# Strategy Instruction for the Inclusive Classroom

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NJCIE 2013

## Objectives

- As a result of this presentation, participants will be able to:
  - Describe strategy instruction as an effective tool for improving academic performance in both general and special education students
  - Demonstrate the use of strategy instruction for reading, math, and writing/spelling by practicing with colleagues
  - Evaluate the strategies demonstrated and determine which might be appropriate for use in their classrooms

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## OVERVIEW OF STRATEGY INSTRUCTION

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## What Are Strategies?

- Learning strategies are:
  - The thoughts and/or actions students use to complete learning tasks
    - Typically consist of a set of steps or procedures
    - Incorporate prior knowledge to enhance learning and performance
    - Involve the application of basic skills in completing complex tasks

(Center for Literacy Studies, 2006)

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## Strategy Development

- Some students can develop effective strategies independently when repeatedly performing tasks
- Other students need prompts and models to help them develop effective strategies
- Still others require explicit instruction, modeling, practice, and feedback in learning to apply strategies properly

(Lenz, 2006)

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## Strategy Development cont….

- Internal vs. External
  - Causes of success or failure as inside or outside of oneself
- Controllable vs. Uncontrollable
  - Belief that causes for success or failure are under direct control or other influences (e.g., effort vs. luck)
- Stable vs. Unstable
  - Extent to which causes of success or failure have remained consistent over time

(Reid & Lienemann, 2006)

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## Instructing Strategy Use

- Processes
  - Predicting
  - Questioning
  - Mnemonics
- Metacognition
  - When to apply → generalization
  - Monitoring
  - Redirecting
  - Choosing new strategy

(Lenz, 2006) 7

## Instructing Strategy Use cont….

- Explicit instruction and numerous practice opportunities required to ensure students see connection between strategy and academic demand
- Ongoing monitoring and feedback necessary to ensure successful applications

(Lenz, 2006) 8

## Remember….

- Strategies should be
  - Facilitative and essential
    - The purpose should be to improve performance
  - Willful and effortful
    - Responsibility shifts to student
  - Clearly linked to task performance

(Reid & Lienemann, 2006) 9

## READING COMPREHENSION STRATEGIES

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## Narrative: Story Grammar

Who is the main character?

↓

When and where did the story take place?

↓

What did the main character do?

↔

How did the main character feel?

↓

How did the story end?

(Reid & Lienemann, 2006) 11

## Story Grammar cont….

- Step 1: Read your Story Grammar questions.
  - This reminds you what information you are looking for.
- Step 2: Read the story and mark information with the color-coded sticky tabs.
  - Mark the text that answers the story grammar questions.
  - Use your cue card or wall chart for the color codes. Remember, you may have more than one answer for some of the questions.
  - Mark everything you think is appropriate.

(Reid & Lienemann, 2006) 12

## Story Grammar cont….

- Step 3: Look back at the tabs and decide if what you have marked answers the Story Grammar question.
- Step 4: Fill in your Story Grammar graphic organizer.
  - Use the information that you have marked.
  - The colors of the sticky tabs match the colors of the graphic organizer.
- Step 5: Read over the Story Grammar graphic organizer and decide if it accurately describes the story.

(Reid & Lienemann, 2006) 13

## Narrative: TWA


**T** — Think Before Reading
Think about:
- The author's purpose
- What you know
- What you want to learn

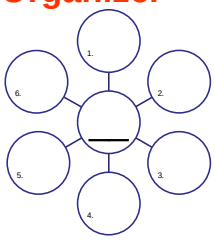
**W** — While Reading
Think about:
- Reading speed
- Linking knowledge
- Rereading parts

**A** — After Reading
Think about:
- The main idea
- Summarizing information
- What you learned

The TWA strategy can be prompted with a poster or with individual note cards.

(Hedin, Mason, & Gaffney, 2011) 14

## Narrative: Character Graphic Organizer

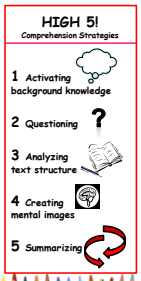



Character Graphic Organizer
1. Name of character
2. Description of character (physical appearance)
3. Character's role
4. Character's problems/challenges
5. Strengths/weaknesses
6. Motivations

(Hudson, Browder, & Wakeman, 2013) 15

## Expository: High 5!

Provide the High 5! steps on a bookmark to prompt students to apply the strategy.




(Dymock & Nicholson, 2010) 16

## High 5! cont….

- Activating background knowledge
  - Making connections between previous learning and new material
- Questioning
  - Generating questions before, during, and after reading
- Analyzing text structure
  - Looking at keywords, subheadings, and other text features (e.g., tables, captions, figures, etc.)

