

KATHERINE RILEY MEHIGAN

The Strategy Toolbox: A ladder to strategic teaching

This model was developed to increase the achievement of students by improving teachers' knowledge and expertise in the use of teaching strategies.

As knowledge of the processes involved in reading and writing increases, and educational publishers rush to create new and more effective materials for teaching students to read and write, one might think that classroom teachers have revolutionized the way they teach students to learn. Terms such as *metacognition*, *meaning making*, and *strategic learning* are buzzwords in education, yet many teachers—especially those working in poor, urban school settings or with at-risk populations—have only a superficial understanding of the ideas behind them and even less knowledge of how to put the ideas into classroom practice (Comer, 1988; E.J. Cooper & Levine, 1999; Delpit, 1995; Jackson, 2001; Strickland, 2000).

Despite the extensive research, recent legislative mandates, and the availability of an endless array of research-based strategies, many teachers in the United States continue to use the same old strategies—even when the strategies fail to increase their students' performance. Or when teachers do find a particular strategy to be effective, they may not consider applying it to a variety of other learning situations. The Strategy Toolbox is a concrete model that directly addresses this problem by building teachers' knowledge of teaching strategies and their capacity to examine the effectiveness of their implementation. The model is intended for individual teachers who share ideas and reflections

in a group setting as an overall strategy for school improvement.

What is the Strategy Toolbox?

Imagine what would happen if individual teachers continually gathered strategies that consistently helped students create meaning, compiled those strategies into an expandable and easily accessible portfolio, selected the most appropriate ones for each particular learning situation, monitored their direct impact on student performance, and adjusted the strategies to transform learning for their students. The Strategy Toolbox model is designed to help teachers do exactly that.

The model is an incremental process that involves teachers (individually and in a group) in the ongoing development and self-regulated use of a personal repertoire of research-based strategies for increasing student ability to comprehend and compose text. Although it's not a real box, the Strategy Toolbox does contain a teacher's most valuable tools for unlocking student learning, and it provides the medium for developing expertise in orchestrating it.

The physical dimension of the Strategy Toolbox provides individual teachers with manipulable and expandable storage for preserving meaning-making strategies. As opposed to a set of strategies that might work for students, this one contains only those strategies evaluated by the particular teacher as effective for her or his particular students—with countless possibilities for application across academic disciplines.

Each strategy in the toolbox is described on an individual index card. The description (composed by the teacher) addresses three key questions about

the strategy: What is it? (declarative knowledge), Why use it? (conditional knowledge), and How does it work? (procedural knowledge). Each strategy card is also personalized by the teacher with color or simple graphics intended to spotlight the importance of the particular strategy and make it more memorable. The cards are organized for varying instructional purposes (e.g., before/during/after strategies, narrative/expository). They are held together by a large binder ring that allows the teacher to regroup strategies, separate cards for display purposes, and include additional strategies over time.

Although the strategies in the toolbox vary according to the teacher's particular instructional focus, the box typically includes three types of meaning-making strategies: (1) research-based strategies currently emphasized in the literature, such as K-W-L (Ogle, 1986), retelling (Gambrell, Koskinen, & Kapinus, 1991), taxonomy (Rothstein & Lauber, 2002), or list/group/label (Nessel & Baltas, 2000); (2) time-honored favorites, such as the Venn diagram, story structure, journal writing, webbing, or think/pair/share; and (3) original strategies created by teachers, such as quick-face (Baxter & Mehigan, 1992). Samples of a cover and a strategy card for quick-face are shown in Figure 1. (For examples of additional strategies, see E.J. Cooper, 2004; Dowhower, 1999; Harvey & Goudvis, 2000; Hyerle, 2004; National Urban Alliance, 2004; Nessel & Baltas, 2000; Strickland, Ganske, & Monroe, 2002.)

Crucial Question

As a direct result of using this strategy, what can my students do now that they couldn't do before? This Crucial Question is an integral part of the Strategy Toolbox model. Displayed as a permanent reference on the back cover of the toolbox, the question provides teachers with an important cue to focus on the direct consequences of using a particular strategy (or combination of strategies) with their particular students. In addition to the Crucial Question, a definition of the term *strategy* composed by the particular teacher (individually or in a group) is included in each toolbox. (I'll give examples later.)

In the development of the Strategy Toolbox model, the reflective cycle of continual practice (Figure 2) was identified as a way to guide teachers

in moving from the concrete and particular to the abstract and universal. The five continually overlapping phases of the cycle involve teachers in actively improving their classroom performance.

As teachers explore, validate, and add new strategies to their repertoire, the importance of the toolbox increases for planning and instruction. The Strategy Toolbox remains a work in progress for teachers throughout their careers.

