The Thoughtful Classroom

The Strategic Teacher:

How to Select the Right Research-Based Strategy for Every Lesson

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THE STRATEGIC TEACHER: AN INTRODUCTION

WHAT DOES IT TAKE TO BE SUCCESSFUL?

DO-IT-YOURSELF PROJECT OF THE WEEK

Rather than paying big bucks to have a contractor build you a brand new deck in three days, why not save some money and complete the project yourself? Follow these guidelines and you'll be sitting pretty on a deck you built yourself in less than three months…

⇒ Why might we hire an expert instead of doing a job ourselves?

⇒ Why can an expert complete a job more efficiently and effectively than the average 'do-it-yourselfer'?

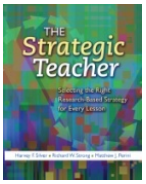
Generate as many reasons as you can in the box below.

WORKSHOP OVERVIEW

Like all expert craftsmen, teachers need a toolbox full of top-notch tools and strategies, the 'know-how' and experience to use them well (which tools work best for which jobs?), and the support and advice of their colleagues in order to get their jobs done efficiently and effectively.

Our goal is to help you become more effective, efficient, and "strategic" teachers by:

- showing you what an effective instructional strategy should look like (its critical attributes)
- introducing you to our learning style model & examining the link between style and success
- introducing you to research-based, classroom-tested tools and strategies that work
- explaining how having a diverse repertoire of instructional tools and strategies helps you differentiate instruction, increase engagement, build academic literacy skills, and translate research about effective instruction into practice
- providing you with a framework for making more thoughtful decisions about what tools and strategies will help you accomplish your goals and objectives
- sharing what we know about how to get new ideas & strategies working in the classroom
- letting you "see" what effective strategic instruction looks like in the classroom



Note: The title of this workshop, and much of what we will be discussing today, is adapted from *The Strategic Teacher: Selecting the Right Research-Based Strategy for Every Lesson* (Silver, Strong, & Perini, 2007).

WHAT DOES AN EFFECTIVE STRATEGY LOOK LIKE?

TELL US WHAT YOU THINK…

The purpose of this workshop is to help you become a more successful and "strategic" teacher by introducing you to a collection of research-based, classroom-tested teaching strategies that work and by showing you how to choose the appropriate tools and strategies for the goals you are trying to achieve.

Before we begin, we're interested in learning what kinds of tools and strategies you're already using. Take a few minutes to reflect on your current practice…

List three teaching tools or strategies that you or someone you know is currently using.	*What factors do you (or should you) consider when deciding what tools and strategies to use in the classroom? Why?*
1.	1.
2.	2.
3.	3.

We're also interested in finding out what *you* think an effective instructional strategy should look like. Record two ideas in the box below and then stop writing.

AN EFFECTIVE INSTRUCTIONAL STRATEGY IS ONE THAT…

1.

2.

Use the "Give One, Get One" tool described on the next page to generate four more ideas.

3.

4.

5.

6.

Give One, Get One [1]

Here are the basic steps of "Give One, Get One":

1. Generate two ideas. (*You've already done this part!*)
2. Stand up and find a partner. GIVE ONE of your ideas to your partner. GET ONE of your partner's ideas and add it to your list. If you and your partner have the same ideas, work together to generate a new idea and add it to your lists.
3. Find a new partner. Give one, get one.
4. Repeat steps 2 and 3 until you have a total of six ideas.

Here are the basic rules of "Give One, Get One":

* Do NOT huddle in groups – work with one partner at a time!
* Do NOT copy your partner's entire list. Give one idea to your partner and get one in return.

[1] The *Give One, Get One* tool is taken from the 2nd edition of *Tools for Promoting Active, In-Depth Learning* (Silver, Strong, and Perini, 2001).

How have other workshop participants responded to this question?

We've summarized the most popular responses in the list below.

AN EFFECTIVE TEACHING STRATEGY IS ONE THAT…

- IMPROVES TEACHING, LEARNING, AND ACHIEVEMENT
- GETS STUDENTS ENGAGED IN THE LEARNING PROCESS
- CAN BE ADAPTED FOR USE ACROSS GRADE LEVELS AND CONTENT AREAS
- HELPS STUDENTS MASTER THE CONTENT AND DEVELOP USEFUL SKILLS
- HELPS STUDENTS DEVELOP THE BEHAVIORS AND "HABITS OF MIND" OF GOOD THINKERS
- IS ROOTED IN RESEARCH ABOUT WHAT WORKS AND IS BASED ON SOUND LEARNING THEORY
- ACTUALLY WORKS IN REAL CLASSROOMS (PRACTICAL, NOT THEORETICAL)
- ADDRESSES THE NEEDS, GOALS, AND CHALLENGES OF REAL TEACHERS AND STUDENTS

WHAT DO *WE* THINK AN EFFECTIVE STRATEGY SHOULD BE?

We believe that an effective teaching strategy should do all of these things and more! In a minute, we will show you a video of a kindergarten teacher using a technique called "Fist List" to help her students review what they have learned about folk literature.

As you watch the video, think about why *Fist List* is such an effective teaching technique.

⇒ Which of the "effective strategy" criteria outlined above does *Fist List* satisfy?

Other questions to think about:

- How could *you* use the *Fist List* technique in your classroom?
- What might change if all of the teaching strategies that you used in the classroom satisfied the "effective strategy" criteria?

Fist List

Teacher provides a term, category, or question for students to put in the "palm" of a hand organizer

Students generate five words, phrases, or responses to fit with whatever is in their palm (one for each finger)

Research-Based Tools for Building Vocabulary

Fist List is one of the many tools that compose a research-based approach to vocabulary building that we call "Cracking Vocabulary's CODE"[2] The CODE approach helps students master and deepen their understanding of critical terms and concepts by having them Connect, Organize, Deep-Process, and Exercise new terms. Other practical tools that you can use to bring the four CODE principles into the classroom are shown on the following pages.

[2] 2nd edition of *WordWorks: Cracking Vocabulary's CODE* (Thoughtful Education Press, ©2008)

PRACTICAL TOOLS
FOR CRACKING VOCABULARY'S CODE

The research is clear: If we want students to master vocabulary, they will need to be exposed to the new terms multiple times and in a variety of ways. While the four phases of C.O.D.E. naturally lead students to CONNECT, ORGANIZE, DEEP PROCESS and EXERCISE new terms, the question of what strategies to use in the classroom remains. Below is a matrix of vocabulary tools and strategies organized according to the four phases of C.O.D.E. As you plan your unit, refer to this matrix to help select appropriate strategies for each phase and to ensure deep learning.

C	O	D	E
☐ **Word Walls** A collection of words organized into categories and posted on the wall for students to use in their reading and writing.	☐ **Prioritizing Vocabulary** Teacher or students determine which words are essential, important, and good to know.	☐ **Visualizing Vocabulary** Creating visual images, sketches, or icons with brief explanations to demonstrate understanding.	☐ **Vocabulary Games** Using Bingo, Jeopardy, Word Baseball, etc. to review vocabulary in a competitive and fun manner.
☐ **Power Decoding** Teaching students attack skills for new words: prefixes, suffixes, roots, context clues, substitutions.	☐ **Key Vocabulary Organizer** A concept definition map that establishes the larger categories that key concepts fit into, critical attributes, examples, and related concepts.	☐ **Multi-sensory Processing** A technique that encourages students to explore important words using words, feelings, sensory information, and visualization.	☐ **Write to Learn** Students are asked to use a specific number of new words in their writing assignments.
☐ **Word Spiders** Teacher introduces eight words that are associated with a mystery, one word for each leg of the spider organizer. Students try to guess the mystery word.	☐ **Categorizing** Teacher or students place a list of words into specific categories.	☐ **Storytelling** Students analyze a selection of stories, then use basic story elements to define important concepts.	☐ **Team Games Tournament** Students are divided up into heterogeneous study groups to review words, then compete in homogenous groups to earn points for their team.
☐ **Associations** Students generate words, pictures, feelings, physical reactions to words. There is no right or wrong, just what comes to mind.	☐ **Concept Maps** A technique used to create visual representations of hierarchical relationships between a central concept, supporting ideas, and important details	☐ **Metaphors** Students learn words deeply by exploring their relationships to other words/concepts (e.g., How is democracy like baseball?).	☐ **Vocabulary Carousel** Teacher sets up 5 or 6 stations. Students work in small groups at all stations. Stations include a variety of vocabulary activities.
☐ **See It, Say It, Show It, Store It** Students look at the word, pronounce it slowly, record its meaning, draw a picture with a brief explanation, and store the word in their Vocabulary Journals.	☐ **Fist List** Teacher provides a category in the "palm" of a hand organizer; students generate 5 words that fit the category, one for each finger of the hand organizer.	☐ **Defining Characteristics** Students build multi-layered definitions by focusing on essential characteristics: What is it? What is it used for? Why is it valued? What kind is it? Where does it come from? What does it look, feel, sound, smell like? etc.	☐ **Effective Practice** Teacher instructs students in the principles of effective practice, including how to mass and distribute review sessions, use words often, and make stronger connections.

C	O	D	E
☐ **Glossary** Students keep a glossary of new words by defining terms in their own words and including icons or pictures.	☐ **Word Banks** Students examine a list of words and place them into the appropriate slots in a visual organizer.	☐ **Etymologies** Students investigate word histories, analyzing how original meaning is intact and how it has changed.	☐ **Three's a Crowd** Students decide which word of three doesn't belong and explain why.
☐ **Concept Attainment** The teacher presents yes and no examples of a concept in order to help students determine its critical attributes. Students use the critical attributes to distinguish among examples and generate their own examples. Excellent for rich concepts with clear attributes, like "tragic hero."	☐ **Group and Label** Students examine a list of vocabulary words and place them into groups based on common characteristics. For each group that students create, they devise a label that describes what all the grouped words have in common.	☐ **Cinquains** A five-line poem used to define a term: • **noun:** coal • **two adjectives:** black and shiny • **three action verbs:** smolder, burn, pollute • **four-word sentence or phrase:** a source of energy • **ending word:** limited	☐ **Peer Practice** A reciprocal learning strategy in which students work as peer partners. One student serves as a coach, the other as a player. While the player works to define key terms from the unit, the coach provides assistance, feedback, and praise. Students then reverse roles.
☐ **Exploring Multiple Meanings** Students explore and use words that have the same sound but different meanings (homophones).	☐ **A Three-Way Tie** Students select three words from a unit's vocabulary and arrange them in a triangle. They then connect the words with lines and explain the relationship between each word by writing along the lines. 	☐ **Compare and Contrast** Students set two rich concepts against one another and describe each separately. They then use their descriptions to draw out the deep similarities and differences between the two concepts. Finally, students must decide if the two concepts are more similar or more different, and explain why.	☐ **Boggle** After independent review, students retrieve all the vocabulary they can. Students join a group of 3-5 students, compare lists, and add any words or meanings they missed. Students then leave their team to "Boggle" with other students, gaining points for terms and meanings that appear on their list but not on their competitors' lists.
☐ **Word Catcher** Students are asked to "catch" a new word each day.	☐ **A Diagram to Die For** Students are asked to create a diagram that shows the relationship among the words on a Word Wall.	☐ **Crazy Connections** The student picks a word out of one hat, then a household, classroom, or odd object out of another. The student's job is to generate as many similarities as possible.	☐ **Para-Writing** Students write a paragraph or short piece using between five and fifteen vocabulary words. Each word must be embedded meaningfully into the text, or it doesn't count.

☐ **Vocabulary Notebook**
A notebook in which students collect important words while reading. In their notebooks, students record their initial "educated" definitions. They then look up the word and select the dictionary definition that best fits the word as it is used in the text. Students compare their initial definitions with the actual definition, and describe briefly what differences they note between them. Finally, students create a visual icon to help them process and remember the word's meaning. The notebook also serves as a great tool for review.

Please note: This strategy includes all four phases of CODE.

IS THERE A NEED FOR STRATEGIES IN THE CLASSROOM?

Absolutely!

With all that today's teachers are expected to accomplish (cover the content, differentiate instruction, raise achievement and test scores, etc.), they can't afford to "teach, test, and hope for the best." They need high-quality tools and strategies (like *Fist List* and *Vocabulary's CODE*) that can help them do their jobs more efficiently and effectively.

What's next?

In sections 2-7, we will introduce you to some of the instructional tools and strategies that we have developed and explain how having a diverse repertoire of instructional strategies can help you tackle some of your most pressing challenges. Before we do this, though, we need to spend a little bit of time introducing you to our learning style model by using a strategy called Metaphorical Expression.

WHAT DOES STYLE HAVE TO DO WITH TEACHING AND LEARNING?

LEARNING MEANS DIFFERENT THINGS TO DIFFERENT PEOPLE

In our effort to help teachers create 'Thoughtful Classrooms,' we encourage them to begin the school year by asking their students what learning means to them.

If you asked *your* students what learning means to them, what kinds of things might they say?

Learning means...

Let's find out how some 2nd graders responded when we asked them the very same question. As you read their responses (see slide show), think about the way that each one adds to our understanding of what learning is.

Learning means something different to everyone. As learners, we get excited about different things, we prefer to learn and be assessed in different ways, and we are comfortable with different kinds of thinking. In other words, we all have different 'styles' of learning.

Our learning style model[3] recognizes four different styles of learners:
Mastery learners, *Understanding* learners, *Interpersonal* learners, and *Self-Expressive* learners.

Students of each style "march to their own beat in the classroom" because they have their own unique "T.E.M.P.O." In other words, each style of learner:

-- Is comfortable with tasks that require different kinds of **T**hinking
-- Prefers a different kind of learning **E**nvironment
-- Is **M**otivated by different factors
-- Learns best from different kinds of learning **P**rocesses
-- Hopes for different **O**utcomes (wants to demonstrate knowledge in different ways)

[3] Our learning style model has its origins in the research on psychological and personality type carried out by Carl Gustav Jung, Katharine Briggs, and Isabel Briggs-Myers; additional detail can be found in the LSIS Resource Center (www.thoughtfulclassroom.com).

