

# Classroom Instruction that *Works*

RESEARCH-BASED STRATEGIES  
FOR INCREASING STUDENT ACHIEVEMENT

2nd Edition

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reviews, qualitative research, and theoretical literature. For details about the study methodology, see the technical report (Beesley & Apthorp, 2010).<sup>2</sup>

## Organization of the Book

This book, which is organized into four parts, includes information that will help teachers understand what each strategy includes, how to use it, when it is most effective in teaching, and why it works. The first three parts (Chapters 1 through 9) focus on the strategies and include recommended classroom practices, examples of the strategies in use, tips for teaching, and information about using the strategies with today's learners. The tips are drawn from information within each chapter and from our experience working with teachers who are learning about and using these strategies successfully in their own classrooms. The fourth part (Chapter 10) presents specific guidance on how to use the strategies to plan for instruction that targets different types of knowledge. Information on how teachers, principals, and support staff can use this book differently can be found at [www.ascd.org/citw](http://www.ascd.org/citw).

In the first edition of *Classroom Instruction That Works*, the strategies were presented according to the magnitude of their average effect size (from largest to smallest). That presentation encouraged some schools and districts to focus on the first three or four strategies with the highest effect sizes without regard to *when* those strategies should be used. For example, teachers were asked to focus on identifying similarities and differences as often as possible, yet they found this difficult to do in the early part of a unit when students didn't have a basic understanding of the concepts and vocabulary related to the topic. This focus on the strategies with the highest effect sizes often meant that those at the bottom of the list were disregarded or considered less important. As a result, teachers often minimized their use of key practices that help students activate background knowledge (cues, questions, and advance organizers) and use higher-order thinking skills (generating and testing hypotheses).

In this second edition of *Classroom Instruction That Works*, the strategies are organized and presented within a framework that is geared toward instructional planning. This helps readers learn about each strategy in the context

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<sup>2</sup> The technical report, *Classroom Instruction That Works, Second Edition, Research Report* is available for free download at [www.mcrel.org](http://www.mcrel.org).

of how it might be used instructionally, and it highlights the point that *all* of the strategies are effective and should be included in instructional planning. This organization also supports our goal of helping teachers use the strategies intentionally. The framework has three components, which were selected because they focus on the key aspects of teaching and learning:

1. Creating the Environment for Learning
2. Helping Students Develop Understanding
3. Helping Students Extend and Apply Knowledge