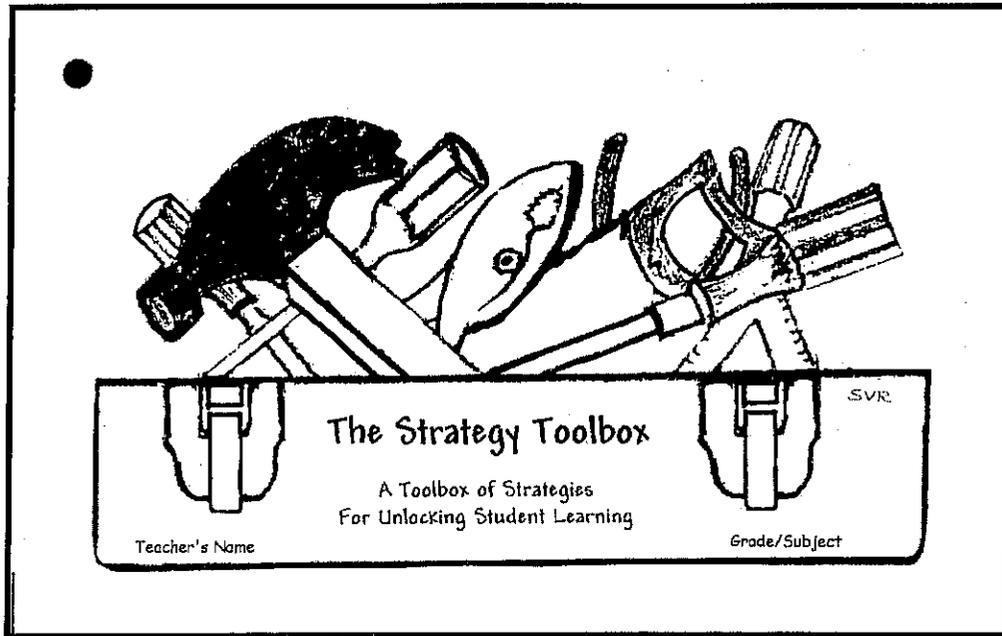
Why the Strategy Toolbox?

The model supports the view that (a) reading and writing are complex, cognitive processes through which learners examine and construct meaning and (b) the more strategies teachers have in their instructional repertoire, the more ways they have to meet the diverse needs of *all* their students. Four factors contribute to the rationale for the Strategy Toolbox.

1. The classroom teacher is ultimately responsible for the learning of students. Although research-based reading and writing programs do play a vital role in helping students examine and construct meaning, it is the teacher in the classroom who ultimately "delivers the program" of instruction (Allington & Nowak, 2004, p. 95). Rigid adherence to a "scripted" procedure cannot guarantee the success of *all* students in any academic discipline, nor can it ensure that the teacher has the knowledge and skill to make wise decisions and necessary adjustments to address the individual needs of students (Anders, Hoffman, & Duffy, 2000; Darling-Hammond, 2000; Duffy, 1993; National Institute of Child Health and Human Development, 2000; Paris, Wasik, & Turner, 1991; Taylor, Peterson, Pearson, & Rodriguez, 2002).

2. Many teachers, especially in schools with large populations of "school-dependent" students, are unprepared to help students examine and construct meaning. The underlying problem is not in following a particular program but in making it the absolute, thereby diminishing the possibility of making the necessary modifications to work effectively with *all* learners. This problem is particularly evident in high-poverty schools where many average and below-average students fail to

FIGURE 1
Samples of a cover and a strategy card



The Strategy Toolbox

QUICK-FACE ☹️ 😐 😊 😄 😞 😡

WHAT IS IT?
It's quickly sketching a little face to show personal reaction to a given stimulus (e.g., character in a story, etc.).

WHY USE IT?
Encourages students to express thoughts without fear of making a mistake; promotes comprehension (oral and written); helps students write from a personal stance.

HOW DOES IT WORK

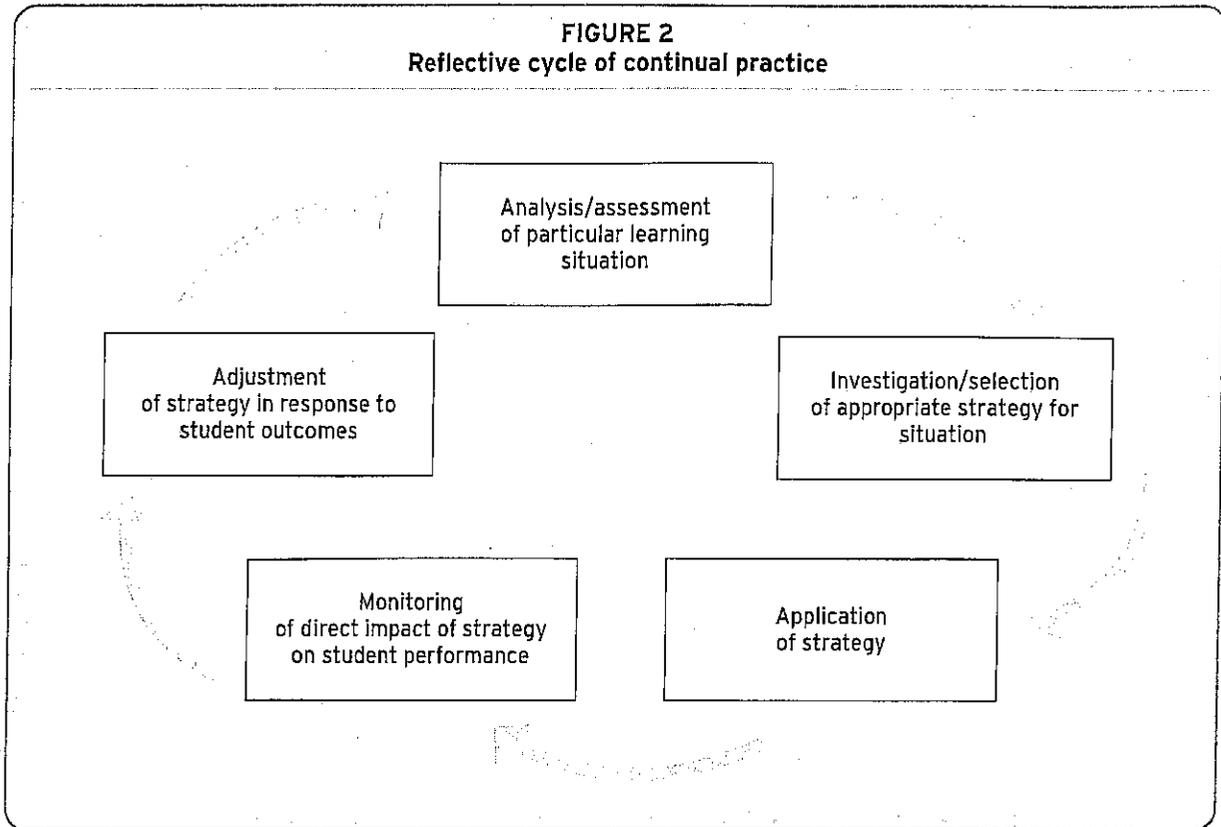
1. *Before reading:* Discuss attitudes/emotions expressed by facial expressions (confusion, disbelief, agreement).
2. List characters from a story; students write names of characters in a column.
3. *After reading:* Students sketch face in response to each character; students provide text/personal experience support.
4. Options: (a) Use with triple journal entry (b) Students can respond from point of view of author or specific character.