You will learn more about the TEMPO of each learning style a little later in the workshop (see style descriptions on p. 12). But first, you will use the *Metaphorical Expression* strategy to help explore and enrich your understanding of the learning style concept and examine your own learning style preferences.

Metaphorical Expression[4]

In the *Metaphorical Expression* strategy, students use one of the three types of analogies described below to expand and deepen their understanding of people, characters, ideas, or concepts.

1) Direct analogy → compare two dissimilar objects
   Example: How is guilt like a stain?

2) Personal analogy → imagine that you are a specific object or concept; describe what you are, how you feel, what you need, etc.
   Example: How would you feel if you were a main idea that didn't get noticed?

3) Compressed conflict → describe a person, idea, or item using two words that contradict each other
   Example: How did Martin Luther King, Jr. exemplify *controlled passion*?

WHAT'S YOUR STYLE?

Take a minute to think about yourself as a learner. What is your approach to learning? What kinds of things do you enjoy doing or learning about? What talents and strengths do you bring to the table? How do you learn best?

Here comes the metaphorical thinking part...

Which of the objects below best represents your style and approach to learning?

A paper clip?

A teddy bear?

A magnifying glass?

A Slinky?

[4] The *Metaphorical Expression* strategy is taken from *The Strategic Teacher: Selecting the Right Research-Based Strategy for Every Lesson* (Silver, Strong, and Perini, 2007).

Now complete the simile below (indicate which object you selected and generate as many 'crazy connections' as you can come up with to justify your choice). Once you finish, share and compare ideas with a neighbor.

As a learner, I am like a _____ because...

After using this metaphor activity in hundreds of workshops as an informal way to get people thinking about their own thinking and learning preferences, we noticed that people's selections often correlated with their preferred ('dominant') learning styles. Specifically, we found that:

People who selected the *paper clip* typically shared many of the same characteristics and learning preferences as *Mastery* learners.

People who selected the *magnifying glass* typically shared many of the same characteristics and learning preferences as *Understanding* learners.

People who selected the *teddy bear* typically shared many of the same characteristics and learning preferences as *Interpersonal* learners.

People who selected the *Slinky* typically shared many of the same characteristics and learning preferences as *Self-Expressive* learners.

The activity that follows will help you learn a bit more about each of the four styles, explore your personal learning preferences in more depth, and see whether the item that you selected for your simile was a good indicator of your dominant learning style.

The "TEMPO" of each style of learner is described below.

As you read about the characteristics and preferences of each style of learner, think about which of these four styles sounds the most like you (put a star (☆) next to it) and which sounds the least like you (mark it with an "X").

☐ **Mastery learners** are most comfortable with tasks that require them to learn/recall concrete facts and procedures. They prefer a well-organized classroom environment with practical, clearly-spelled-out goals and expectations, and they learn best from instruction that proceeds in a straightforward and 'step-by-step' manner. When it comes to showing what they know, these learners prefer objective questions with single correct answers to questions that require creative thinking or logical reasoning. They take pride in mastering the content and are motivated by a drive for accuracy, success, and competence.

☐ **Understanding learners** are most comfortable with tasks that require them to use logic and analytical thinking skills. Their preferred classroom environment is one that values 'big idea discussions,' logical debates, and critical thinking skills – and they are motivated by their never-ending curiosity, their need to know why, and their drive to uncover logical errors or flaws. These learners are most engaged when the learning process proceeds 'question-by-question,' and they like assessment tasks that ask them to analyze data, critique ideas, or justify arguments with evidence.

☐ **Interpersonal learners** are most comfortable with tasks that allow them to interact with classmates and make personal connections to what they are learning. They are drawn to a friendly and nurturing classroom environment where people collaborate with and support one another, and they are motivated by their desire to help others and be part of a team. Because their ideal learning process is a 'feeling-by-feeling' one, these learners enjoy questions, activities, and assessment tasks that invite them to share their personal feelings, values, and perspectives about the content material.

☐ **Self-Expressive learners** are most comfortable with tasks that ask them to apply what they know in new and different ways. They are motivated by a drive for originality, and they are drawn to learning environments that provide stimulation, surprise, and the opportunity to think creatively. For these learners, who prefer to operate 'dream-by-dream,' the ideal learning and assessment scenarios are ones that allow them to use their imaginations; explore possibilities; think metaphorically; or create novel products, ideas, and solutions.

The style that you marked with a star is the one that you perceive to be your 'dominant' style.[5] What style is it? _____

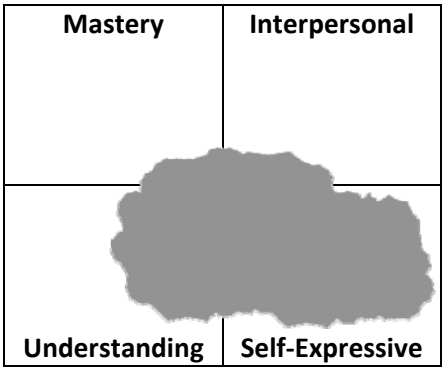
Did the item that you selected for your simile predict your dominant learning style? _____
(*Don't worry if it didn't. We're just curious, and we thought that you might be too!*)

An important note about style:

As individuals, we can exhibit characteristics of all four styles of learners – but one of these four styles is typically a better fit for us than the other three. When we talk about a person's learning style (e.g., "John is a Self-Expressive learner"), we are talking about this 'best fit' style (aka the person's *dominant* or *preferred* style).

Looking at a '*style amoeba diagram*' like the one below may help to clarify the distinction between a person's dominant learning style and his complete *learning style profile*.

This diagram shows the complete *learning style profile* of an imaginary student. We would refer to this student as a 'Self-Expressive learner' because that's his dominant style (you can tell because the amoeba is camped out over the entire Self-Expressive quadrant) – but the diagram makes it clear that this student has a fairly strong preference for the _____ style as well. This student's least-preferred styles are _____& _____.



WHAT DOES ALL OF THIS STYLE STUFF HAVE TO DO WITH TEACHING STRATEGIES?

A lot, actually!

By now, you know that learners can be categorized according to their dominant learning styles. *But did you know that teaching strategies can also be categorized by style?* It's true! (see p.14)

Each style of strategy engages and capitalizes on the strengths of a specific style of learner. Each style of strategy also requires and develops a different style of thinking.

[5]A more objective way to determine your learning style profile would be to use a formal assessment instrument (e.g., *Learning Style Inventory for Adults*, Thoughtful Education Press © 2007).

<table>
<tr>
<td>Mastery Strategies focus on increasing students' abilities to remember, sequence, and summarize important facts and procedures. They motivate by offering clarity, organization, and the opportunity to achieve and demonstrate measurable success.

Examples include:

• New American Lecture
• Direct Instruction
• Graduated Difficulty
• Teams-Games-Tournaments</td>
<td>Interpersonal Strategies foster students' desire to interact with others, relate personally to the curriculum and to each other, and share their feelings and values. They use teams, partnerships, and coaching to motivate students through their drive for membership and relationships.

Examples include:

• Reciprocal Learning
• Decision Making
• Jigsaw
• Community Circle</td>
</tr>
<tr>
<td colspan="2">Four-Style Strategies engage all four styles simultaneously, thereby encouraging students to develop a balanced and dynamic approach to learning.

Examples include:
• Window Notes
• Circle of Knowledge
• Do You Hear What I Hear?
• Task Rotation</td>
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<tr>
<td>Understanding Strategies develop students' capacities to use evidence and logic, think analytically (e.g., identify similarities and differences), develop interpretations, and see the big picture. They motivate by arousing curiosity and encouraging inquiry.

Examples include:
• Compare and Contrast
• Reading for Meaning
• Concept Attainment
• Mystery</td>
<td>Self-Expressive Strategies, which often incorporate imagery, metaphor, and 'what if' scenarios, motivate students by appealing to their drive for originality and creativity. They invite students to create and imagine, consider different perspectives, look for patterns, and apply their knowledge in new and different ways

Examples include:
• Inductive Learning
• Metaphorical Expression
• Pattern Maker
• Mind's Eye</td>
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</table>

Adapted from p. 4, *The Strategic Teacher: Selecting the Right Research-Based Strategy for Every Lesson*. Silver, H., Perini, M., & Strong, R. (2007).

What else has style?

Learners and teaching strategies aren't the only things in the classroom that 'have style.' The chart below shows you how everything from curriculum objectives to classroom activities to assessment tests can be categorized according to style.

Learning Behaviors and Activities by Style

Mastery	Understanding	Self-Expressive	Interpersonal
TEACHERS MAY BE CHARACTERIZED AS:			
Trainers	Intellectual challengers	Facilitators	Nurturers
Information providers	Theoreticians	Stimulators	Supporters
Instructional managers	Inquirers	Creators/originators	Empathizers
LEARNERS MAY BE CHARACTERIZED AS:			
Realistic	Logical	Curious	Sympathetic
Practical	Intellectual	Insightful	Friendly
Pragmatic	Knowledge-oriented	Imaginative	Interpersonal
CURRICULUM OBJECTIVES EMPHASIZE:			
Knowledge	Concept development	Creative expression	Positive self-concept
Skills	Critical thinking	Moral development	Socialization
SETTINGS (Learning Environments) EMPHASIZE:			
Purposeful work	Discovery	Originality	Personal warmth
Organization/ competition	Inquiry/independence	Flexibility/imagination	Interaction/ collaboration
OPERATIONS (Thinking and Feeling Processes) INCLUDE:			
Observing	Classifying	Hypothesizing	Describing feelings
Describing	Applying	Synthesizing	Empathizing
Memorizing	Comparing/contrasting	Metaphorical expression	Responding
Translating	Analyzing	Divergent thinking	Valuing
Categorizing	Evaluating	Creating	
TEACHING STRATEGIES INCLUDE:			
Command	Concept Attainment	Metaphorical Expression	Reciprocal Learning
Read and Retell	Inquiry	Inductive Learning	Decision Making
Graduated Difficulty	Multiple Document Learning	Pattern Maker/ Extrapolation	Jigsaw
Direct Instruction	Reading for Meaning	Mind's Eye	Team Games Tournament
Interactive Lecture	Compare and Contrast	Etch-A-Sketch	Community Circle
	Mystery		
STUDENT ACTIVITIES INCLUDE:			
Workbooks	Independent study	Creative art activities	Group projects
Drill and repetition	Essays	Imagining	"Show and Tell"
Demonstrations	Logic problems	Boundary breaking	Team games
Dioramas	Debates	Dramatics	Directed art activities
Competitions	Hypothesizing	Open-ended discussions	Personal sharing
ASSESSMENT TASKS CALL FOR:			
Making charts/maps	Comparing/contrasting	Speculating—What if?	Performing community service
Developing sequences/ timelines	Making a case	Hypothesizing	Decision making
Repairing/debugging	Conducting an inquiry	Creating metaphors	Relating
Reporting	Explaining	Inventing/designing	Reflecting
Constructing	Analyzing	Using artistic media to express ideas	Empathizing
Defining/describing	Classifying		Keeping a journal
	Debating		
	Interpreting		

Source: *Teaching Style Inventory*. Copyright © 2005, Thoughtful Education Press

What does Metaphorical Expression look like in the classroom?

Earlier in the workshop you had a chance to take the *Metaphorical Expression* strategy out for a test-drive. Now, we'd like you to see what this strategy looks like when it's used in the classroom. The video that you're about to watch shows a high school teacher using the *Metaphorical Expression* strategy to stretch her students' thinking and enhance their understanding of Catherine and Heathcliff's relationship in **Emily Brontë's** *Wuthering Heights*.

As you watch the video, think about why *Metaphorical Expression* is categorized as a *Self-Expressive* strategy. (Refer to pages 12, 14, and 15 if you need a 'style-refresher.')

Possible reasons:

Now think back to two of the tools that you learned about earlier: *Give One, Get One* (p. 4) and *Fist List* (p. 5).

Why might *Give One, Get One* be considered an *Interpersonal* tool?

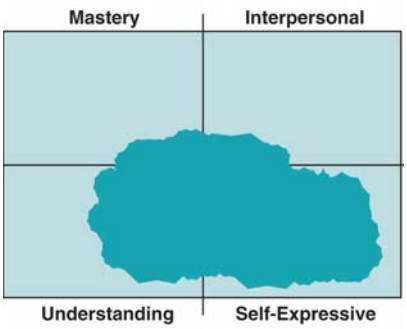
Why might *Fist List* (as you saw it used in the video) be considered a *Mastery* tool?

Note: Strategies can have 'multiple style personalities'

Like people, teaching strategies can have characteristics of more than one style. For example: We categorize *Metaphorical Expression* as a Self-Expressive strategy because it *primarily* targets the Self-Expressive style, but the strategy crosses over into 'Understanding-style territory' as well. *Any ideas why this might be the case?*

We can use an 'amoeba diagram' like the one at the right to illustrate the full style profile of any given *strategy* in the same way that way can use an amoeba diagram to illustrate the full style profile of an individual.

Metaphorical Expression



Source: *The Strategic Teacher,* p. 132

The way that you use a tool or strategy in the classroom can affect the styles that it targets

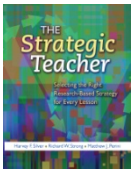
For example: You can change the style-focus of the *Fist List* tool simply by changing the question or item that you put in the palm (see examples below).

FIST LIST IN ALL FOUR STYLES:

MASTERY	**INTERPERSONAL**
Use Fist List to help students activate prior knowledge or review factual information. - What are five things that you know about snakes? - List and describe the five main positions on a basketball team.	Use Fist List to have students connect the content to their personal experiences or share their feelings and values. - What are five qualities that you look for in a friend? - What advice would you have given to President Lincoln?
UNDERSTANDING	**SELF-EXPRESSIVE**
Use Fist List to encourage analytical thinking. - Why might the results of this experiment have turned out differently than we had expected? - Examine and compare these paintings by famous Impressionists. What are the defining characteristics of this style of painting?	Use Fist List to engage students in metaphorical, hypothetical, or creative thinking. - How is prejudice like an iceberg? - What are some possible solutions to our school's trash problem?