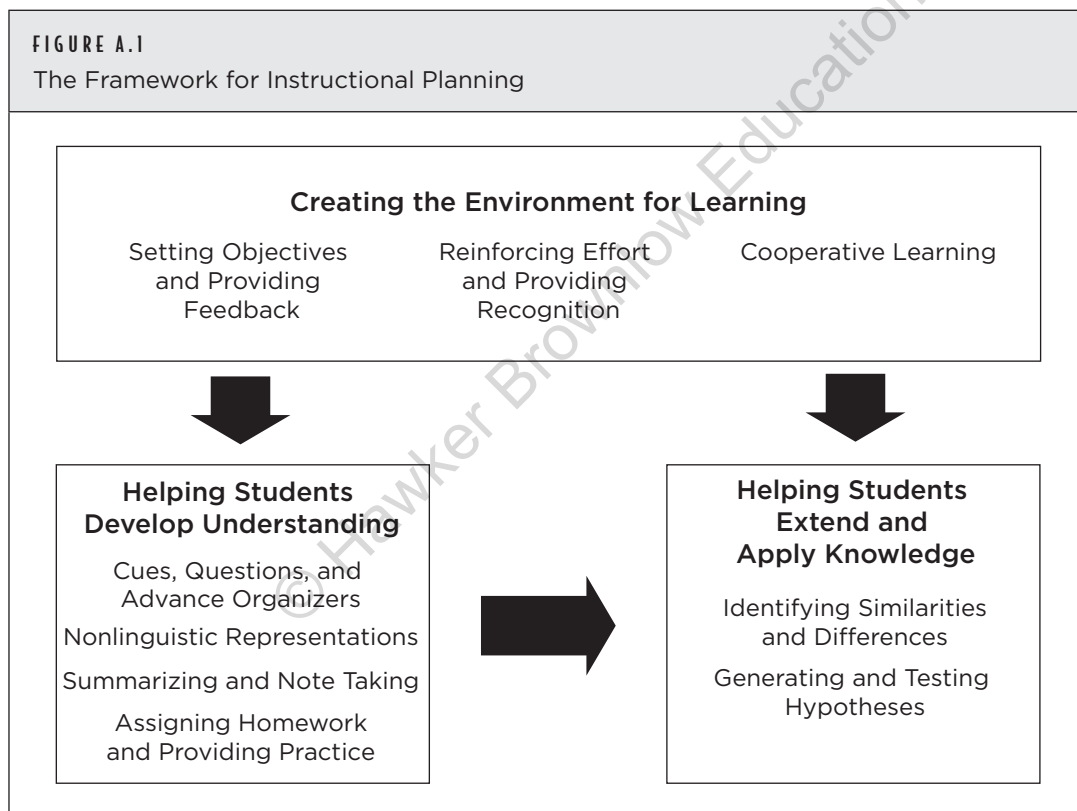
The strategies in the first component of the framework—Creating the Environment for Learning—are the backdrop for every lesson. When teachers create an environment for learning, they motivate and focus student learning by helping students know what is expected of them, providing students with opportunities for regular feedback on their progress, and assuring students that they are capable of learning challenging content and skills. They also encourage students to actively engage in and “own” their learning, provide opportunities for students to share and discuss their ideas, develop collaboration skills, and learn how to monitor and reflect on their learning.

The second component—Helping Students Develop Understanding—acknowledges that students come to the classroom with prior knowledge and must integrate new learning with what they already know. The strategies included in this component help teachers use students’ prior knowledge as scaffolding for new learning. The process of acquiring and integrating information-type knowledge requires students to construct meaning and then organize and store information. Constructing meaning is an active process—students recall prior knowledge, make and verify predictions, correct misconceptions, fill in unstated information, and identify confusing aspects of the knowledge (Marzano & Pickering, 1997). Students organize information by recognizing patterns in the information (e.g., a sequence of events, a description), and they store information most effectively by creating a mental image of it. Acquiring and integrating procedure-type knowledge involves (1) constructing a model of the steps required of the process or skill, (2) developing a conceptual understanding of the process and understanding and practicing its variations, and (3) using the process or skill fluently or without much conscious thought (Marzano & Pickering, 1997).

Strategies in the third component of the framework—Helping Students Extend and Apply Knowledge—emphasize the importance of helping students move beyond “right answer” learning to an expanded understanding and use of concepts and skills in real-world contexts. These strategies help students become more efficient and flexible in using what they have learned. They involve the use of complex reasoning processes, which are necessary for students to use knowledge meaningfully (Marzano & Pickering, 1997). Figure A.1 illustrates where each strategy fits in the framework.

FIGURE A.1

The Framework for Instructional Planning



## Laying the Foundation

In the remainder of this introduction, we provide some principles of learning that are derived from research and theory on learning and which inform

# 1

## Setting Objectives and Providing Feedback

“The key to making your students’ learning experiences worthwhile is to focus your planning on major instructional goals, phrased in terms of desired student outcomes—the knowledge, skills, attitudes, values, and dispositions that you want to develop in your students. Goals, not content coverage or learning processes, provide the rationale for curriculum and instruction.”

—Jere Brophy, *Motivating Students to Learn*

Imagine that you have to go to a city you haven’t visited before. You know that cities have a variety of services and attractions, but you don’t know exactly what you are supposed to do in this particular city. Should you provide a service for someone, gather information about a particular person or place, or do something else? Without a specific objective, you could spend your time on something that isn’t important or that makes it difficult to know whether your time in the city was worth the trip.