Title of Story: Hansel and Gretel From perspective of the: Reader

Character	Personal Reaction	Text Support
Gretel	😊	She pushed the wicked witch into her oven; set Hansel free.
Witch	☹️	Witch tried to eat the children.

Note. Quick-face adapted from Baxter & Mehigan (1992).

FIGURE 2
Reflective cycle of continual practice



respond to scripted programs and need alternative learning strategies delivered by a well-trained teacher (Cooter, 2003). Reported results of the No Child Left Behind Act of 2001 (2002) provide evidence that many teachers are not adequately prepared, by either their prior teaching experiences or professional development, to fulfill the critical role of helping their students become strategic readers and writers (Stewart, 2004).

The vision that comes to mind is of a 6-ft stepladder with broken rungs. At the bottom of the ladder is a teacher looking hopelessly up at a sign that says "Strategic Teaching." The good news is that the teacher *does* recognize a higher level of teaching; other teachers may sincerely believe they are already at the top of the ladder.

3. The key to increasing student achievement is a knowledgeable and highly skilled teacher. Without question, the key to increasing student ability to comprehend and compose text in any academic area is a knowledgeable teacher who can (a) make adaptive decisions in response to student

needs and (b) engage students in higher order thinking through teacher modeling, direct explanation of the exact strategies students need, and scaffolded instruction (Anders et al., 2000; Anderson, Hiebert, Scott, & Wilkinson, 1985; Duffy, 1993; Knapp & Associates, 1995; Pressley et al., 1995; Robinson, Farone, Hittleman, & Unruh, 1990; Snow, Burns, & Griffin, 1998; Taylor, Pearson, Clark, & Walpole, 2000; Templeton, 1991). The important point, however, is that in order to make adaptive decisions and engage students in higher order thinking, teachers need (a) a repertoire of diverse strategies, (b) knowledge of the direct relationship between teaching practices and student performance, (c) expertise in applying that knowledge in the classroom, (d) a personal commitment to increasing the performance of *all* their students, and (e) the confidence to make professional decisions that deviate from the scripted program (E.J. Cooper, 2004; Jackson, 2001; Paris, Wasik, & Turner, 1991; Prawat, 1992; Rosenblatt, 2004).

4. Preparing teachers to help their students become strategic learners is a complex and challenging endeavor. Preparing teachers to teach their students to be strategic readers and writers is undoubtedly one of the greatest challenges facing teacher educators today (Duffy, 1993; Fullan, 1997; Hoffman, 1991; Jackson, 2001; Knapp & Associates, 1995; Levine, Cooper, & Hilliard, 2000; Strickland, 2000; Taylor et al., 2002). However, designing meaningful teacher development remains enormously complex (Anders et al., 2000; E.J. Cooper, 2004; Dowhower, 1999; Duffy, 1993; Fullan, 1997; Hoffman, 1991; Paris et al., 1991; Pressley et al., 1995; Robinson et al., 1990; Snow et al., 1998; Taylor et al., 2002; Templeton, 1991).

Duffy (1993) pinpointed the complexity of this challenge:

If students are to be strategic (i.e., if they are to be flexible adapters of strategies as needed to construct meaning), their teachers must themselves be strategic (i.e., flexible adapters of professional knowledge in response to students' developing concepts), and teachers of teachers must also be strategic (i.e., adapting innovations and research findings to teachers' situations and involving them as co-constructors of knowledge rather than telling them what to do). (p. 245)

The many challenges in ascending to a level of strategic teaching can beset the efforts of any teacher, but they can be especially forbidding for teachers in schools with large populations of school-dependent students. Yet it is precisely in high-poverty schools that the need for strategic teachers is most critical (E.J. Cooper, 2004; Delpit, 1995; Jackson, 2001; Knapp & Associates, 1995; Strickland, 1994; Zeichner, 1996).