A PREVIEW:
WHAT CAN HAVING A DIVERSE REPERTOIRE OF STRATEGIES DO FOR ME?

When we put *The Strategic Teacher* text together, our goal was to provide teachers with a *diverse* collection of classroom-tested strategies that they could use to improve teaching and learning.



What did we do to make the collection 'diverse'? We included strategies that:

- Represent all four learning styles (Mastery, Understanding, Self-Expressive, Interpersonal)
- Target and help students develop different kinds of skills
- Incorporate different research-based principles of effective instruction
- Work with different content areas and grade levels
- Develop different facets of understanding (e.g., application, interpretation, explanation)
- Accomplish different purposes within the context of lesson and unit design (e.g., activating prior knowledge, introducing information, reviewing information, reflecting on learning)

Why the focus on diversity?

WHAT DOES USING A DIVERSE & 'STYLISH' REPERTOIRE OF RESEARCH-BASED STRATEGIES IN THE CLASSROOM ALLOW YOU TO ACCOMPLISH?

LOTS OF THINGS!!!!

For example, you can:

- Differentiate instruction so all styles of learners can succeed
- Increase students' level of engagement & commitment to learning
- Help students develop the skills they need to be successful
- Incorporate research about effective instruction into your lesson plans
- Prepare students to become self-directed and successful lifelong learners by teaching them strategies that they can use to manage, guide, and enhance their learning experiences

In sections 4-8 of the workshop, we will show you how

HOW CAN TEACHING STRATEGIES HELP ME DIFFERENTIATE INSTRUCTION SO THAT ALL STYLES OF LEARNERS ARE ABLE TO SUCCEED?

DOES STYLE MATTER?

AGREE OR DISAGREE: *When students "fail to learn at a level that matches their ability to learn," it is often because they are being taught and assessed in ways that don't allow them to "learn and perform in an optimal way."* (Sternberg and Grigorenko, 2004)

We will revisit this topic again a little bit later in the workshop. For now…

Get ready to take a 15 second test.
Listen for the instructions and write your response in the box below.

Get ready for another 15 second test.
Listen to the instructions and write your response in the box below.

How did your feelings, attitudes, behavior, and/or performance level differ during test one and test two? Explain.

What if you had to use your <u>non-dominant</u> hand all day long while other people were allowed to use their dominant hand? How might it affect your ability to complete your daily activities successfully? Your thoughts? Your feelings? Your behavior?

The timed-test activity on the previous page and the reflection questions above were designed to get you thinking about how it might feel if you were a student who was rarely given the opportunity to learn and perform in your dominant style.

These are just workshop acitivities, but the truth is that certain styles of students *are* rarely given the opportunity to learn, perform, and be assessed in their dominant styles. <u>Any ideas which ones?</u>

Use your experience as an educator, the TEMPO-based learning style descriptions (p. 14), and the "Learning Behaviors and Activities by Style" chart (p. 15) to help you make an educated guess.

DOES STYLE AFFECT SUCCESS IN SCHOOL?

⇒ *Which style(s) of learner did you think might face the most significant challenges in school?*
Record your hypothesis here: _____

How accurate was your hypothesis? Let's find out...

Use the data from the slide show to fill in the missing information on the chart below.

MASTERY LEARNERS ___% of at-risk population (35% of general population)	**INTERPERSONAL LEARNERS** ___% of at-risk population (35% of general population)
UNDERSTANDING LEARNERS ___% of at-risk population (15% of general population)	**SELF-EXPRESSIVE LEARNERS** ___% of at-risk population (15% of general population)

Source: Hanson and Dewing (1990)

Analyzing the numbers…

Why do you think that *Interpersonal* and *Self-Expressive* learners compose the bulk of the at-risk population (68% of the at-risk population vs. 50% of the general population)?

How might you explain the fact that there are relatively few *Understanding* learners in the at-risk population?

In *Within Our Reach: Identifying and Working more Effectively with At-Risk Learners,* Hanson, et al. (1991) note the following discrepancy between the typical school environment and the kind of environment needed by at-risk students:

"The current public school curricula reflects a heavy emphasis on student recall, a dependence on sequence and analysis, a good deal of quiet seat work with its correlated introverted and independent work habits, [and] a major emphasis on rational/inferential thinking…Teacher talk represents 80% of class talk time. Discussion tends to be whole class and teacher-centered. There are too few cooperative learning or small groups [learning opportunities]. Teacher questions tend to fall primarily in the recall or reason categories. There tends to be little emphasis on students helping students. Content mastery tends to be objective, factual, and generally quite impersonal."

"The current at-risk learners (drop-outs, underachievers, the goal-less, the self-destructive and the disenchanted "stay-ins") reflect a different set of behaviors. As a group these young people…tend to learn best interactively, in dyads or small groups, experientially, and in roles that are both supportive of one another and that emphasize prior life experience as germane to mastering new content. These learners need to talk through required processes to have their questions about relevance and application answered, and to understand that they are valued, "seen," and appreciated for their interactive and self-awareness capacities. These learners need a cooperative environment, one that recognizes and awards the consciousness of individual differences, and one that "celebrates mistakes" as a way of converting confusion and anxiety into a readiness to benefit from trial and error experimentation."

The idea that "*conventional instruction in school systematically discriminates against students with creative and practical strengths, and tends to favor students with strong memory and analytical abilities*" is also supported by work from Robert Sternberg (summarized in Sternberg and Grigorenko, 2004), who notes that,

"Students with creative or practical abilities, who are almost never taught or assessed in a way that matches their pattern of abilities, may be at a disadvantage in course after course, year after year" (Sternberg, Grigorenko, and Zhang, 2008).

_ _

⇒ *Do you agree with these researchers' assessments?*

⇒ Do you believe that schools/teachers/instruction/assessments favor particular styles of learners while consigning others "to the dust heaps of our classrooms" (Sternberg, 1997)?

FINDING AN INSTRUCTIONAL APPROACH THAT WORKS FOR ALL

Earlier in the workshop, you saw that people have preferences for different styles of thinking and learning. If we hope to achieve high levels of learning for all students, we need to acknowledge that they learn in different ways and adopt an instructional approach that works for all of them.

Can we really teach in a way that allows students of all styles to succeed?

With the right tools and strategies, and the help and support of our colleagues, YES WE CAN!

"The question is not, 'Is it possible to educate all students well?' but rather, Do we want to do it badly enough?"

-- Deborah Meier (2002)

HAVING A DIVERSE REPERTOIRE OF 'STYLISH' STRATEGIES MAKES THE DIFFERENTIATION PROCESS MORE MANAGEABLE

Differentiating instruction so that all styles of learners can succeed may seem like a challenging task, but it's a task that becomes a lot more manageable when you have access to a diverse collection of 'stylish' teaching strategies.

⇒ *Why might this be the case?*

Once you have a collection of teaching strategies that includes strategies from all four styles, you can differentiate instruction simply by rotating through the different styles of strategies in your repertoire (e.g., use a Mastery strategy like *Fist List* for one lesson, use a Self-Expressive strategy like *Metaphorical Expression* for the next lesson, and so on).

The Strategic Teacher text makes process of differentiating instruction so that all styles of learners can succeed more managable by providing teachers with a ready-to-use collection of research-based strategies in all four styles (4 strategies from each style + 4 'multi-style strategies' that target all four styles of thinking at once). By the end of the workshop, you will have looked at some of the strategies from this book as well as other useful instructional tools that you can use to add to and diversify your existing instructional repertoire.

If you're interested in previewing some of our other 'stylish' tools and strategies, complete the post-workshop activity ("What does strategic teaching look like?") on pp. 58-64; the names of tools and strategies are underlined.

WHAT CAN HAPPEN IF WE TEACH WITH STYLE IN MIND?

Read the following quotation from Robert Sternberg (1997) and then respond to the 'consequences question' that appears underneath the quotation.

> *"Many of the students we are consigning to the dust heaps of our classrooms have the abilities to succeed. It is we, not they, who are failing. We are failing to recognize the variety of thinking and learning styles they bring to the classroom, and teaching them in ways that don't fit them well."*

What would be the consequences if you used a variety of 'stylish' teaching strategies to address the diversity of learning styles in your classroom?

IS USING A MULTI-STYLE, STRATEGIC APPROACH TO INSTRUCTION REALLY ADVANTAGEOUS?

The value of a multi-style approach to instruction is supported by work from Robert Sternberg and colleagues, which shows that students who are taught using multiple styles of instruction outperform other students, both on multiple-choice memory tests and on performance-based assessments (Sternberg, Torff, & Grigorenko, 1998).

Why does teaching across the four styles work so well? Among other things, it:

- Gives all students 'a chance to shine' by allowing them to work in their dominant style.
- Enables students to grow as learners by challenging them work in their less-preferred styles.
- Helps students develop the kinds of thinking skills that are required on standardized exams (because different strategies develop different kinds of skills).
- Counteracts boredom by replacing repetition with variety (no more 'same thing every day').
- Increases students' engagement & commitment to learning (more on this in the next section).

HOW CAN I USE TEACHING STRATEGIES TO INCREASE MY STUDENTS' LEVEL OF ENGAGEMENT AND COMMITMENT TO LEARNING?

WHAT KINDS OF WORK DO STUDENTS FIND ENGAGING?

After posing this question to teachers and students and analyzing their responses, we found that the kinds of work students find engaging (and, therefore, are willing to work hard at) fall into four categories. According to the results of our survey, engaging work is work that:

- Permits students to experience **S**uccess (work that they are good at or getting better at);
- Stimulates their **C**uriosity and satisfies their need for understanding;
- Encourages **O**riginality, creativity, and self-expression; and
- Allows them to interact with and build positive **R**elationships with others.

Source: Strong, Silver, and Robinson (1995)

Increasing engagement in the classroom requires adding these elements together as follows:

Success + **C**uriosity + **O**riginality + **R**elationships = **E**ngagement

WHAT'S THE LINK BETWEEN ENGAGEMENT, STYLES, AND STRATEGIES?

Did you recognize, as we did, that there's a connection between style and engagement? That:

- Students with a need for *Mastery* are driven by the desire to experience Success
- Students with a need for *Understanding* are driven by their Curiosity
- Students with a need for *Self-Expression* are driven by their desire for Originality
- Students with a need for *Interpersonal* interactions are driven to develop Relationships

Mastery learners are driven by *success*. They delight in mastering the knowledge, skills, and procedures that will allow them to complete their work and be successful.	**Interpersonal learners** are driven by *relationships*. They long to interact with and help other people, and they hope that their work is of value and interest to themselves and their peers.
Understanding learners are driven by *curiosity*. They delight in asking why questions (why is __?), solving puzzles, uncovering flaws or gaps in logic, and making sense of things.	**Self-Expressive learners** are driven by *originality*. They long to be creative and original, to "think like no one else," and to apply what they know in new and different ways.

Apply what you know:

Which style(s) of students could you likely engage by using a tool like *Give One, Get One*?

What about *Fist List*?

Metaphorical Expression?

How might using a variety strategies raise the "*engagement SCORE*" in your classroom?

HOW CAN USING STRATEGIES HELP STUDENTS DEVELOP THE SKILLS THAT THEY NEED TO SUCCEED ACADEMICALLY?

WHAT SKILLS DO STUDENTS NEED TO SUCCEED ON TODAY'S STATE ASSESSMENT TESTS?

The figure below shows two science questions from a state assessment test. The question on the left is a more "traditional" type of test question. The question on the right is representative of the "newer" kinds of questions that are increasingly popping up on state assessment tests.

Read the questions to yourself and think about how they differ. *What can you conclude about the way that assessment tests are changing?*

Traditional Test Item

Which of the following animals is **not** endangered?

A) African elephant
B) American alligator
C) Blue whale
D) Dodo bird
E) Florida manatee

New Test Item

Below is an imaginary animal called a *Woggle*. **Based on its characteristics**, what **scientific** inferences can you make about its niche and habitat? In other words, tell about where it might live, what it might eat, and what role it might serve in its community. **Explain your thinking.**

*Illustration courtesy of the Connecticut State Department of Education (2001).

Another example of a "newer-style" assessment test question can be found on the next page. Review it and then respond to the question below.

What skills do students need to have in order to answer the newer types of test questions successfully?

ANOTHER EXAMPLE OF A 'NEW" TEST QUESTION:

Task Two: Social Studies

Part B: Essay

Directions:

- Write a well-organized essay that includes an introduction, several paragraphs, and a conclusion.
- Use evidence from the documents that follow this page to support your response [documents not included in this workshop packet]
- Do not simply repeat the contents of the documents.
- Include specific related outside information.

Historical Context:

Throughout history, societies have held different viewpoints on governmental decision making and the role of citizens in this decision-making process. The decision-making process can range from absolute control to democracy.

Task:

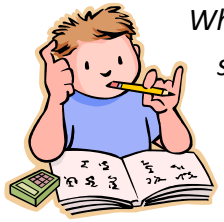
Using information from the documents and your knowledge of global history and geography, write an essay in which you

- Compare and contrast the different viewpoints societies have held about the process of governmental decision making and about the role of citizens in the political decision-making process.
- Discuss the advantages and disadvantages of a political system that is a democracy.

Be sure to include specific historical details. You must also include additional information from your knowledge of global history and geography.

SOURCE: *NY State Global History and Geography Regents Examination Test Sampler Draft*, Spring 1999

While traditional test questions were typically designed to test students' mastery of the content material, newer test questions require students to do *more* than know the content (students must also be able to interpret, synthesize, and apply what they know). In order to succeed on today's state assessment tests, then, students need to possess a wide variety of skills.



Which of the skills on the checklist below do you think that students need to succeed on today's state assessment tests?

