - alphabetic principle, spelling-sound correspondence
- Sight Recognition
  - of familiar words

Grammar Comprehension
- Background Knowledge
  - facts, concepts, etc.
- Vocabulary
  - breadth, precision, links, etc.
- Language Structures
  - syntax, semantics, etc.
- Verbal Reasoning
  - inference, metaphor, etc.
- Literacy Knowledge
  - print concepts, genres, etc.

Skilled Reading
Fluent execution and coordination of language comprehension and word recognition

Figure 1.9 Reading Rope (Scarborough, 2001)
Types of Comprehension

**Listening**: understanding the meaning of spoken words

**Reading**: understanding the meaning of written words
“Children cannot understand written language any better than they can understand oral language.”

(Fletcher, 2007)
Standard Support for the Types of Comprehension

In order for students to do this...
RI.5.3 Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

They need to be able to do this...
SL.5.4 Report on a topic or text or present an opinion to support main ideas or themes.
- Sequencing ideas logically.
- Use appropriate facts.
- Use relevant, descriptive details.
- Speaking clearly at an understandable pace.
The Need for Knowledge

“Comprehension is not a skill like word recognition that can be mastered in a relatively short time, but rather a collection of knowledge and processes that takes many years to acquire.”

An Experiment

Junior high students were asked to read a passage about baseball on a standard reading test.
• Half were considered good readers.
  ○ Half of the good readers knew a lot about baseball.
• Half were considered poor readers.
  ○ Half of the poor readers knew a lot about baseball.

What do you think the results were?
## Past Reading Topics Found on the NAEP

### NAEP Reading Topics

<table>
<thead>
<tr>
<th>4th Grade</th>
<th>8th Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue crabs</td>
<td>Oregon trail</td>
</tr>
<tr>
<td>Brazilian beetles</td>
<td>Great white shark</td>
</tr>
<tr>
<td>Antarctica penguins</td>
<td>Anasazi Indians</td>
</tr>
<tr>
<td>Ellis Island</td>
<td>19th Amendment</td>
</tr>
<tr>
<td>Woman astronaut</td>
<td>Robots</td>
</tr>
<tr>
<td>Telescopes and space</td>
<td>Cane Toads</td>
</tr>
<tr>
<td>Cultural stereotypes (N)</td>
<td>Bus schedules</td>
</tr>
<tr>
<td>Fishing with granddaddy (N)</td>
<td>Chinese Emperor (N)</td>
</tr>
</tbody>
</table>

“Reading tests are knowledge tests in disguise” (Willingham, 2015)

Classroom Connection: Background Knowledge

zebra muscles
Zebra Mussels


The Zebra mussel, Dreissena polymorpha, is a bivalve mussel native to freshwater lakes of southeast Russia. Zebra mussels are filter feeders. When in the water, they open their shells to admit food. Zebra mussels get their name from the striped pattern on their shells, though not all shells bear this pattern. They are usually about the size of a fingernail, but can grow to a maximum length of nearly two inches. Its native distribution is the Black Sea and Caspian Sea. Zebra mussels are considered an invasive species in North America, Great Britain, Ireland, Italy, Spain, and Sweden.

What just happened in your reading?

STOP

Is there anything you need to reread?
**Effects:** Zebra mussels are a great nuisance to people. Since colonizing the Great Lakes, they have covered the undersides of docks, boats, and anchors. They can grow so densely that they block pipelines, clogging water intakes of municipal water supplies and hydroelectric companies.

They also cleanse the waters of inland lakes, resulting in increased sunlight penetration and growth of native algae at greater depths. This proves beneficial for fish most of the time, helping the fish live in better conditions. They may also decrease the recreational value of inland lakes because once the mussels have devoured all the microorganisms in the water, weeds proliferate.

**Reproduction:** An adult female zebra mussel is one of the most reproductive organisms in the world. It may produce between 30,000 and 1 million eggs per year.

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What just happened in your reading?

STOP

Is there anything you need to reread?
Spread: In the U.S., they were first detected in the Great Lakes in 1988. It is believed they were inadvertently introduced into the lakes in the ballast water of ocean-going ships traversing the St. Lawrence Seaway. Since adult zebra mussels can survive out of water for several days or weeks if the temperature is low and humidity is high, boats provide temporary refuge for clusters of adult mussels that could easily be released when transoceanic ships drop anchor in freshwater ports.

From their first appearance in American waters in 1988 zebra mussels have spread to a large number of waterways, disrupting the ecosystems, killing any local mussels (primarily by outcompeting native species for food, and damaging harbors, boats, and power plants). The cost of fighting the pests at power plants and other water-consum ing facilities is $500 million a year in the U.S., according to the Center for Invasive Species Research at the University of California, Riverside.