Although principals and teachers do recognize that a wealth of knowledge exists for increasing student achievement, the process involved in "putting all of the relevant pieces together remains a challenge" (Taylor et al., 2002, p. 278). For example, many urban school districts mandate *what* strategies teachers should use (e.g., journals, prediction, graphic organizers), but efforts toward teacher development often end before teachers understand *why* a particular strategy works, *when* to use it, and how to know *if* and *when* it is working for students. Consequently, many teachers cling to a "prescribed" strategy without knowing how to adapt, modify, and combine strategies in response

to students' understandings (Duffy, 1993; Joyce & Showers, 1995; Levine et al., 2000; Strickland, 1994, 2000; Taylor et al., 2002).

Most teachers become frustrated when expected to make dramatic rather than incremental changes in their teaching behaviors. Because teachers differ in their personal beliefs about learning, as well as in their levels of knowledge and expertise in teaching strategies, teacher development must begin at each teacher's level of expertise and provide ongoing instruction, feedback, support, and encouragement as teachers face the daily challenges involved in becoming self-directed.

In an effort to illustrate the complex levels of expertise in teaching strategies, six levels of teacher readiness were identified in the development of the Strategy Toolbox model (see Figure 3). Symbolically, each level represents a supporting rung on the ladder to strategic teaching. Even a small step toward strategic teaching can broaden teachers' view of their role and result in significant increases in the learning of their students.

What role does the Strategy Toolbox play?

The model is designed to help individual teachers ascend, step by step, the ladder toward strategic teaching. Starting at their current level of instructional expertise, teachers (individually and as a group) begin building knowledge of teaching strategies through choosing initial strategies, designing their strategy cards, extending their use in class, and moving through the reflective cycle of continual practice. The continuing development of the Strategy Toolbox provides the incentive and support teachers need to face the many challenges involved in teaching strategies. Specifically, the toolbox is designed to support teachers in meeting seven challenges most commonly encountered in the ascent to a higher level of teaching.

Challenge 1: Clarifying the concept of a strategy

Having a vague concept of a strategy is a huge barrier to teaching strategies because an individual teacher's interpretation of the term shapes the way that teacher approaches instruction and interacts

FIGURE 3
Levels of expertise in teaching strategies

Level 1: Rote use of strategies

At the weakest level, teacher performs a specific behavior to accomplish an immediate task as prescribed by an outside source. Teacher does not consciously recognize the behavior as a strategy or reflect on its effectiveness in light of student performance.

Level 2: Awareness of strategy use

Teacher recognizes the specific behavior as a strategy used to accomplish an immediate task but does not reflect on its impact on student performance. Teacher is still following a script but with more awareness.

Level 3: Reflection on immediate task

Teacher consciously selects a strategy and reflects on its direct impact on student performance but does not generalize the strategy to new instructional situations. Teacher is beginning to reflect on the script.

Level 4: Reflection and generalization

Teacher deliberately applies the selected strategy to a variety of learning situations and recognizes *if* and *when* the strategy is effective. Teacher is moving beyond the script.

Level 5: Explicit teaching for immediate task

Teacher accurately diagnoses the particular learning situation, deliberately selects the strategy (or combination of strategies), explains and models the strategy, guides students in applying it to the immediate task, and monitors student outcomes. Teacher is becoming strategic in planning instruction.

Level 6: Strategic teaching

At the strongest level, the teacher deliberately guides students in applying a known strategy (or combination of strategies) to similar learning situations. Teacher continually monitors, effectively adapts strategies for application, and systematically releases control of the strategies to the student.

with students (Levine et al., 2000; Prawat, 1992; Taylor & Pearson, 2002). Before teachers begin constructing a Strategy Toolbox, they are guided through a discussion focused on various definitions of the term *strategy*. Analyzing and discussing the definitions help teachers to make the important distinction between a strategy (which demands conscious thought and flexible decision making) and the many activities and skills that are automatically applied within a specific context. Making this distinction is essential for teachers to gain an appreciation of the importance of their role in shaping and adapting strategies to each instructional situation. The definitions in Figure 4 reflect the thinking of some of the experts in the field of learning. They may be helpful as teachers (individually, or as a group) develop their own definitions of *strategy*. The following two examples are a synthesis of my own ideas and the sources in Figure 4:

Teaching strategy n. 1 (a) teacher-controlled improvement of student performance (b) the art and science of orchestrating student learning. 2 a *flexible* plan deliberately selected and applied by the teacher to help students construct meaning. 3 a tool in the *teacher's* toolbox.

Learning strategy n. 1 (a) learner-controlled improvement of reading/writing performance (b) the art and science of constructing meaning. 2 a *flexible* plan deliberately selected and applied by the learner to construct meaning. 3 a tool in the *learner's* toolbox.

Here are three examples of teacher-developed definitions of a strategy:

A formalized (but flexible) procedure for creating meaning that can be shaped to fit a variety of settings and contexts.

A plan deliberately selected and flexibly applied for the purpose of examining and creating meaning of text.

A series of steps in the thinking process that is applicable to a reading/writing task across the curriculum.

Once teachers have developed a working definition of *strategy*, they put it aside until they are ready to include it as a permanent reference in the Strategy Toolbox.