Check off each skill that you believe is important. Then compare your responses with a neighbor.

Reading and Study Skills

- ☐ Collect and organize ideas through note making
- ☐ Make sense of abstract academic vocabulary
- ☐ Interpret information presented in different formats (oral, written, visual/graphic)

Thinking Skills

- ☐ Make and test inferences/hypotheses/conjectures and draw conclusions
- ☐ Conduct comparisons using specific criteria
- ☐ Analyze the demands of a variety of higher-order thinking questions

Communication Skills

- ☐ Write or speak clear, well-formed, coherent explanations in all content areas
- ☐ Write comfortably in the following nonfiction genres: problem/solution, decision-making, argument, comparative
- ☐ Read and write about one or more documents

Reflective Skills

- ☐ Construct plans to address questions and tasks
- ☐ Use criteria and guidelines to evaluate work in progress
- ☐ Control or alter mood and impulsivity

What skills do students really need in order to succeed on today's state assessment tests?

This was a question that we were very interested in answering, and one that we spent a lot of time investigating. We gathered test questions from every state and from all content areas, analyzed the questions to determine what skills were needed to answer them correctly, and compiled a list of "most-needed skills."

The skills that we identified—skills that students need to succeed regardless of grade level or content area—are the 12 skills on the checklist that you just saw!

The value of these skills is also reflected in the recently released *Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects*, *which* define the knowledge and skills K-12 students need to "prepare them for success in college and in work," and which are being adopted by states across the nation in an effort to establish a more uniform set of academic goals for our students (www.corestandards.org*).*

THE HIDDEN SKILLS OF ACADEMIC LITERACY

⇒ ***How many of the twelve 'checklist skills' on p. 30 do you teach directly? _____***

If your answer was "not many," don't worry – you are not alone! In fact, we decided to call the twelve skills on our list *The Hidden Skills of Academic Literacy* (or "Hidden Skills" for short) because we discovered that these skills are rarely taught in classrooms, rarely assessed or benchmarked at the various grade levels, and rarely addressed in state curriculum documents.

Do the Hidden Skills really make a difference?

Absolutely! In fact, one of the primary factors that distinguishes 'high achievers' from 'average achievers' is the degree to which the twelve Hidden Skills have been mastered and developed.

WHAT IS THE CONNECTION TO TEACHING STRATEGIES?

Each of the instructional strategies in *The Strategic Teacher* has the capacity to develop at least two—and sometimes as many as six!!—of the Hidden Skills. Let's see what one of these strategies looks like…

Reading for Meaning [6]

THE BASIC STEPS:

- Present students with list of 'agree or disagree statements' about an assigned text (e.g., "Frog is a good friend")
- Have students preview the statements and then begin reading the text
- Ask students to indicate whether they agree or disagree with the statements based on what they read
- Have students justify their agree/disagree positions by finding and recording appropriate evidence from the text

[6] The *Reading for Meaning* strategy is taken from *The Strategic Teacher: Selecting the Right Research-Based Strategy for Every Lesson* (Silver, Strong, and Perini, 2007)

Reading for Meaning is an easy strategy to implement, and it can be used across all content areas and grade levels (with primary grade students, simply read the story and statements aloud and have students share their positions and evidence verbally rather than in writing).

To help you visualize the strategy in action, we've provided two classroom vignettes from *The Strategic Teacher* for you to look at (Silver, Strong, and Perini, 2007; pp. 84-86); see the "Strategy In Action" section that starts on the next page.

Besides making students more active readers and enhancing their understanding of assigned texts, the *Reading for Meaning* strategy has the capacity to develop *several* Hidden Skills.

Can you figure out which ones?

⇒ Use the checklist on p. 30 to mark off the Hidden Skills that are embedded in this strategy.

Gettysburg Address Reading for Lesson

As part of his U.S. history course, 8th grade teacher Robert Bukowski has students conduct close readings of *Texts That Changed American History*. This day, Robert and his students are studying a key document in Civil War history and perhaps the most famous presidential address ever delivered—the Gettysburg Address. Robert begins his lesson by distributing to each student a Reading for Meaning organizer (Figure 6.1), which includes five statements about the Gettysburg Address.

Robert tells students

> Tapping into their prior knowledge is something that all good historians do before they read a new text to help them get a grasp on what they're going to be reading. So, what I'd like you to do is to tap into your prior knowledge by thinking back on what you know about Abraham Lincoln, the Civil War, and the Gettysburg Address.

Robert directs students to their Reading for Meaning organizers, asking them to preview the five statements and then to use their prior knowledge to anticipate what the text might be about.

Once all students have made their predictions, they begin reading. As they read, they collect evidence on their organizer that either supports or refutes each statement. For example, Figure 6.1 shows the Reading for Meaning organizer, along with evidence that a student collected as proof against the first statement, *Lincoln believes the soldiers have died in vain.*

Afterward, Robert has students meet in their readers' groups to discuss the reading, the statements, and the evidence they collected. Students share and compare ideas and work to reach consensus on the accuracy of each statement. As students work, Robert circulates around the room to listen to group members negotiate their ideas. When disagreement occurs, Robert coaches the group in using evidence to justify opinions. After the group discussion, the whole class convenes to share insights about the content and reactions to the process. For homework, Robert asks students to develop a retelling of the Gettysburg Address that a 3rd grader could understand.

As Robert and his students continue to read *Texts That Changed American History* throughout the year, he teaches students how they can use the Reading for Meaning strategy on their own, as a way to manage difficult readings. Whenever a text becomes confusing, Robert explains and models how students can stop reading and instead focus on developing a short statement that they believe tells what the passage is about. Students can then use their statement to find out whether the reading supports or refutes their belief.

FIGURE 6.1 Reading for Meaning Organizer with Sample Student Evidence

Proof For	Statement	Proof Against
	1. Lincoln believes the soldiers have died in vain. Agree ☐ Disagree ☑ 2. Lincoln is convinced great nations survive challenges. Agree ☐ Disagree ☐ 3. Lincoln sees a clear relationship between the past and present. Agree ☐ Disagree ☐ 4. A good slogan for the Gettysburg Address would be "We can work it out." Agree ☐ Disagree ☐ 5. Lincoln's intent is to make Americans feel guilty about the war. Agree ☐ Disagree ☐	"gave their lives that this nation might live" "The brave men, living and dead, who struggled here, have consecrated it..." "we here highly resolve that these dead men shall not have died in vain..."

Frog and Toad Reading for Meaning Lesson

Jeffrey Berger also uses Reading for Meaning, as a way to help his 2nd graders develop the critical skill of collecting evidence and using it to support their personal reactions to literature. Today, Jeffrey is reading Arnold Lobel's short story "Dragons and Giants" from the book *Frog and Toad Together* out loud to his students. Behind Jeffrey sits an easel. On the easel are three columns: The left and right columns are labeled "Proof For" and "Proof Against." Down the center column are four statements:

1. Being brave means you are never afraid.
2. Actions are more important than appearance.

3. Frog and Toad needed each other to survive their adventure.
4. Even make-believe stories can inspire us to do great things.

Jeffrey asks students to think about these statements before he begins reading. Then, as Jeffrey reads, he stops at key points and asks students if they notice anything that might help them figure out if each statement is true or false. Jeffrey records students' ideas in the "Proof For" or "Proof Against" columns and then continues reading. Afterward, Jeffrey and his students discuss the reading, the statements, and the process they used to determine if the evidence was responsive to the statement.

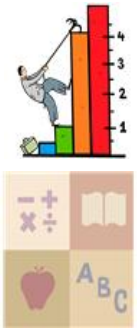
A DIVERSE REPERTOIRE OF STRATEGIES HELPS TO BUILD A DIVERSE REPERTOIRE OF SKILLS

Developing (and using) a diverse repertoire of teaching strategies is the key to helping students develop a diverse repertoire of thinking and learning skills. (Why? Because different strategies target different skills.) Use the list of Hidden Skills on p. 30 to determine which skills are embedded in the teaching strategies that you're currently using. If necessary, add additional strategies to your repertoire to fill in any gaps. Don't forget to include the tools and strategies that you learned about today!

Once you have a repertoire of teaching strategies that collectively targets all twelve Hidden Skills, you can help students build these important skills in three different ways:

(1) You can help students practice and develop all twelve Hidden Skills simply by cycling through the strategies in your repertoire.

(2) You can identify particular skills that need work and select the specific strategies that will target them.



(3) You can help students develop independence and sophistication in using these skills by giving them multiple opportunities to practice and apply them. If other teachers in your school make a commitment to using the same strategies that you are using (such that students get a chance to practice the embedded skills across grade levels and content areas over time), the benefits will be even greater.

Providing students with specific, timely, and constructive feedback about their use of specific skills, tools, and strategies will also go a long way toward promoting competence, confidence, and independence. Practice + Feedback = Perfect!

HOW CAN STRATEGIES HELP ME INCORPORATE RESEARCH ABOUT EFFECTIVE INSTRUCTION INTO MY LESSON PLANS?

STRATEGIES THAT WORK TO RAISE STUDENT ACHIEVEMENT

For many years, educational researchers have been interested in finding out whether teaching strategies were actually having a positive impact on student achievement—and if so, which ones. One of the most extensive and influential of these studies was initiated by the renowned educational researcher Robert Marzano, who used meta-analysis to identify the kinds of instructional strategies that have a high probability of enhancing student achievement.

In his aptly titled and best-selling book, *Classroom Instruction That Works: Research-Based Strategies for Increasing Student Achievement* (Marzano, Pickering, & Pollock, 2001), Marzano describes the nine categories of instructional strategies that brought about the greatest gains in student achievement across all grade levels and content areas. These nine categories, which we refer to as "The Marzano Nine," are listed below.

⇒ Which <u>three</u> categories of instructional practices/strategies do you think would have the greatest impact on student achievement? Mark your choices with an "X".

CATEGORIES OF INSTRUCTIONAL PRACTICES AND STRATEGIES*

- ☐ Generating & Testing Hypotheses
- ☐ Summarizing & Note-taking
- ☐ Identifying Similarities & Differences
- ☐ Questions, Cues, and Advance Organizers
- ☐ Reinforcing Effort & Providing Recognition
- ☐ Cooperative Learning
- ☐ Nonlinguistic Representation
- ☐ Setting Objectives & Providing Feedback
- ☐ Homework & Practice

Ranking	% Gain

*We acknowledge the use of nine strategies from Marzano, Pickering, and Pollock's *Classroom Instruction That Works*. Copyright © 2001 Mid-continent Research for Education and Learning (McREL). Adapted by permission of McREL. 4601 DTC Boulevard, Suite 500, Denver, Colorado 80237. Phone: 303.337.0990. Web: www.mcrel.org/topics/products/19/

THE GAP BETWEEN KNOWING AND DOING

Three decades worth of research have provided the educational community with a very clear picture of what effective classroom instruction should look and sound like. We know, for example, that we can enhance achievement by clarifying learning objectives, developing high-order thinking skills, employing rubrics, and encouraging writing—yet results from classroom observation studies (see data below) show that *we're not doing the things that we know work.*

Research Observations:

Classrooms in which students were either writing or using rubrics: ***0*** *percent*
Classrooms in which there was evidence of higher-order thinking: ***3*** *percent*
Classrooms in which there was evidence of a clear learning objective: ***4*** *percent*
Classrooms in which high-yield strategies were being used: ***0.2*** *percent*

Source: Learning 24/7 (2005) as quoted in Schmoker (2006)

We are suffering from what Stanford University professors Jeffrey Pfeffer and Robert Sutton (2000) refer to as a "knowing-doing gap." In other words, we have access to the information that can help us teach more effectively—we're just having trouble putting it into action.

Why does this gap exist?

No matter what anyone says, bridging the knowing-doing gap isn't as easy as it sounds. Even when researchers give us ideas that are as clear and logical as Marzano's, it can be time-consuming and challenging to figure out how to put those ideas into practice!

RESEARCH-BASED STRATEGIES HELP TO BRIDGE THE KNOWING-DOING GAP

Being former teachers ourselves, and having spent decades working and collaborating with educators in classrooms across the country, we knew that teachers needed more than a list of effective principles; they needed *practical strategies* for implementing the principles of effective ideas in their classrooms.

When we wrote *The Strategic Teacher,* our goal was to help educators bridge the knowing-doing gap by giving them a collection of concrete, effective, and teacher-tested strategies that have the research "built right in." We knew that these strategies *should* work because they were rooted in research about what works in schools. We knew that they *actually* worked because we had used, tested, and refined them with the help of real classroom teachers like yourselves. Let's take a closer look at one of the strategies from the book…

Compare and Contrast [7]

Compare and Contrast belongs to the category of instructional strategies that Marzano, Pickering, & Pollock (2001) found to have the greatest impact on student achievement across grade levels and content areas: "Identifying Similarities and Differences."

Note: The way that you implement the "identifying similarities and differences" concept in your classroom will influence the degree to which it benefits students. For example, asking compare and contrast *QUESTIONS* in the classroom or on a test *won't* provide the same benefits as using (and teaching students how to use) a thoughtfully-designed compare and contrast *STRATEGY.*

Other reasons why comparison lessons often fall short of their potential are summarized in the left column of the "*Why Comparison Strategies Often Fail…and What We Can Do About It*" table on the next page. Our Compare and Contrast strategy maximizes the power of Compare and Contrast lessons by addressing these issues *and* incorporating the elements that Marzano et al. (2001) note are "the key" to performing effective comparisons (p. 17).

The *Compare and Contrast* strategy includes four specific phases (refer to the middle column of the table on the next page for additional information).

(1) Description – Students describe each item separately; specific criteria provide focus

(2) Comparison – Students use a visual organizer to identify similarities and differences

(3) Conclusion – Students draw conclusions based on their comparisons

(4) Application – Students demonstrate and apply what they have learned

By having students move through these four phases, you can enhance their understanding of the content by deepening the quality and thoughtfulness of their comparisons. Perhaps even more importantly, you will teach students a concrete process ("strategy") that they can use to perform high-quality comparisons on their own (e.g., when faced with a compare and contrast essay question on a state assessment test).