Being in a classroom without knowing the direction for learning is similar to taking a purposeless trip to an unfamiliar city. Teachers can set objectives to ensure that students’ journeys with learning are purposeful. When teachers identify and communicate clear learning objectives, they send the message that there is a focus for the learning activities to come. This reassures students that there is a reason for learning and provides teachers with a focal point for planning instruction. Providing feedback specific to learning objectives helps students improve their performance and solidify their understanding.

Setting objectives and providing feedback work in tandem. Teachers need to identify success criteria for learning objectives so students know when they have achieved those objectives (Hattie & Timperley, 2007). Similarly, feedback should be provided for tasks that are related to the learning objectives; this way, students understand the purpose of the work they are asked to do, build a coherent understanding of a content domain, and develop high levels of skill in a specific domain. In this chapter, we present classroom practices for setting objectives and providing feedback that reassure students that their teacher is focused on helping them succeed.

## Why This Category Is Important

Setting objectives is the process of establishing a direction to guide learning (Pintrich & Schunk, 2002). When teachers communicate objectives for student learning, students can see more easily the connections between what they are doing in class and what they are supposed to learn. They can gauge their starting point in relation to the learning objectives and determine what they need to pay attention to and where they might need help from the teacher or others. This clarity helps decrease anxiety about their ability to succeed. In addition, students build intrinsic motivation when they set personal learning objectives.

Providing feedback is an ongoing process in which teachers communicate information to students that helps them better understand what they are to learn, what high-quality performance looks like, and what changes are necessary to improve their learning (Hattie & Timperley, 2007; Shute, 2008). Feedback provides information that helps learners confirm, refine, or restructure various kinds of knowledge, strategies, and beliefs that are related to the learning objectives (Hattie & Timperley, 2007). When feedback provides explicit guidance that helps students adjust their learning (e.g., “Can you think of another way to approach this task?”), there is a greater impact on achievement, students are more likely to take risks with their learning, and they are more likely to keep trying until they succeed (Brookhart, 2008; Hattie & Timperley, 2007; Shute, 2008).

The results from McREL’s 2010 study indicate that the strategies of setting objectives and providing feedback have positive impacts on student

achievement. The 2010 study provides separate effect sizes for setting objectives (0.31) and providing feedback (0.76). These translate to percentile gains of 12 points and 28 points, respectively. The first edition of this book reported a combined effect size of 0.61, or a percentile gain of 23 points, for this category. Differences in effect sizes may reflect the different methodologies used in the two studies, as well as the smaller study sample size (four studies related to setting objectives; five studies related to providing feedback) and the specific definitions used in the 2010 study to describe the two strategies.

Studies related to setting objectives emphasize the importance of supporting students as they self-select learning targets, self-monitor their progress, and self-assess their development (Glaser & Brunstein, 2007; Mooney, Ryan, Uhing, Reid, & Epstein, 2005). For example, in the Glaser and Brunstein study (2007), 4th grade students who received instruction in writing strategies and self-regulation strategies (e.g., goal setting, self-assessment, and strategy monitoring) were better able to use their knowledge when planning and revising a story, and they wrote stories that were more complete and of higher quality than the stories of control students and students who received only strategy instruction. In addition, they retained the level of performance they reached at the post-test over time, and when asked to recall parts of an orally presented story, the strategy plus self-regulation students scored higher on the written recall measure than did students in the other two groups.

The studies related to feedback underscore the importance of providing feedback that is instructive, timely, referenced to the actual task, and focused on what is correct and what to do next (Hattie & Timperley, 2007; Shute, 2008). They also address the use of attributional and metacognitive feedback. For example, a study by Kramarski and Zeichner (2001) investigated the use of metacognitive feedback versus results feedback in a 6th grade mathematics class as a way to help students know what to do to improve their performance. Metacognitive feedback was provided by asking questions that served as cues about the content and structure of the problem and ways to solve it. Results feedback provided cues related to the final outcome of the problem. Students who received metacognitive feedback significantly outperformed students who received results feedback, in terms of mathematical achievement and the