Challenge 2: Gaining conscious awareness of strategies

A lack of conscious awareness of the particular strategies they are using with students (especially

FIGURE 4
Examples of learning experts' definition of strategy

Strategy n.,...1 a) the science of planning and directing...b) a plan or action based on this 2 a) skill in managing or planning...b)...artful means to some end (Agnes, 1999, p. 1416).

A *teaching strategy* is a plan or activity that the teacher can use to accomplish a desired outcome (J.D. Cooper, 1997, p. 107).

A *student strategy* is one that students can use on their own to construct meaning (p. 107).

Strategies are plans for solving problems encountered in constructing meaning (Duffy, 1993, p. 232).

A strategy is an intentional behavior (in response to a need) that transcends the immediate task (Harth, 1982, p. 12).

A strategy is a systematic, goal-directed behavior that can be generalized beyond the immediate task (Johnston, 1985, p. 639).

when these strategies are embedded in a scripted program) is a major hurdle for many teachers. It is virtually impossible for any learner (teacher or student) to gain control over any strategy—no matter how many times he or she uses it—without a keen awareness of that particular strategy and its direct effect (Feuerstein, 1980; Hansen & Pearson, 1983; Harth, 1982). For many teachers, identifying all the strategies they use daily in the classroom is a challenge that requires deliberate thought and concerted effort.

The process of guiding teachers in brainstorming a list of familiar strategies helps them to tap into their knowledge of what they already know and do in their classrooms. Because this initial list is often short, teachers may need prompting or time to search through their lesson plans and curriculum guides. Providing this opportunity allows teachers to see strategies from a different perspective and to gain a new appreciation of strategies previously taken for granted. For many teachers, this discovery can be a reward in itself.

Once a representative list is generated, teachers compare each listed behavior to their definition of a strategy. This reinforces their ability to distinguish a strategy from the activities and skills that they apply automatically within a specific context and to identify the essential elements of a teaching and learning strategy.

Challenge 3: Building a repertoire of strategies

A repertoire is an appropriate description of the Strategy Toolbox because the concept brings to

mind the skills and expertise of a particular person—for example, a performer's personal stock of plays, roles, or songs that she or he is ready to present. The repertoire tells a lot about that particular performer's capacity to achieve in a given situation. Similarly, teaching students to read and write is a complex, creative process that requires the teacher to have a repertoire of diverse strategies and the expertise to apply them in a flexible and creative manner. Unlike skills, strategies cannot be automatically performed the same way every time; they must be consciously selected, flexibly applied, and adjusted to fit the demands of the situation (Dowhower, 1999; Duffy, 1993; International Reading Association & National Council of Teachers of English, 1996; National Institute for Child Health and Human Development, 2000; Paris et al., 1991; Snow et al., 1998).

Building a personal repertoire takes time and concentrated effort. Initially, teachers choose three to four relatively simple strategies that are consistently helpful for their particular students (e.g., K-W-L, webbing, story structure, student journals). Limiting their initial choices enables teachers to concentrate on (a) applying a particular strategy to a variety of situations, (b) adapting it to a variety of contexts, and (c) monitoring its direct impact on student performance (Dowhower, 1999; Pearson, Roehler, Dole, & Duffy, 1992).

Because teachers often need help in determining which strategies are "worthy of inclusion" (teachers' words) in their personal toolbox, a checklist (such as the one in Figure 5) is provided as a guide. Once teachers have made their initial

strategy selections, they compose (individually or in a small group) a brief description of each strategy. The template (What is it? Why use it? How does it work?) enables teachers to focus on (a) what the strategy is and when to use it, (b) why and when it works, and (c) the basic steps involved in doing the strategy. Once the descriptions are composed, a final copy is typed (or carefully handwritten); each strategy is then cut out and affixed to an individual card.

Challenge 4: Using the Crucial Question to probe the link between a particular strategy and student performance

As a direct result of using this strategy, what can my students do now that they couldn't do before? It is unrealistic to believe that teachers can assess the efficacy of a strategy without understanding its direct link to the performance of their particular students. Understanding this link is essential to choosing the right strategy at the right time and shaping it to fit the needs of particular students. For this purpose, the Crucial Question was identified and deliberately incorporated into the Strategy Toolbox model. Specifically, the question is designed to build teacher capacity to discern and determine effective strategies, eliminate those that are not working, and cultivate new ones to fill the gaps.

This question is crucial because the answer has the potential to change, for the better, the way teachers envision their role. Deceptively simple, the question is endlessly complicated because in order to perceive their role differently, teachers must see their students differently. To do that, they must approach instruction differently (E.J. Cooper, 2004; Delpit, 1995; Jackson, 2001; Taylor et al., 2002; Zeichner, 1996).

Precisely because changes in teachers' attitudes and beliefs tend to follow rather than precede changes in behavior, the toolbox model can play a large part in helping teachers see their students in a different and more positive light. Once teachers discover they can change outcomes for their students by "tweaking" strategies to fit different learning situations (e.g., varying the number of steps, amount of modeling, allotted time for guided practice), they begin to raise their expecta-

FIGURE 5
The Strategy Toolbox checklist

- ✓ Do I know WHAT the strategy is?
- ✓ Do I know how to DO the strategy?
- ✓ Do I know WHY the strategy WORKS?
- ✓ Do I know WHEN to use it?
- ✓ WILL I use the strategy?
- ✓ Will I know IF and WHEN it's working?