If you want to get a better feel for the four phases of the strategy and see how it addresses the most common causes of "comparison failure," try completing the Mix & Match activity on the next page. (Don't look now, but there's an answer key on page 42!)

[7] The Compare and Contrast strategy can be found in *The Strategic Teacher: Selecting the Right Research-Based Strategy for Every Lesson* (Silver, Strong, and Perini, 2007).

Mix & Match

Instructions: Complete the "*Why Comparison Strategies Often Fail…and What We Can Do About It*" table below by indicating which of these seven 'text snippets' belongs in each box of the "Examples" column.

A. "You can find the rules of volleyball described on page 124 of your text, and the rules for table tennis on page 198."
B. "Remember to describe the color, shape, and size of each individual sample before attempting to compare them."
C. "As you describe Tutankhamen and Hatshepsut, focus in on the challenges that they faced, the things that they accomplished, the qualities that made them unique, and their overall style of leadership."
D. "Use a Top Hat Organizer to compare and contrast alligators and crocodiles according to the criteria that we established."
E. "People often confuse reptiles and amphibians. Let's compare them to make sure that we're clear about how they're the same and how they're different."
F. Sample student response to question #3: "By comparing these two items, I realized that a container's shape and the materials it's made of can affect its function."
G. "Use what you learned to design a new and improved egg carton; remember to consider the way that your construction materials and container shape will affect practicality and functionality."

Why Comparison Strategies Often Fail…and What We Can Do About It

Why Comparison Strategies Fail	What We Can Do About it	Examples
1. Students don't understand the purpose or goal of making the comparison.	Always provide students with a clear purpose for the lesson. **(Part of PHASE 1)**	
2. Students don't describe each item or idea individually before attempting to compare them.	Remind students that they should describe each idea or item separately before attempting a comparison. **(Part of PHASE 1)**	
3. Students don't know what characteristics to focus on when describing their items or ideas.	Provide clear criteria to focus students' descriptions and a simple description organizer* so they can record their information. **(Part of PHASE 1)** *Sample organizers can be found in the "fable" and "coin" examples on p. 42.	
4. Students don't know enough about the items or ideas to describe them completely and accurately.	Provide students with resources (books, pictures, objects) that they can use to gather information about the items or ideas they are comparing. (**Part of PHASE 1)**	
5. Students don't have a way to visualize and line up parallel differences. For example: **Alligator**: The snout is a wide "U"-**shape,** and rounded like a shovel. **Crocodile**: The snout is a longer, more pointed "V"-**shape.** **Similarities**	Develop, help students develop, or allow students to select a visual organizer that allows them to line up parallel differences. **(PHASE 2)**	
6. Students don't think about or draw conclusions from their comparisons.	Use questions like these to help students draw meaningful conclusions: (1) Are these items more similar or different? Why? (2) What is the cause (or effect) of this important difference? (3) What can you conclude from your work? (A conclusion that ties into the purpose is one option) **(PHASE 3)**	
7. Students don't do anything with or apply what they learned by making the comparison.	Ask students to demonstrate, apply, or expand on what they learned by creating an appropriate product. **(PHASE 4)**	

Source: Adapted from Silver, H., Perini, M., & Strong, R. (2007). *The Strategic Teacher: Selecting the Right Research-Based Strategy for Every Lesson*. Alexandria, VA: ASCD. (p.76)

Like other strategies in *The Strategic Teacher, Compare and Contrast* can be adapted for use in all grade levels and content areas: Representative samples of student work from all four phases of the strategy are shown on pp. 42-44.

What might be the consequences if educators in a school or district made a commitment to using a strategy like *Compare and Contrast* across grade levels and content areas?

A Potpourri of Classroom Comparisons

This "Potpourri of Classroom Comparisons" (pp. 8-10) comes from pages 8-10 of *Compare and Contrast: How Comparative Thinking Strengthens Student Learning* (A Strategic Teacher PLC Guide).

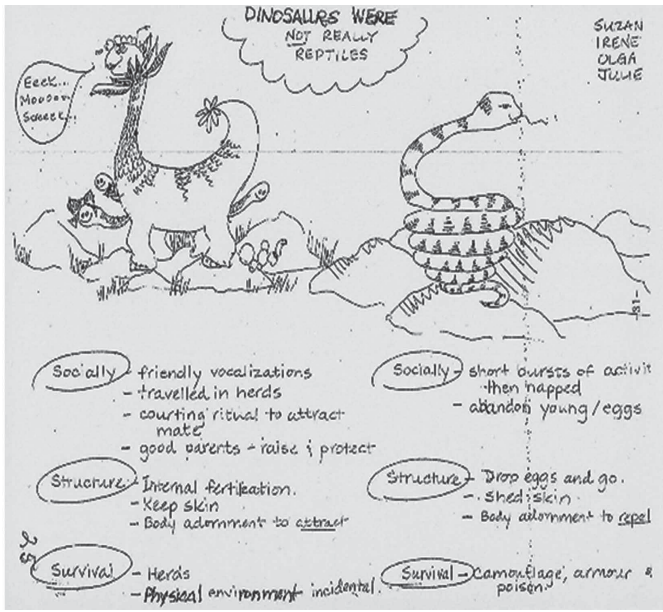
Figure 1.1 **Compare & Contrast Potpourri** **Phase One**

A 3rd grader analyzes the structure of two fables.

"The Tortoise and the Hare"	Criteria	"The Tortoise and the Antelope"
A tortoise A hare	Characters	A tortoise Antelope
Because the hare makes fun of the tortoise	Why they decide to race	Because they argue who can go faster
The hare goes to sleep by accident	How the tortoise wins	The tortoise and some friends trick the antelope
"slow and steady wins the race"	Lesson	"Team work works"

A 1st grader uses a magnifying glass to identify the critical attributes of coins.

Name of Coin	penny	nickel	dime	quarter
Color	copper	silver	silver	silver
Shape	circle	circle	circle	circle
Size	medium	large	small	largest
How Edges Feel	smooth	smooth	bumpy	bumpy
Year	1991	1975	1967	1990
President on Front	Lincoln	Jefferson	Truman	Washington
Picture on Back of Regular Coin	building	building	torch plants	eagle
Picture on Back of NJ Coin	X	X	X	crossing Delaware
Value	1¢	5¢	10¢	25¢

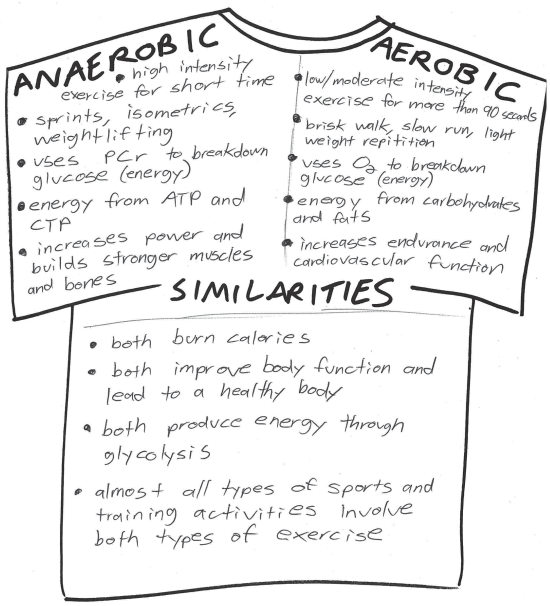


A group of middle school students use words and images to distinguish reptiles from dinosaurs.

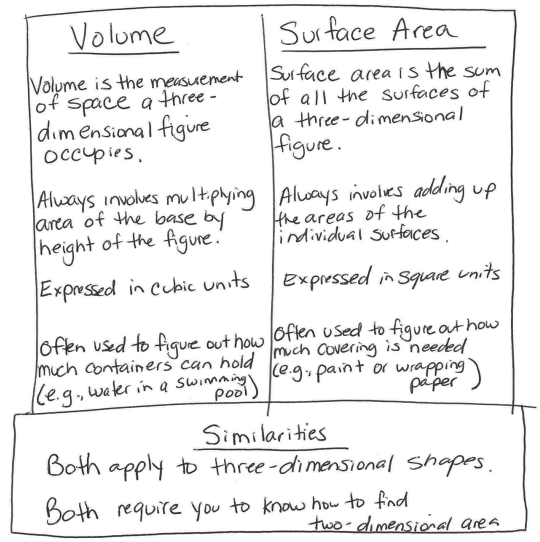
Answer Key for Why Comparison Strategies Often Fail…and What We Can Do About It
1-E; 2-B; 3-C; 4-A; 5-D; 6-F; 7-G

Figure 1.1 (*continued*) **Phase Two**

A high school student creates a T-Shirt Organizer to identify the similarities and differences between anaerobic and aerobic exercise.



A middle school student creates a Top Hat Organizer to summarize and review critical similarities and differences between volume and surface area.



A high school student compares the educational philosophies of Booker T. Washington and W. E. B. Du Bois on a Y Organizer.

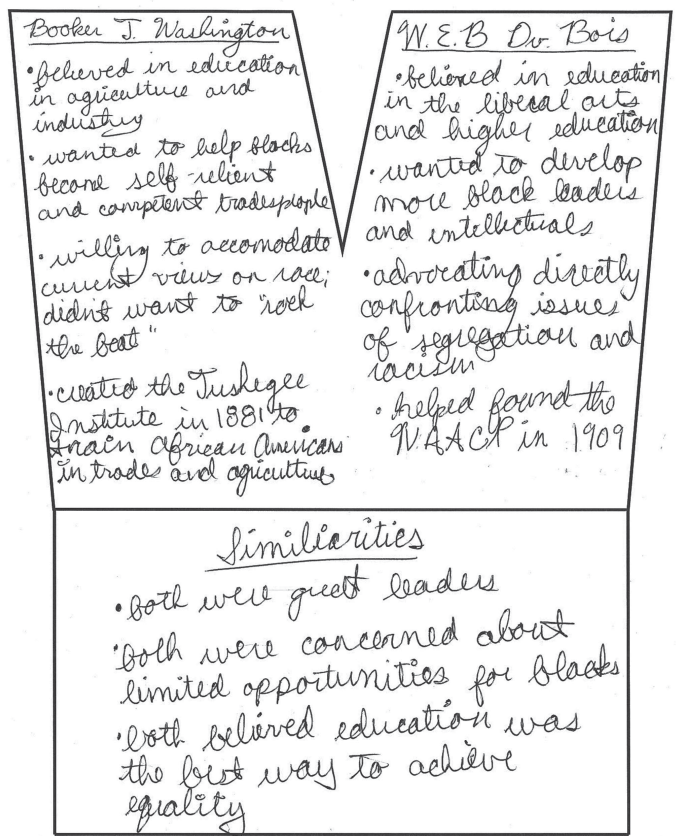


Figure 1.1 (*continued*) **Phases Three and Four**

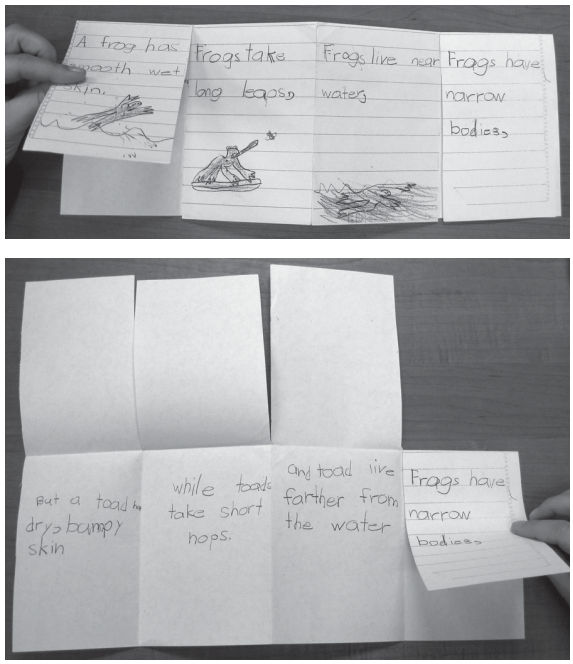
A 5th grader draws conclusions about renewable and nonrenewable energy.

The most important difference between renewable energy and nonrenewable energy is that renewable energy won't run out, while nonrenewable energy will eventually run out.

Possible cause(s) for this difference is/are renewable energy comes from sources like wind, the sun and plants that come back and that can't run out. Nonrenewable energy comes from sources like coal and fossil fuels that don't come back after they're taken.

Possible effect(s) of this difference is/are The U.S. and other countries are trying to find new ways to develop renewable energy sources because people will need renewable energy in the future when nonrenewable sources run out.

A 2nd grader creates a Flip Strip to show how frogs and toads differ.



A 2nd grader writes a simple comparison essay on spheres and rectangular prisms.

Let's find out about how the sphere and the rectanglar prism are different and alike! First of all the word vertices means corners. A sphere and a rectanglar prism are alike because they are 3-D shapes. The way that they are different are that the sphere can roll while the prism doesn't. The prism has vertices and the sphere doesn't. The sphere doesn't have edges and the prism does. The prism has faces and the sphere doesn't. Also the prism has flat bosses while the sphere doesn't. How do you think they are alike and different?

HOW CAN I BECOME A MORE "STRATEGIC" TEACHER?

THE KEY TO GREAT TEACHING

Read the sentence below. If you had to fill in the blank with one or two words, what word(s) would you choose?

The key to great teaching is _____.

There are obviously a lot of possible ways to complete the sentence above. Can you guess how we filled in the blank? Unscramble the letters below to come up with the two words that we chose...

Word 1: d s i c e s n i o
Word 2: k i n g a m

The way we see it, the key to great teaching is _____ _____.
(word 1) (word 2)

But you don't have to take our word for it...