A common inference made by scientists predicts that the zebra mussel will continue spreading passively, by ship and by pleasure craft, to more rivers in North America. Since no predator or combination of predators has been shown to significantly reduce zebra mussel numbers, such spread would most likely result in permanent establishment of zebra mussels in many North American waterways.

What just happened in your reading?

Is there anything you need to reread?
## Text Structures

<table>
<thead>
<tr>
<th>Structure</th>
<th>Graphic Organizer</th>
<th>Key Words</th>
</tr>
</thead>
</table>
| Description     | ![Diagram](image) | • for example  
                         • specifically  
                         • characteristics of  
                         • for instance  
                         • such as  
                         • qualities of |
| Sequence        | ![Diagram](image) | • to start with  
                         • continuing  
                         • before  
                         • after  
                         • more recently  
                         • not long after  
                         • finally |
| Cause and Effect| ![Diagram](image) | • as a result  
                         • because  
                         • since  
                         • therefore  
                         • if, then  
                         • nevertheless |
| Compare and Contrast | ![Diagram](image) | • both  
                         • neither  
                         • in common  
                         • differences  
                         • similarly  
                         • in contrast |
| Problem and Solution | ![Diagram](image) | Problem  
                         • question  
                         • puzzle  
                         • query  
                         Solution  
                         • answer  
                         • response  
                         • reply |

### Graphic Organizers

- Description
- Sequence
- Cause and Effect
- Compare and Contrast
- Problem and Solution
Vocabulary Skills

“The need for a broad vocabulary should be self-evident. It’s hard to understand the meaning of a sentence if you don’t know the meaning of the constituent words. There are times when you can deduce the meaning of an unknown word from the context, but you need to understand most of the text to be able to puzzle out the meaning of the unknown word.”

Vocabulary

Students need to realize:

- Words exist in networks or families

- Words have histories and knowing these histories helps with spelling and connecting to other words with similar origins

- Words contain meaningful parts that can be learned and applied to other words to work out their meaning too.
Word Knowledge: Aim for “Deep Lexical Quality” (Perfetti, 2011)

- Antonym
- Synonym
- connotation
- denotation
- Multiple meanings
- Examples in context:
  - Sounds, spelling, meaningful parts; words it is to be distinguished from.
**native**

- Being such by birth
- Member of original inhabitants
- Of, belonging to
- Natural

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**Examples in context:**
- native
- Nat = born/birth
  - -ive = adj. tending to or doing

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**Connotation**
- Being by birth
- Being such by birth
- Member of original inhabitants
- Of, belonging to
- Natural

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**Word Breakdown:**
- /n//a//t//i//v/ Na’ / tive

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**Word Parts:**
- mother
  - domestic, local
There is no comprehension strategy powerful enough to compensate for the fact that you can’t read the words.

- Dr. Anita Archer
How We Recognize Words

unreachable
un-reach-able
un-reach-a-ble
u-n-r-ea-ch-a-b-le
u-n-r-e-a-c-h-a-b-l-e

Units of Analysis

word
morpheme
syllable
grapheme
letter
What do we know about the effectiveness of interventions for older students who continue to struggle in reading?
Improving Reading Skills in Middle and High School

- Schedule a 90 minute block every day for other students reading below grade level
- Word level skills - fluency
- Strategy instruction and engagement in thinking about text
- Both embedded and systematic vocabulary instruction
- Lots of guided, supported practice in reading

FCRR - Torgeson
Research

- Cooperative Learning
- Content teachers are in the best position to teach the strategies
- Bundling strategies
The Standards and Science

Content Standards: Math, Science, Social Studies

Language Standards

Reading (RI and RL) Standards

Reading Foundational Standards

Scarborough’s Rope

LANGUAGE COMPREHENSION
- BACKGROUND KNOWLEDGE (facts, concepts, etc.)
- VOCABULARY (breadth, precision, links, etc.)
- LANGUAGE STRUCTURES (syntax, semantics, etc.)
- VERBAL REASONING (inference, metaphor, etc.)
- LITERACY KNOWLEDGE (print concepts, genres, etc.)

WORD RECOGNITION
- PHONOLOGICAL AWARENESS (syllables, phonemes, etc.)
- DECODING (alphabetic principle, spelling-sound correspondences)
- SIGHT RECOGNITION (of familiar words)

SKILLED READING: Fluent execution and coordination of word recognition and text comprehension.
Is it really possible to substantially improve the reading skills of struggling readers after elementary school?

The greatest danger for most of us is not that our aim is too high and we miss it, but that it is too low and we reach it.

Michelangelo
Resources:

Etymology
https://www.etymonline.com

Word Trees:
https://membean.com/treelist

Matrix Makers:
http://www.neilramsden.co.uk/spelling/matrix/temp/index.html