Note. From Baxter & Mehigan (1992).

tions for students—especially for those experiencing great difficulty learning.

In order for teachers to answer the Crucial Question, they need ways to (a) gauge a measure of the success of a given strategy (or combination of strategies) and (b) determine the feasibility of using the strategy again. For this purpose, a variety of assessment measures are shared with teachers. Such data include observation, running records, learning logs, student interviews, pre- and post-subject area tests, and pre- and postwriting samples. Gathering data that support the Crucial Question helps teachers focus on what really matters, the achievement of their students. The following anecdote (written by a teacher) illustrates the impact of asking the Crucial Question. (All names used are pseudonyms.)

Every single time I ask James to retell a story, he gets the events all mixed up, but today it was different. Instead of just giving my children events to be put in order after they finished reading today's story, I used a new strategy (retelling with one-word notes). Before the children read the story, I listed eight key words from the story (sequentially arranged) on the board and asked students to repeat each word after me. After the students finished the story, I used the words on the board as a guide to retell the story. When I asked for volunteers to retell the story using the guide words, James's hand shot up. He was able to retell the entire story from the words listed on the board—and was he surprised! And, quite frankly, so was I. What was really interesting about all this is that I didn't even go over the meaning of the words when I presented the list.

When teachers begin to gather data in response to the Crucial Question, it is important to encourage them to involve their students in the reflection

process: Providing sample questions that invite students to share their work and analyze the effectiveness of a particular strategy is helpful for teachers—Did the strategy help you to complete the task? How did it help you? Why do you think it didn't work for you? Would you use the same strategy again? Would another strategy have worked better for you? Why or why not? The following teacher anecdote illustrates the impact of involving students in the monitoring process.

I always guide Emma in making a web before she writes a descriptive paragraph, but her paragraph never includes the information on her web. Today I tried a new strategy (talk/draw/write). Before Emma made the web, I asked her to tell me what the manatee in the story looked like and asked her to draw a picture of it. As a result, Emma had no problem filling in the web this time. But, the best part was that her paragraph had more descriptive words in it and included most of the ideas she had put in her web! When I asked Emma how the strategies (talking and drawing the picture) helped her to describe the manatee, she replied, "Because I could see what to put in the web!" "Will you draw a picture first the next time you need to describe something?" I asked. "Yes, I like drawing," she enthusiastically responded. I then asked, "How does drawing the picture help you to write better?" Emma quickly replied, "Because I can see what I want to say." Perhaps Emma doesn't need to make a web at all!

Encouraging teachers to involve their students in assessing the effectiveness of a particular strategy (or combination of strategies) is important. Over time, this involvement enables teachers to make success accessible to all students, and ultimately it can change the relationship between teacher and students.

Challenge 5: Selecting the right strategies for students at the right time

Selecting and applying a particular strategy is a creative process; no two teachers use a strategy exactly the same way. The efficacy of any strategy lies in (a) the way the teacher shapes that particular strategy for the students who will use it and (b) whether it enables those students to perform the task. Knowing how to "do" a strategy is one thing; gaining the knowledge and flexibility to use it at the right time is quite another. Teacher expertise in shaping and adjusting strategies to fit the particular learning situation is the key to effective strate-

gy use (Allington & Nowak, 2004; Anders et al., 2000; Harth, 1982; Pressley et al., 1995).

Once teachers have created their initial strategy cards, applied the strategies in a variety of learning situations, and defended their use of particular ones in light of their individual data, it is important for them to see if the strategies are really sinking in. For this purpose, teachers are given a prepared list of several reading and writing tasks and asked to pinpoint an appropriate strategy for each. An example of such a checklist is provided in Figure 6.

After teachers read the list and respond, they discuss their individual choices in small groups. The process of looking through their strategy cards, pondering various strategies, pulling out possible choices, and explaining the reasoning behind their choices pushes teachers to examine their own thinking more rigorously and to see each strategy as a flexible tool that can be shaped, modified, applied, and adjusted to fit a wide variety of learning situations. In addition, this process helps teachers to detect their individual teaching and learning styles and to examine how their particular style might influence the way their students learn.

Challenge 6: Developing personal ownership of strategies

Research on teacher development makes it clear that for teachers to develop ownership of strategies (i.e., incorporate new strategies into the instructional routine), far more is needed than textbook exposure or attendance at a one-day workshop (E.J. Cooper, 2004; Darling-Hammond, 2000; Fullan, 1991; Joyce & Showers, 1995; Strickland, 2000). The findings of cognitive research show that (a) learners (teachers included) have a natural proclivity to see and think visually (Hyerle, 2004); (b) the brain seeks to be continuously challenged; and (c) novelty is critical (Rosenblatt, 2004); and (d) the brain flourishes in an enriched, safe learning environment with opportunities for challenging problem solving and specific feedback (Jensen, 1998).

Educators have long accepted the theory of multiple intelligences and multimodal instruction (Armstrong, 2003; Gardner, 1993) and acknowledged that hands-on learning in a nonthreatening social setting helps the learner to construct meaning and retain information (Armstrong; Jensen,

FIGURE 6
Metacognitive check—What strategy will you use?

Directions: Read each task. For each task, specify an appropriate strategy. Do NOT attempt to DO the task; simply write the name of your strategy of choice on the line beside the task. You may select the same strategy for more than one task. Be ready to explain your choices.