Teachers make hundreds of decisions every day in their classrooms—and research shows that these decisions have a *significant* impact on student achievement. In fact, many educational researchers have concluded that teachers and the instructional decisions that they make have a greater impact on student achievement than any other factor.

- Teachers can enhance student achievement by making good instructional decisions—by knowing what teaching strategies actually work and knowing when to use them (Marzano, Pickering, & Pollock, 2001).

- What teachers do has 6 to 10 times as much of an impact on student achievement as all other factors combined (Mortimore and Sammons, 1987 as summarized in Schmoker, 2006).

- Individual teachers can have a profound impact on student achievement—even in otherwise ineffective schools (Marzano, Pickering, & Pollock, 2001).

- "Improved classroom instruction is the prime factor to produce student achievement gains" (Odden & Wallace, 2003, p.64).

- Effective classroom instruction works regardless of students' socioeconomic status (Schmoker, 2006).

As my business partner Richard Strong always used to say, **"*There can be no improvement in learning without the teacher*!"**

THE LINK BETWEEN SUCCESSFUL, STRATEGIC TEACHING AND THOUGHTFUL DECISION-MAKING

Twentieth century philosopher Ludwig Wittgenstein argued that a word's meaning is not found in its formal definition, but rather in its use. Take a look at some ways in which the word "strategy" has been used. Then respond to the question at the bottom of the page.

However beautiful the strategy, you should occasionally look at the results.
-- *Winston Churchill*

Strategy requires thought, tactics require observation.
-- *Max Euwe*

Strategy is about making choices, trade-offs; it's about deliberately choosing to be different.
-- *Michael Porter*

Strategy is a style of thinking, a conscious and deliberate process, an intensive implementation system, the science of ensuring future success.
-- *Pete Johnson*

You have to be fast on your feet and adaptive or else a strategy is useless.
-- *Charles de Gaulle*

There is always a better strategy than the one you have; you just haven't thought of it yet.
-- *Sir Bryn Pitman*

When you're prepared, you're more confident. When you have a strategy, you're more comfortable.
-- *Anonymous*

Sound strategy starts with having the right goal.
-- *Michael Porter*

What do you think it means to teach "strategically"? In what ways can thoughtful decision making make instruction more strategic and successful? Use the quotations above to spark your thinking.

AN INTRODUCTION TO THE STRATEGIC DASHBOARD

Teachers often ask us if there's a tool that they can use to help them decide what strategies to use when. When they ask us this question, we direct them to a decision-making tool that we call a "Strategic Dashboard."

What exactly is a Strategic Dashboard? And how can it help you?

⇒ *Take a minute to think of things you know about "regular" dashboards*. (What is a dashboard? What is the value of a dashboard? How does a dashboard help the driver of a car make thoughtful and informed decisions?) Jot down everything that you can think of in the space below.

Take a minute to examine the "Strategic Dashboard" that appears on the next page. Then respond to the questions in the boxes below.

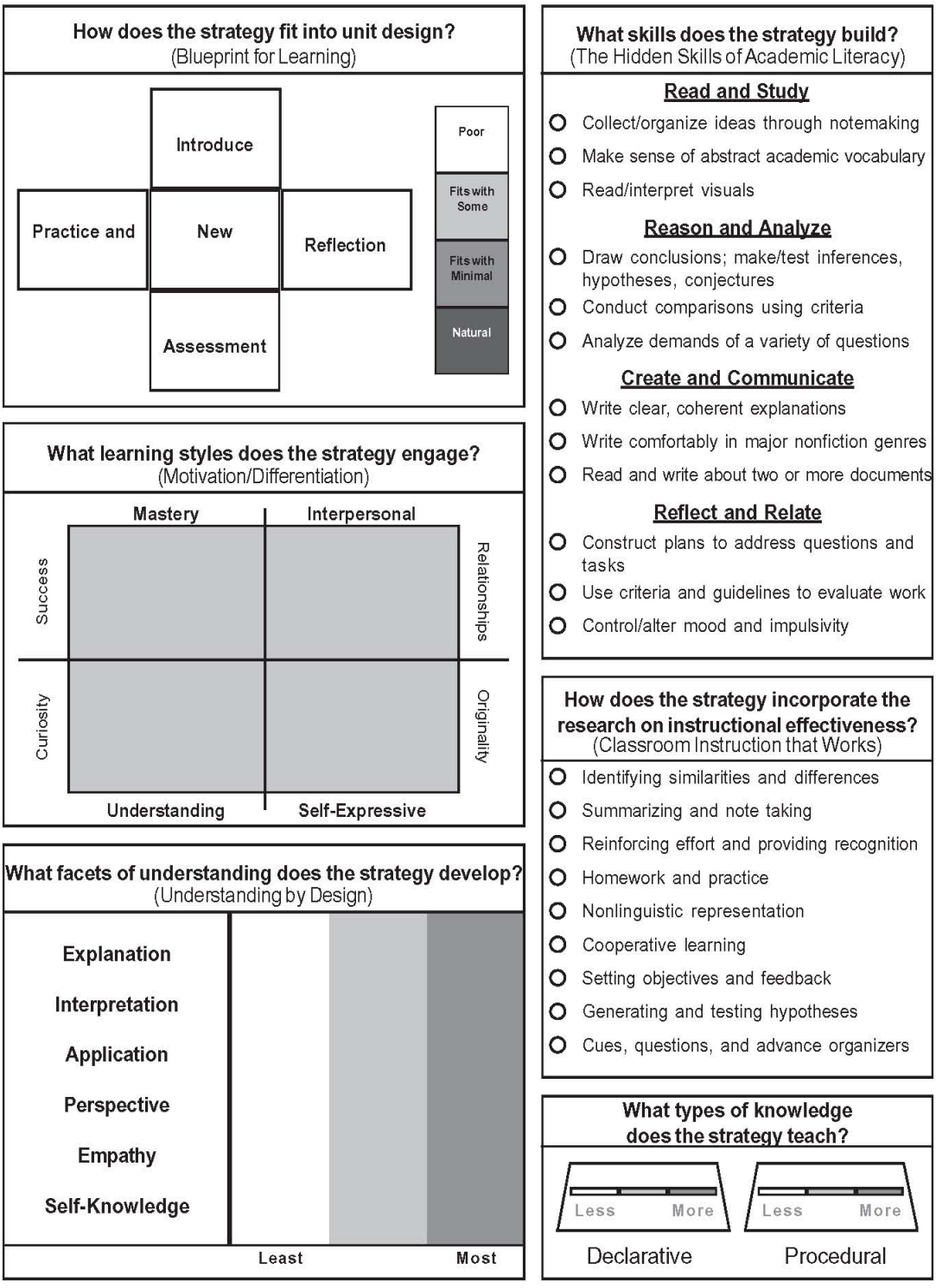
What six questions is a Strategic Dashboard designed to answer?*

1.
2.
3.
4.
5.
6.

How might a Strategic Dashboard help you make more informed decisions about what strategies to use when? How might it allow you to teach more successfully and strategically?

*When you were looking at the dashboard, you might have noticed that we've only discussed some of the many benefits of having a diverse repertoire of research-based strategies. Having a diverse repertoire also allows you to *design more effective and thoughtful lessons and units, address the different facets of understanding* as outlined by Wiggins and McTighe (2005), and manage different kinds of content knowledge (declarative vs. procedural). These other benefits are described more fully in *The Strategic Teacher (Silver, Strong, & Perini, 2007)*, which is where the Strategic Dashboard concept originated.

Strategic Dashboard



Source: Adapted from *The Strategic Teacher: Selecting the Right Research-Based Strategy for Every Lesson*. Copyright © 2007 Thoughtful Education Press. Published by ASCD. *We acknowledge the use of nine strategies from Marzano, Pickering, and Pollock's *Classroom Instruction That Works*. Copyright © 2001 Mid-continent Research for Education and Learning (McREL). Adapted by permission of McREL. 4601 DTC Boulevard Suite 500, Denver, CO 80237. Phone 303.337.0990. Web: www.mcrel.org/topics/products/19

What benefits does renowned educational researcher Robert Marzano feel the Strategic Dashboard offers teachers? Take a look at what he had to say in the foreward of *The Strategic Teacher*…

"Through an innovation known as the Strategic Dashboard… [Silver, Strong, and Perini] show how each strategy in [The Strategic Teacher] relates to nearly every idea that matters in instructional research: how the strategy serves as a unit design tool; how it can be used to differentiate instruction; what skills, facets of understanding, and types of knowledge it builds in students; how it is supported by current research. What's so attractive about this approach, other than its immediate usefulness to teachers, is how well it aligns with what I have found coming from the opposite direction as a researcher. Perhaps we should consider *The Strategic Teacher* a touchstone text, one of the very first documents in a new and exciting field where the science of teaching—the empirical reliability of meta-analysis and action research—is perfectly aligned with the art of teaching and the wisdom of the teachers who practice it every day."

Why do we think the Strategic Dashboard is beneficially?

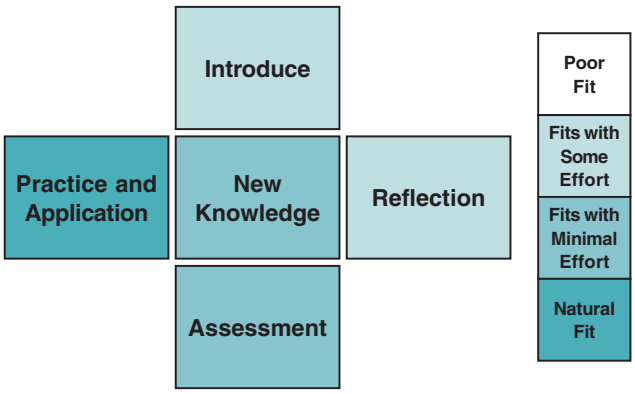
WE BELIEVE THAT STRATEGIC TEACHING INVOLVES MAKING THOUGHTFUL DECISIONS BEFORE, DURING, AND AFTER INSTRUCTION. The Strategic Dashboard enables teachers to make more thoughtful decisions by providing them with a snapshot of each strategy's "vital statistics" (what styles of learners it engages, what styles of skills it targets, what principles of effective instruction it incorporates, what facets of understanding it develops, what types of knowledge it builds, and how it fits into lesson and unit design.)

Completed Dashboards for selected strategies from *The Strategic Teacher* are provided for your reference on pp. 51-53.

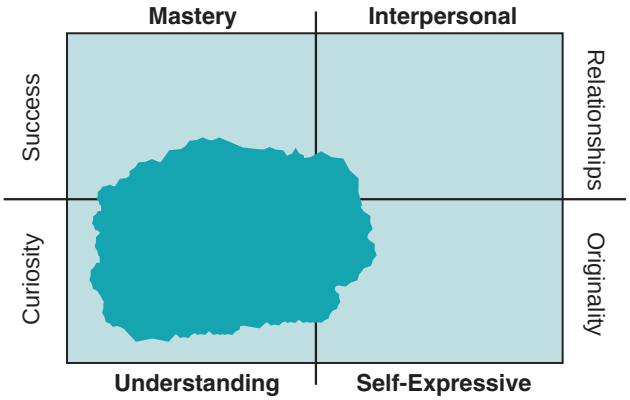
So far in this workshop, we've focused on the way that a Strategic Dashboard and a diverse repertoire of research-based strategies can help you become a more strategic and successful teacher. An idea that we've emphasized less—but one that's equally important—is the idea that using a diverse repertoire of strategies will also help students become more strategic, successful, and self-directed learners. Let's review how…

COMPARE AND CONTRAST DASHBOARD

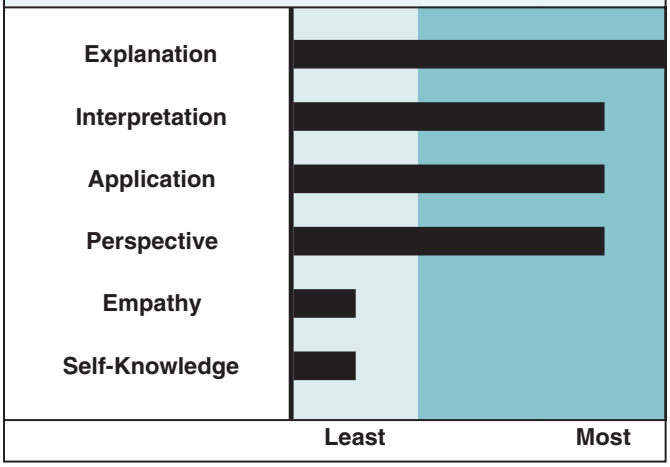
How does the strategy fit into unit design?
(Blueprint for Learning)



What learning styles does the strategy engage?
(Motivation/Differentiation)



What facets of understanding does the strategy develop?
(Understanding by Design)



What skills does the strategy build?
(The Hidden Skills of Academic Literacy)

Read and Study

- ● Collect/organize ideas through note making
- ○ Make sense of abstract academic vocabulary
- ○ Read/interpret visuals

Reason and Analyze

- ● Draw conclusions; make/test inferences, hypotheses, conjectures
- ● Conduct comparisons using criteria
- ○ Analyze demands of a variety of questions

Create and Communicate

- ○ Write clear, coherent explanations
- ● Write comfortably in major nonfiction genres
- ● Read and write about two or more documents

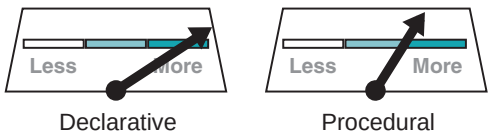
Reflect and Relate

- ○ Construct plans to address questions and tasks
- ● Use criteria and guidelines to evaluate work
- ○ Control/alter mood and impulsivity

How does the strategy incorporate the research on instructional effectiveness?
(Classroom Instruction That Works)

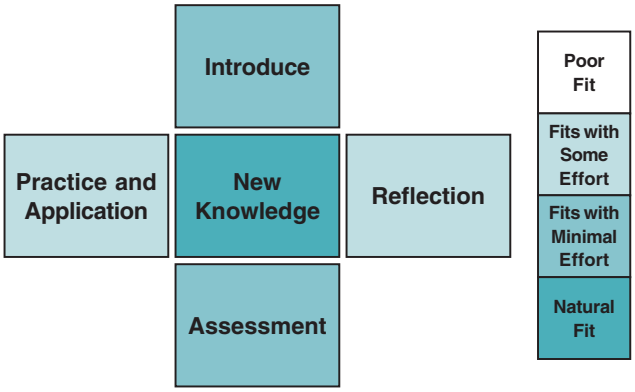
- ● Identifying similarities and differences
- ● Summarizing and note taking
- ○ Reinforcing effort and providing recognition
- ○ Homework and practice
- ○ Nonlinguistic representation
- ○ Cooperative learning
- ○ Setting objectives and feedback
- ● Generating and testing hypotheses
- ● Cues, questions, and advance organizers

What types of knowledge does the strategy teach?