(Dymock & Nicholson, 2010) 17

## High 5! cont….

- Analyzing text structure cont….
  - Types of structures
    - Descriptive structures focus on the attributes that distinguish one thing from another
      - List→ e.g., list of countries that grow wheat; the physical attributes of a kangaroo
      - Web→ describes one thing or idea, but has categories; e.g., Dallas, TX population, economy, climate
      - Matrix→ describes more than one thing; e.g., compare and contrast a bicycle with a car
    - Sequential structures present a series of events or steps that progress over time
      - String→ step-by-step sequence of events; e.g., sequence for baking cookies
      - Cause-effect→ describes how two or more events interact with one another; e.g., the environmental results of an oil spill
      - Problem-solution→ problem or question, followed by a solution; e.g., solutions to prevent environmental results of acid rain

(Dymock & Nicholson, 2010) 18

## High 5! cont….

- Creating mental images
  - Visualizing how the text is structured enhances comprehension
    - Diagramming
    - Outlining
- Summarizing
  - The ability to delete irrelevant details, combine similar ideas, condense main ideas, and connect major themes into concise statements that capture the purpose of a reading for the reader
    - Diagramming in Step 4 helps students to summarize

(Dymock & Nicholson, 2010) 19

## Expository: SCROL

- Survey the headings
  - In the assigned text selection, read each heading and subheading.
  - For each heading and subheading, try to answer the following questions.
    - *What do I already know about this topic?*
    - *What information might the writer present?*
- Connect
  - Ask yourself, how do the headings relate to one another?
  - Write down the key words from the headings that might provide connections between them.

(Reid & Lienemann, 2006) 20

## Expository: SCROL

- Read the text
  - As you read, look for words and phrases that express important information about the headings.
  - Mark the text to point out important ideas and details.
  - Stop to make sure that you understand the major ideas and the supporting details.
  - If you do not understand, reread.
- Outline
  - Using indentations to reflect structure, outline the major ideas and supporting details in the heading segment.
  - Write the heading and then try to outline each heading segment without looking back at the text.

(Reid & Lienemann, 2006) 21

## SCROL cont….

- Look back
  - Now, look back at the text and check the accuracy of the major ideas and details you wrote.
  - Correct any inaccurate information in your outline.
  - If you marked the text as you read, use this information to help you verify the accuracy of your outline.

(Reid & Lienemann, 2006) 22

## Narrative or Expository: QAR

- Question-Answer Relationship Strategy
  - Teaches students to recognize the relationship between comprehension questions and text answer sources
    - Right there (text explicit)
    - Think and search (text implicit)
    - On my own (script implicit)

(Reid & Lienemann, 2006) 23

## QAR cont….

***What made Albert Einstein a great scientist?***

RIGHT THERE _____
THINK AND SEARCH _____
ON MY OWN _____

***For what is he best known?***

RIGHT THERE _____
THINK AND SEARCH _____
ON MY OWN _____

***What type of disability did he have?***

RIGHT THERE _____
THINK AND SEARCH _____
ON MY OWN _____

(Reid & Lienemann, 2006) 24

## QAR cont….

QAR Helper

RIGHT THERE

*Can the information be found in one sentence of the text?*

THINK AND SEARCH

*Can the information be found in two or more of the sentences or paragraphs in the text? Does it require me to put the information together?*

ON MY OWN

*Does this question require me to use my background knowledge of the subject?*

(Reid & Lienemann, 2006)

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## WRITING AND SPELLING STRATEGIES

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## Spelling

- Typically integrated into the language arts curriculum
  - Word lists are generated from material or from lists of commonly misspelled words
  - Often taught through drill and practice
- Prompting, Modeling, Feedback, Rehearsal, Overcorrection, and Tutoring

(Gischlar , 2011)

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## Cover, Copy, Compare

- Look at the correctly spelled target word
  - Cover
    - Hide the correct model
  - Copy
    - Spell the word from memory
  - Compare
    - Uncover the correct model and compare it to the student's response

(Skinner, McLaughlin, & Logan, 1997)

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## Repeated Review of Words with Shared Rime

- Teacher selects word from the same family (i.e. black, rack, sack / ill, pill, will)
- Teacher holds up flashcards and student reads the words out loud
- Student writes the word from memory
- Teacher immediately shows the student the correct model
- If incorrect, the student copies the correct word from the flashcard in the "self-correction blank"

(Conrad,2008)

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## Writing

- Includes….
  - Grammar, Punctuation, Spelling, Creativity, Expression, & Handwriting
- Critical Elements
  - Planning what to write and how to organize the composition
  - Translating that into written language
  - Revising what is written to make improvements

(Reid & Lienemann, 2006)

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## POW + TREE Strategy

- Pick my idea
- Organize my notes using TREE
  - » Topic Sentence ➡ Tell what you believe.
  - » Reasons ➡ Three or more.
  - » Examples ➡ Why do I believe this?
  - » Ending ➡ Wrap it up right!
- Write and say more

(Graham, Harris, & Mason, 2005) 31

## POWER

- Plan
  - Start with a clear topic and gather the information needed to write
- Organize
  - Review notes and organize ideas
- Write
- Edit
  - Check all spelling, capitalization, punctuation, order of words, and grammar
  - Make sure your ideas are well stated
- Revise

(Reid & Lienemann, 2006) 32

## COPS Revision Strategy

- C Have I capitalized the first word and proper names?
- O How is the overall appearance?
- P Have I put in commas and end punctuation?
- S Have I spelled all the words right?