Task	Strategy
Summarize the last book you read.	_____
Write a paragraph comparing two teachers you know.	_____
Describe the main character of a movie you have just seen.	_____
Write an article about an event that happened yesterday.	_____
Explain how you prepare your class for a field trip.	_____
Get ready to read an article about an unfamiliar topic.	_____

A few examples: Venn diagram, sequence chain, story map, brainstorming web, list, and freewriting.

1998; Rosenblatt, 2004). Yet teachers themselves are seldom given opportunities to increase their knowledge and skills in a stimulating, nonthreatening environment where they experience a sense of some control over what they are learning.

The Strategy Toolbox model provides novelty, personal choice, interaction among peers, and feedback specific to classroom practices. While choosing strategies, personalizing individual strategy cards, gathering data, and defending strategy choices with peers, teachers develop personal ownership of strategies and increase the likelihood that they will incorporate them into their daily instructional routines. Many teachers, determined to express not only their own interests but also the interests of their students, embellish their cards with vivid colors, designs, and graphics to spotlight the particular strategy and make it more memorable.

The classroom is the proving ground for the selection, refinement, and adjustment of strategies. The colorful presence of the Strategy Toolbox inspires the teacher and the students. For the teacher, the toolbox provides a constant reminder to (a) consider a variety of strategies for a given lesson, (b) experiment with a specific strategy in a variety of instructional situations, (c) cue students to the strategy in use, and (d) gather data to show that a particular strategy is working for students. The Strategy Toolbox also provides a *visible* way for teachers to let students in on the *invisible* power of strategies for learning. Separating or displaying an individual strategy card provides an interesting and easy way

for teachers to focus student attention on the invisible processes embedded in a particular strategy. Teachers quickly discover they can stimulate student interest by incorporating colors and designs that build on the students' personal interests and cultural backgrounds. In this way, teachers gradually increase appreciation for the different strengths and learning styles that each student brings to the learning situation. Because strategy cards can be easily edited without redoing the entire toolbox, teachers can add information or make notes of ways to adapt the strategy for future use.

As teachers develop ownership of new strategies and increase their expertise in applying them in the classroom, they begin to rethink, rearrange, and recategorize the strategies in the toolbox in ways that reflect their growing knowledge and understanding of teaching strategies. For classification models, see the National Urban Alliance model (E.J. Cooper, 2004); comprehension framework (Dowhower, 1999); and implementation guidelines for Essential Components of Reading Instruction (Stewart, 2004).

Challenge 7: Building confidence to make professional decisions

Among the many challenges that teachers face as they advance toward a higher level of instructional practice, the one that stands out is gaining the courage to deviate from familiar procedures. Such courage may be lacking even when teachers recognize that some of the strategies they use are

not working for their students. At an unconscious level, some teachers may not want to take responsibility for making personal decisions about choice of strategies; others may lack belief in the capacity of all their students to learn (E.J. Cooper, 2004; Delpit, 1995; Strickland, 1994; Zeichner, 1996). One fifth-grade teacher made this statement: "It's just easier for me to follow the script than face the consequences of making a wrong decision. This way they can't blame me when my students don't learn."

Pressure from supervisors, principals, or parents to adhere to a specified scripted program can squelch the confidence of most teachers to make professional decisions regarding strategy use, especially those working in schools where underachievement is the norm (Cooter, 2003). Jackson (2001) wrote that "such pressures can cause a type of paralysis that inhibits well-meaning teachers from trying new or different strategies that motivate and support the learning of their culturally different students" (p. 222).

In contrast, the Strategy Toolbox model actively builds on the experiences of teachers and validates the positive efforts they are currently making in their classrooms. By sharing ways to apply and adjust particular strategies in response to student needs and periodically discussing their data with colleagues, teachers gain the confidence to make professional decisions about their selection and application of strategies. Increased confidence begets a greater appreciation for the different strengths that each student brings to the learning process. It also promotes teachers' willingness to accept personal responsibility for the choices they make for the students entrusted to them (E.J. Cooper, 2004; Jackson, 2001; Strickland, 1994).

How does the model promote schoolwide improvement?

The Strategy Toolbox is intended to be implemented by individual teachers in a group setting as an overall strategy for school improvement. The model is based on the premise that an effective plan for professional development must be (a) an ongoing effort that involves the active support of all members of the school community, (b) directly connected to increasing student achievement, (c)

aligned with the identified needs of the students, and (d) in close proximity to the actual classroom (Comer, 1988; E.J. Cooper, 2004; Zeichner, 1996). In concert with a school mission anchored in the belief that all students can become strategic thinkers, readers, and writers, the toolbox can be a highly visible way for a school to demonstrate the direct connection between its plan for professional development and increasing student achievement. A yearlong professional development calendar can be developed that includes opportunities for all members of the school community to play an active part in helping students meet and exceed goals for increased learning.

Developing a common vocabulary

Developing a common vocabulary is essential to building a community of learners. Collaborative development of the Strategy Toolbox provides a common denominator that promotes recognition and ownership of particular strategies and leads to better working relationships within the school. When administrators, teachers, students, and parents refer to a particular strategy by a common name, they are more able to recognize that strategy and discover its many applications across grade levels and subject areas.