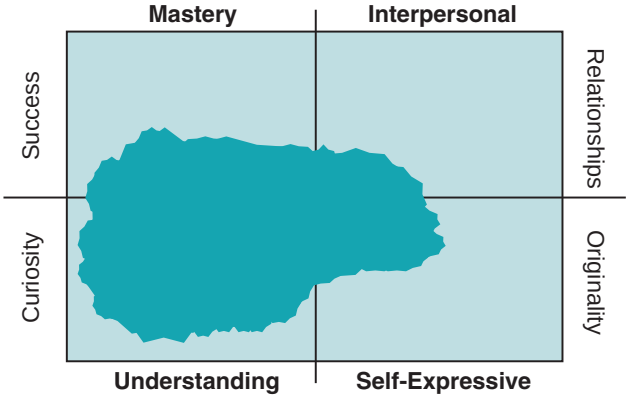


READING FOR MEANING DASHBOARD

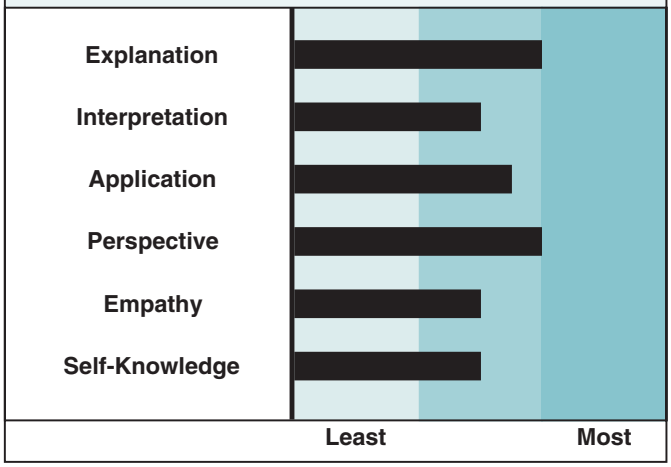
How does the strategy fit into unit design?
(Blueprint for Learning)



What learning styles does the strategy engage?
(Motivation/Differentiation)



What facets of understanding does the strategy develop?
(Understanding by Design)



What skills does the strategy build?
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- ○ Analyze demands of a variety of questions

Create and Communicate

- ● Write clear, coherent explanations
- ● Write comfortably in major nonfiction genres*
- ○ Read and write about two or more documents

Reflect and Relate

- ○ Construct plans to address questions and tasks
- ○ Use criteria and guidelines to evaluate work
- ○ Control/alter mood and impulsivity

How does the strategy incorporate the research on instructional effectiveness?
(Classroom Instruction That Works)

- ○ Identifying similarities and differences
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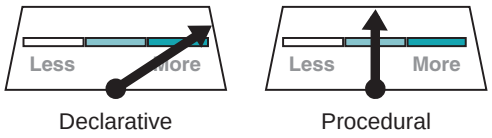
- ● Cues, questions, and advance organizers

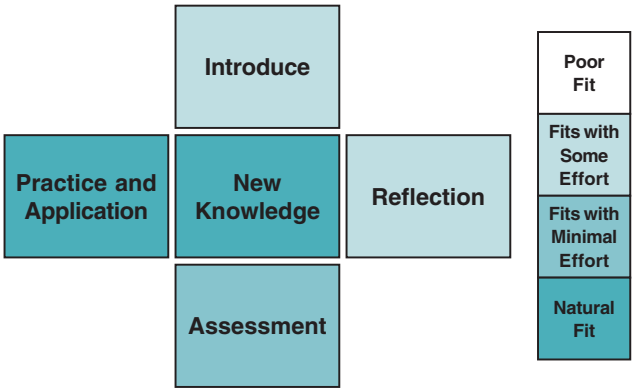
What types of knowledge does the strategy teach?



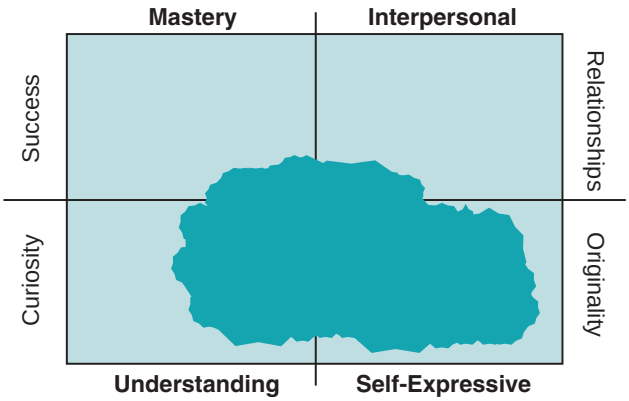
*Reading for Meaning is especially useful for building students' capacities to use evidence in their writing.

METAPHORICAL EXPRESSION DASHBOARD

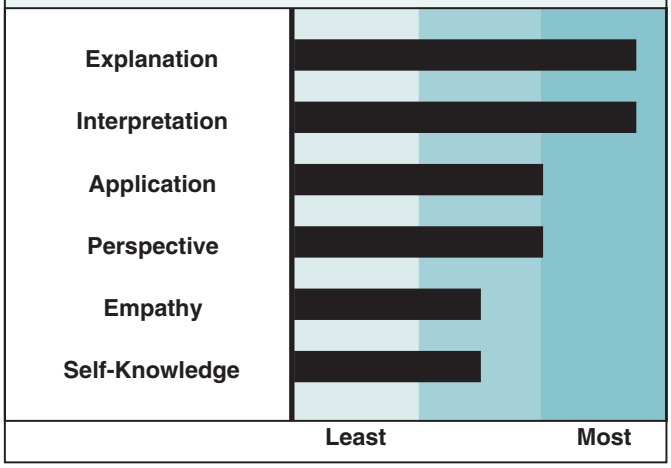
How does the strategy fit into unit design?
(Blueprint for Learning)



What learning styles does the strategy engage?
(Motivation/Differentiation)



What facets of understanding does the strategy develop?
(Understanding by Design)



What skills does the strategy build?
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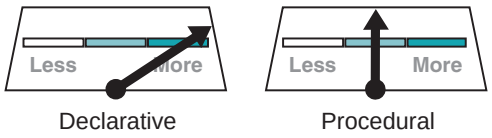
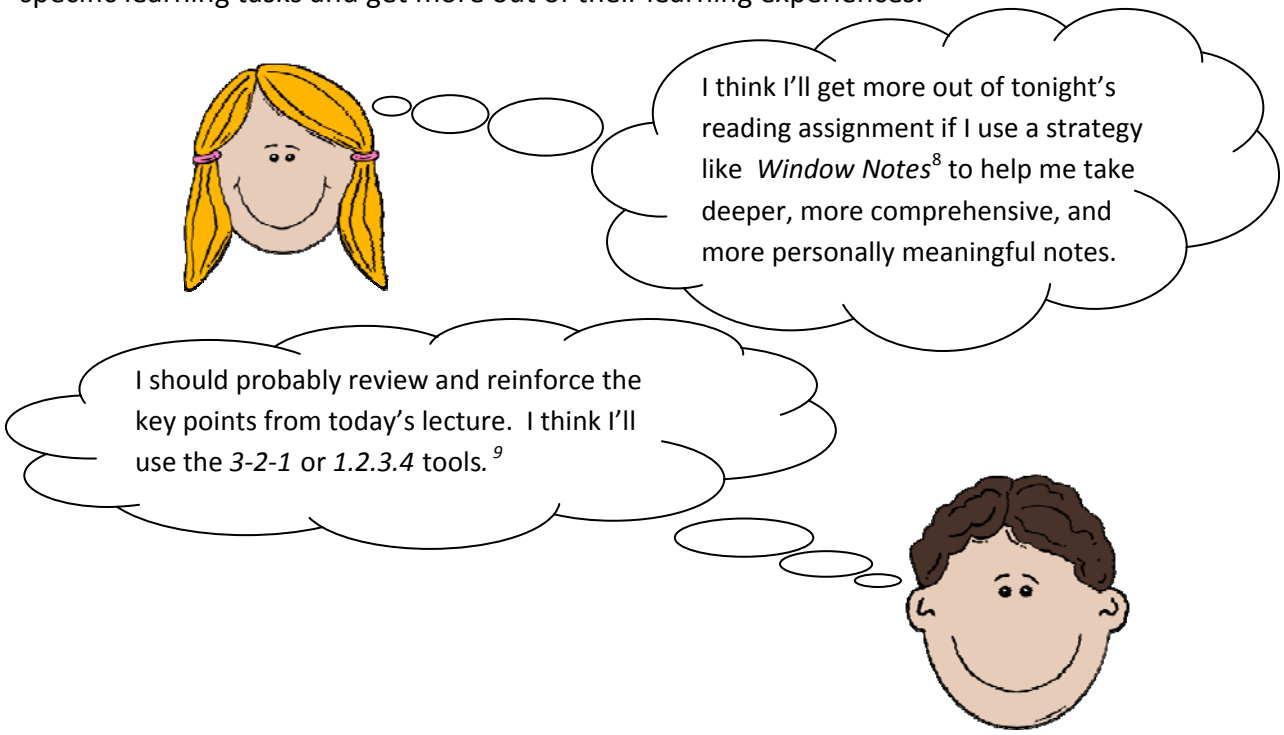


USING A VARIETY OF STRATEGIES PREPARES STUDENTS TO BE MORE STRATEGIC LEARNERS

"The greatest sign of success for a teacher…is to be able to say,
'The children are now working as if I did not exist.'"

– Maria Montessori

How you teach has a significant impact not only on what students learn, but on how they learn to learn. If you use a variety of tools and strategies in the classroom, you will introduce students to a variety of tools and strategies that *they* can ultimately (with practice) use to manage and guide their own learning. Once students have a variety of learning strategies in their repertoires, they—like you—will be able to make 'strategic' decisions about how to approach specific learning tasks and get more out of their learning experiences.



Teaching with different styles and strategies in mind prepares students to be self-directed, confident, and successful lifelong learners.

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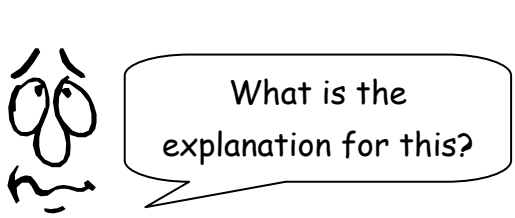
[8] *The Strategic Teacher: Selecting the Right Research-Based Strategy for Every Lesson* (Silver, Strong, and Perini, 2007).

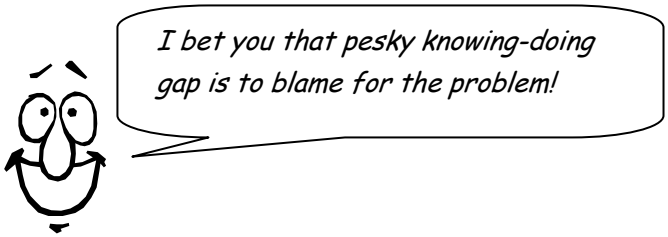
[9] *3-2-1* and *1.2.3.4.* both appear in the 2nd edition of *Tools for Promoting Active, In-Depth Learning* (Silver, Strong, and Perini, 2001).

HOW CAN WE HELP YOU BRING STRATEGIES INTO THE CLASSROOM?