(Reid & Lienemann, 2006) 33

## MATH STRATEGIES

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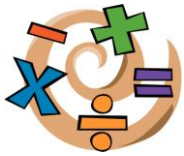
## Math



- Three major areas:
  - Basic facts
  - Computation procedures
  - Word-problem solving
- Math Skills Problems
  - Computation (i.e. fluency, procedures, etc.)
  - Application (i.e. money, time, measurement, etc.)

(Reid & Lienemann, 2006) 35

## Basic Math Principles

- **Place value**
  - The position of a number provides information about the value of a number
- **Expanded notation**
  - Numbers can be reduced to underlying units (e.g., 437 = four 100's + three 10's + seven 1's)
- **Commutative property**
  - The order of numbers in addition and multiplication equations does not affect the result (i.e. 5 + 4 = 4 + 5)
- **Associative property**
  - The grouping of numbers in addition and multiplication problems can be changed without affecting the result (i.e. [7 + 1] + 4 = 7 + [1 + 4])
- **Distributive property**
  - Numbers in an equation can be redistributed (e.g., 7 x [8 + 4] = [7 x 8] + [7 x 4])
- **Equivalence**
  - The quantity on one side of the = equals the quantity on the other side

(Reid & Lienemann, 2006) 36

## Cover, Copy, Compare

- Look at the problem and solution
- Cover the problem with an index card
- Write the problem and solution on the right side of the page
- Uncover the problem and solution on the left
- Evaluate response

(Codding, Eckert, Fanning, Shiyko, & Solomon, 2007)

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## Look for Clue Words

- Addition
  - Sum, total, in all
- Subtraction
  - Difference, how much more, exceed
- Multiplication
  - Total, product, times
- Division
  - Share, distribute, quotient, average

(Gaschler, 2011)

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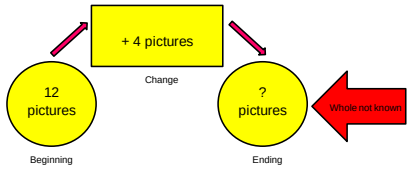
## Schema-Based Strategies

- **Change:** Tammy likes to paint pictures of flowers. She has painted 12 pictures so far. If she paints 4 more pictures, how many will she have?




(Jitendra, Rodriguez, Kanive, Huang, Church, Conroy, & Zaslofsky, 2013)

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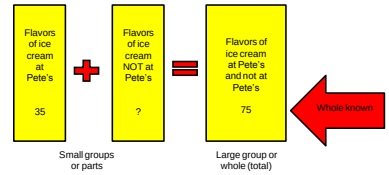
## Schema-Based Strategies Cont.

- **Group:** There are 75 different flavors of ice cream. Pete's ice cream shop has 35 flavors. How many flavors are not at Pete's ice cream shop?




(Jitendra, Rodriguez, Kanive, Huang, Church, Conroy, & Zaslofsky, 2013)

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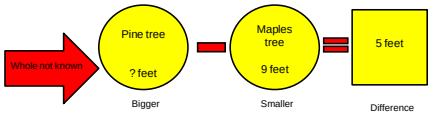
## Schema-Based Strategies Cont.

- **Compare:** Erica saw a pine tree in the forest. Later, she saw a maple tree that was 9 feet tall. The maple tree was 5 feet shorter than the pine tree. How tall is the pine tree?




(Jitendra, Rodriguez, Kanive, Huang, Church, Conroy, & Zaslofsky, 2013)

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## Solve It!

- Read ➡ for understanding
- Paraphrase ➡ your own words
- Visualize ➡ a picture or diagram
- Hypothesize ➡ a plan to solve the problem
- Estimate ➡ predict the answer
- Compute ➡ do the arithmetic
- Check ➡ make sure everything is right

(Montague, Warger & Morgan, 2000)

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## SUMMARY



## Key Points

- Strategies should be ….
  - Facilitative
  - Explicitly taught
  - Frequently practiced
  - Monitored for proper application



## Goals for Students

- Eventually, we want students to be able to….
  - Know when and why to use a strategy
  - Monitor the strategy for effectiveness
  - Shield themselves from maladaptive thoughts that could impair performance
  - Develop the belief that strategy use makes them better thinkers
  - Use a strategy fluently to the point it becomes automatic

(Reid & Lienemann, 2006)



## Questions or Comments?



## Thank You!

Feel free to contact us at kgischlar@rider.edu or steffeee@rider.edu with any questions.