Tailoring toolboxes to address instructional needs

While supporting the broader school goals for student achievement, the Strategy Toolbox allows teachers flexibility in determining their particular area of focus. Any staff member can design a toolbox to address virtually any instructional goal for developing strategic learners—in any subject area or grade. Toolboxes can also provide a global view of strategy use throughout the school as well as offer individual teachers an ongoing record of their professional growth.

Building relationships

Effective teachers are best bound together through opportunities to share the practices they are using in their individual classrooms. Creating the Strategy Toolbox in a group setting can be a revelation for any staff members, novice and experienced alike. For example, learning about the different strategies colleagues use for a single purpose—or

discovering how a familiar strategy can be adapted and applied for a variety of purposes—helps teachers analyze and evaluate strategies in ways that guide their development as reflective teachers. In a relaxed atmosphere, colleagues can become open-minded and more willing to accept other viewpoints related to individual teaching behaviors.

Once teachers begin to apply their selected strategies to a variety of contexts in their classrooms and to gather data on their effectiveness, they can work together to (a) identify instructional areas of need, (b) reflect on the effectiveness of particular strategies in light of their individual data, and (c) explore new strategies through research and classroom experimentation. Opportunities for teachers to share, discuss, and reflect on their strategy implementations include minilessons, grade-level meetings, focus groups, observations, peer coaching, action research, and study groups.

The Strategy Toolbox model gives teachers an expanding repertoire of diverse strategies, a shared purpose toward increasing student achievement, and a common vocabulary that can enable all staff members to center group sharing on what students are learning to do as a direct result of the strategies they are using. Focused discussions can provide an “Aha!” experience of seeing students in a more realistic light and a subsequent adjustment of expectations for individual students. The following comments (made by teachers during a grade-level meeting) reflect the gradual shifts that can take place in teachers’ beliefs and practices.

Wouldn't it be better to use that strategy with social studies content?

I've used a similar strategy in reading, but I never thought to use it in math.

The strategy always worked with my top kids, but I was shocked when it helped my struggling learners summarize the passage!

After my kids used the Venn diagram in social studies today, they were better able to write a paragraph comparing the import and export of goods.

I've always used graphic organizers for prewriting, but having students use them after writing their first draft is really helping them improve their writing.

My kindergartners just love helping me decide which strategy in my toolbox to use with them before and after reading.

Involving parents and the school community

Actively involving parents and all faculty members in the overall plan for school improvement is critical to school success (Comer, 1988; Delpit, 1995; Zeichner, 1996). Showing the Strategy Toolbox to instructional assistants, teacher substitutes, school volunteers, and parents can be an ideal way for principals and teachers to share the effective strategies used with students in the classroom. Inviting parents to school to create their own toolboxes to reinforce home strategies can be an innovative way to build communication, collaboration, and cooperation between home and school.

Considering the model for students

As teachers build capacity to adapt strategies in response to student outcomes, many begin to consider teaching their students to develop and apply a small repertoire of selected strategies for independent learning. Once their focus shifts from the concept of *teaching* strategies to the concept of *learning* strategies, teachers inevitably ask, “What about toolboxes for students?” This notion is a highly creative yet simple and manageable way to help individual students acquire the cognitive tools they need for independent learning, and it is something I am developing (Mehigan, Gourley, Mehigan, & Pendleton, 2004).

Transforming teaching and learning

The power of teaching strategies is not that it adds something to the learning process, improves student performance on standardized tests, or makes learning more interesting. Instead, teaching strategies is meant to transform the teaching and learning process. Given the reality that teachers cannot toss their favorite teaching guides out the classroom window today and be strategic teachers tomorrow, the Strategy Toolbox model offers them a disarmingly simple way to approach the threshold of the world of strategic teaching—well packed and organized for the rest of their journey. The toolbox is all about helping teachers take delight in the process of finding the right strategy at the right time for every student. This process includes not only selecting, applying, and adjusting strategies but also celebrating when students find a strategy that really works for them.

As educators in the United States struggle to meet legislative mandates in high-poverty schools (Stewart, 2004) and the role of reading specialists expands to that of mentor and reading coach (Dole, 2004), the Strategy Toolbox can play an important, career-long part in each teacher's professional development. Even for the skeptical teacher, seeing is believing. As teachers see students learning right before their eyes as a direct result of the strategies they use, they begin to view individual students in a more realistic light, gain respect for what each one brings to the learning situation, and assume increasing responsibility for the learning of all students entrusted to them.

Many strategies in the Strategy Toolbox are not new; many are as old as teaching itself. What makes the toolbox unique is the process of identifying strategies, organizing them into an expandable and manipulable format, and examining their effectiveness in light of student outcomes. Teachers overwhelmingly pay tribute to the toolbox model for tying together all the strategies they have ever used and providing the incentive and support needed to make incremental changes in the way they teach their students to learn. But perhaps more than anything else, the toolbox brings out the best in teachers. The pride in creation is only one reason the toolbox concept works. The Strategy Toolbox builds on the strengths of teachers, unlocks their potential, honors their judgment, fosters their creativity, and helps them become the effective teachers they want to be. As a testimony to individual talents and instructional efforts, the toolbox helps teachers discover what researchers have known all along—that the depth of a child's learning is directly connected to the expectations and expertise of the teacher.

Mehigan is an educational consultant in Washington, DC. She may be contacted at 4000 Cathedral Avenue, 819B, Washington, DC 20016, USA. E-mail kmehigan@earthlink.net.

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