THE KNOWING-DOING GAP REVISITED

Decades-worth of research by Bruce Joyce and Beverly Showers have made it clear that most of the information that teachers acquire during professional development sessions does not get used. In fact, for the majority of professional development initiatives, **less than ten percent** of what teachers learn in workshops and training sessions ends up making it back to the classroom (Joyce & Showers, 2002). *Yikes!!*



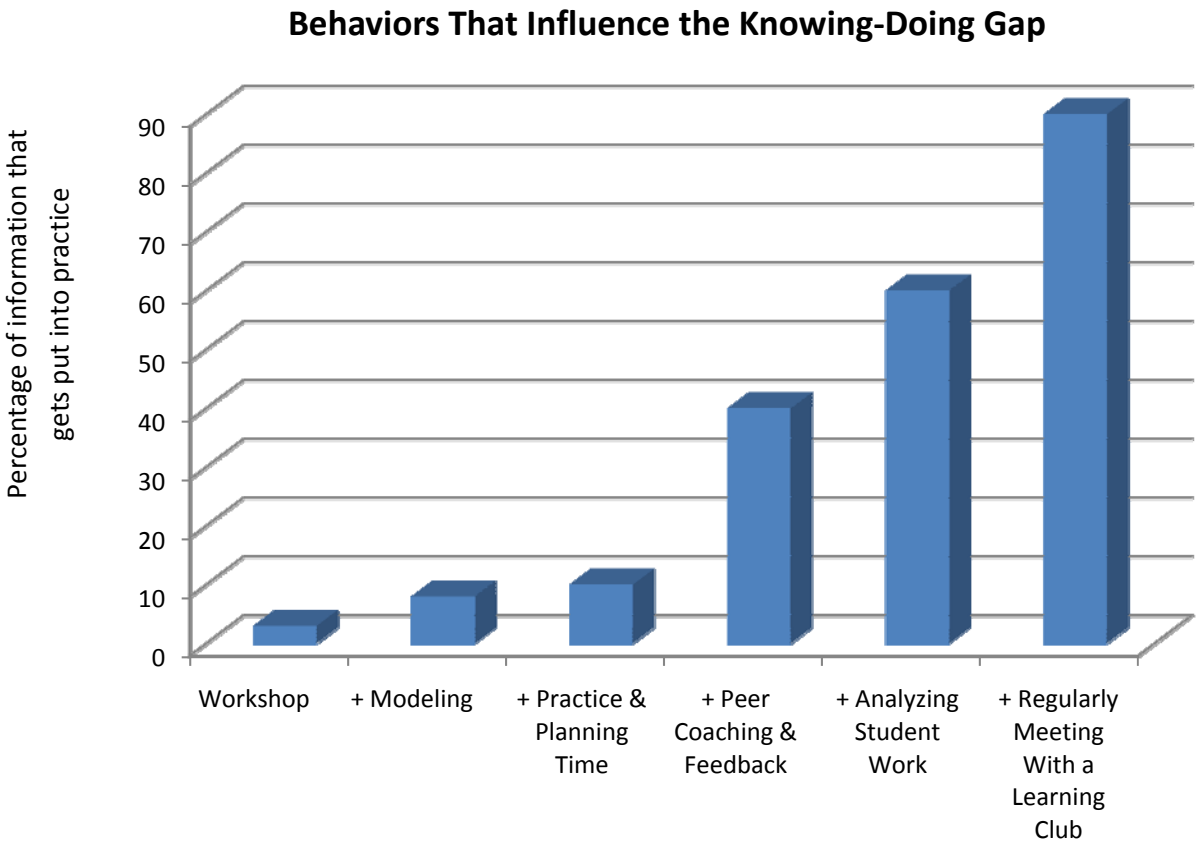


What does it take to bridge the gap?

When schools have focused, integrated professional development programs in place --- programs that include high levels of teacher collaboration and teamwork – it becomes possible for teachers to:

- ✓ Practice using teaching strategies and plan lessons that use the strategies
- ✓ Use Peer Coaching to give and receive feedback from other teachers
- ✓ Analyze work that students generate during strategy-based lessons
- ✓ Design and deliver effective units of instruction using teaching strategies

The bar graph on the next page illustrates the way that these behaviors impact the knowing-doing gap. What can you learn from the graph?



Source: Joyce, B., & Showers, B. (2002). *Student achievement through staff development, 3rd edition.* Alexandria: ASCD.

Think back to the beginning of the workshop…

Do you remember talking about the differences between the experts and the do-it-yourselfers?

About the reasons why a contractor could build you a new deck more efficiently and effectively than you could do it yourself?

Do you recall that one of a contractor's main advantages is that he has a team of professionals working with him to get the job done?

Why are we bringing this up now?

Because learning and implementing new strategies is also more efficient and effective when it is done with the help and support of a team.

LEARNING CLUBS CAN HELP TO BRIDGE THE KNOWING-DOING GAP!

If the goal is to make classroom instruction more effective than it is now, learning the craft of 'strategic' teaching should not be a solitary pursuit!

Why?

Implementing any kind of significant change can be a difficult task, but it is virtually impossible to effect meaningful change without collaboration and support. In fact, "Creating a collaborative environment has been described as 'the single most important factor' for successful school improvement initiatives and 'the first order of business' for those seeking to enhance the effectiveness of their school" (Martin-Kniep G., 2004; Eastwood & Lewis, 1992).

For this reason, schools that are serious about improving teaching and learning should make every effort to encourage educators to communicate with each other, learn from each other, and work together as a team.

The first step involves establishing action-oriented forums that enable teachers to work collectively and collaboratively toward the goals of refining and improving instructional practice and enhancing student learning. **We call these forums "Learning Clubs."**

Learning Clubs enhance instructional effectiveness by deepening teachers' understanding of instructional 'best bets' and by helping teachers use research-based teaching strategies to address their students' learning needs. Learning Clubs enhance student learning by helping teachers close the gap between what they know works and what they do in the classroom.

The power of Learning Clubs lies in their ability to serve four basic functions. Learning Clubs:

√ Foster collaboration, community, and a sense of shared responsibility

√ Promote regular and reflective analysis of student work and classroom practice

√ Initiate meaningful changes in instructional practice

√ Empower teachers to establish specific goals for improving instruction and learning

WHAT DOES STRATEGIC TEACHING LOOK LIKE?

What does it look like when you incorporate everything that you've just learned about effective classroom instruction into practice? Since you obviously can't peek into an *actual* classroom right now to see how it looks when a strategic teacher "puts it all together", we've provided you with a classroom narrative instead. The purpose of giving you this narrative is to help you "see" the way in which one strategic teacher ("Mr. Cogito") uses what he knows about the principles of effective classroom instruction to help him design and deliver a unit about explorers.

Reading the narrative is also a good way to preview some of our other research-based and "stylish" tools and strategies. Sources include *The Strategic Teacher (Silver, Strong, & Perini, 2007), Tools for Promoting Active, In-Depth Learning* (Silver, Strong, and Perini, 2001), and *Math Tools Grades 3-12: 64 Ways to Differentiate Instruction and Increase Student Engagement* (Silver, Brunsting, and Walsh, 2008). The names of these tools and strategies are underlined in the narrative.

As you read, pay attention to the ways in which Mr. Cogito uses what he knows about learning styles and teaching strategies to help him plan and present a unit that is both engaging and effective. Specifically, we want you to think about how Mr. Cogito addresses each of the four questions/concepts that we discussed in this workshop. Use the questions below to keep you focused and the blank space to the right of the narrative to take notes.

1. *How does Mr. Cogito use teaching tools and strategies to differentiate instruction so that all styles of learners get what they need to succeed?*

2. *How does Mr. Cogito use teaching tools and strategies to engage and motivate all styles of learners?*

3. *What instructional tools and/or strategies does Mr. Cogito use to help his students develop the "Hidden Skills of Academic Literacy"?*

4. *Is there any evidence that Mr. Cogito has bridged the "knowing-doing gap" that prevents so many other teachers from integrating Marzano's valuable research findings (the "Marzano Nine") into their classroom practice?*

When you finish, use what you learned in the workshop to answer the following question:

What does strategic teaching look like?

Describe at least five characteristics:

One final note:

When you begin planning and implementing "strategic" lessons and units of your own, don't get discouraged if they aren't as complete or lengthy as Mr. Cogito's since he is a strategy expert who has been doing this sort of thing for a long time. If you can incorporate even one of the things that you learned in this workshop into your next lesson or unit, you are on the right track—and one step closer to becoming a strategy expert yourself!

A STRATEGIC TEACHER AT WORK…

NOTES

On Day 1, Mr. Cogito begins by writing 15 key terms related to the unit on the board, one word one at a time. With each new word, students consider what they know about the term and make connections between terms to see if they can figure out what topic or "big idea" they will be studying.

After the 15 words are written, the class comes to a consensus: The topic has "something to do with explorers." Mr. Cogito confirms his students' hypothesis by telling them the name of the unit—Explorers or Exploiters?—and asks, "What comes to mind when you hear this title? What do you associate with *explorer*? How about *exploiter*?" Using their Learning Logs, students generate a preliminary definition of both terms. After sharing and discussion, Mr. Cogito explains that this tension between exploration and exploitation will be a defining theme in the unit. "In fact," he says, "near the end of the unit, you'll be participating in a Circle of Knowledge discussion. You'll have the job of arguing whether the defining legacy of this period is exploration of New Worlds or exploitation of native cultures. But before we get ahead of ourselves, let's come back to the new vocabulary words we'll be learning."

Mr. Cogito returns to the fifteen key vocabulary terms and asks students to assess their initial Vocabulary Knowledge Rating (VKR) understanding of each term using a simple VKR rating scale:

1 = I've never heard it;
2 = I've heard it, but I'm not sure what it means;
3 = I think I know it but need some clarification;
4= I know it well enough to explain it to others.

After rating their initial understanding of the terms, students compute and share their average VKR scores for all fifteen terms. "Your challenge," says Mr. Cogito, "will be to make sure that by the end of the unit, your total score is at least a 3.5. That way, you'll know you have a good handle on the important terms in the unit."

Next, Mr. Cogito presents the essential questions for the unit:

1. What conditions made exploration possible?
2. Who were the explorers and what did they accomplish?
3. What happened between the explorers and the native cultures they encountered? Should the explorers' actions be admired or admonished?

"What I want you to do for homework," he tells students, "is to review these questions carefully and to *be* a historian by asking yourself what else you would like to know about the Age of Exploration. Generate at least one more essential question of your own."

Mr. Cogito also distributes the Assessment Menu for the unit and asks students to review it. The menu contains twelve tasks in all, four tasks for each of the three essential questions, with each task representing one of the four learning styles. For example, for the first essential question (What conditions made exploration possible?), students can:

- Select the five most important developments that led to Columbus's voyage and develop an annotated timeline (Mastery task)
- Compare and contrast the time leading up to Columbus's voyage with the Space Race (Understanding task)
- Develop a flag that captures the "Spirit of the Age" and write an exploration of what the design elements on the flag represent (Self-Expressive task)
- Pretend that they are Columbus and write a personal letter to Isabel and Ferdinand that will persuade them that the time is right for the proposed journey (Interpersonal task)

Over the course of the unit, students will be able to choose their tasks -- provided that they try tasks in different styles.

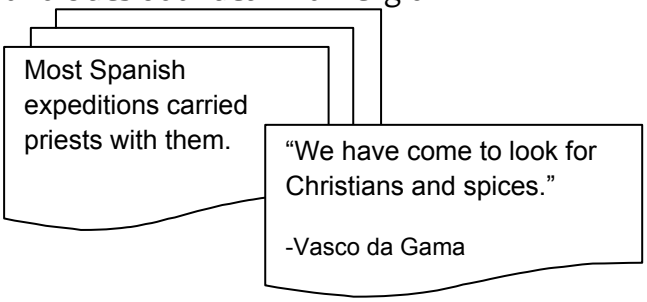
On Day 2, Mr. Cogito focuses on the question: "Why was the time right for Columbus in 1492?"

Students begin by sharing the questions they generated for homework and working with Mr. Cogito to put them into larger categories. For example, three students' questions relate to what life was like on ships at the time. "These are wonderful questions," Mr. Cogito says as he records them on a poster. "Let's keep our eye out for answers to these questions during the unit. And let's get started by getting some answers to one of our three essential questions: What conditions made exploration possible?"

Mr. Cogito shows a brief video of Neil Armstrong's walk on the moon and reads an excerpt from Kennedy's famous speech about the Space Race. Mr. Cogito then asks his class to consider this question: How could President Kennedy, in 1961, guarantee the American people that

by the end of the decade the United States would safely land a man on the moon, when the U.S. had not yet even put an astronaut into orbit? To generate some initial ideas, students use Give One, Get One: they generate two initial ideas on their own and then move around the room to collect four additional ideas from other students.

After collecting all of his students' ideas on the board, Mr. Cogito draws a parallel between the first lunar landing and Columbus's first voyage. "Like landing a man on the moon," he says, "Columbus's journey to the New World was the result of a number of factors that came together at the right time. It's going to be your job as historians to figure out what these factors were using a strategy called Mystery. You'll be working in cooperative teams to figure out why the time was right in 1492 for the Europeans to discover two new continents." Mr. Cogito provides each team of students with an envelope of 25 clues to read, group, and label. After grouping and labeling the clues into categories, student teams will generate five hypotheses about why 1492 was an ideal time for Columbus's journey. Before students start working, Mr. Cogito models the thinking process involved for grouping clues. "First I read the two clues carefully. Then I ask myself, 'What is the topic? What does the clue say about the topic?' For example, these two clues both deal with religion."



Mr. Cogito goes on to show students how he searches for more "religion" clues and generates a hypothesis about the role religion may have played in Columbus's journey.

As students work to group clues and generate hypotheses, Mr. Cogito circulates around the room to listen in on students' thoughts. The class convenes so Mr. Cogito can explain that they'll continue the learning process for homework. "You're going to read the first two sections of your textbook. As you read, you'll have to collect evidence that either supports or refutes each of your five hypotheses."

Sample Student Homework Entry

Hypothesis 1: Improvements in technology allowed ships to navigate across the Atlantic Ocean.
Evidence: The science of cartography, or mapmaking, had become more sophisticated and accurate by Columbus's time. New inventions, like the astrolabe and mariner's compass, made longer and more difficult voyages possible.

On Day 3, Mr. Cogito reviews the assigned homework and explains why the time was right for Columbus in 1492.

Students share their hypotheses and the evidence they discovered in the textbook. After the discussion, Mr. Cogito provides his students with a cause and effect organizer that looks like the one below:

Cause/Effect Organizer

The 5 C's: Why the time was right for Columbus in 1492	
Causes for Exploration	*Possible Effects*
Competition among nations Control of travel to the East Commerce and middle-class comfort Creation of new technologies Courageous explorers	

He explains, "The Five C's in this organizer correspond to the big ideas in your textbook reading." Mr. Cogito uses New American Lecture to describe the critical information about each of the five major causes in small chunks. To both deepen and assess his students' knowledge and understanding along the way, Mr. Cogito stops at different points throughout his lecture to pose a different question from the list below:

1. Why did Europeans want to travel to Asia? Which influential groups supported this travel?
2. What was happening in the Middle East at the time that influenced Europeans' desire to find a new route to the East?
3. What developments made it possible for Europeans to travel where they had been unable to travel before?
4. What other reasons might explorers have had for exploring new lands?

Before moving on to the next essential question, Mr. Cogito asks students look back on what they've learned so far. Students review the student-generated questions they recorded on Day 2 and ask themselves if they've found any answers. For homework, students continue their reflection by reviewing their Vocabulary Knowledge Ratings to see if their understanding of the key terms has evolved.

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