CHAPTER Six

Developing Instructional Competencies

OBJECTIVES

After reading this chapter, the reader will be able to:

- describe several basic instructional methods;
- list several assessment techniques that can be used to guide instructional decisions;
- understand the difference between accommodations and modifications provided during standardized testing procedures;
- suggest several specific instructional strategies that will increase the student's academic achievement;
- create a portfolio of evidence demonstrating the use of appropriate instructional techniques.

INTRODUCTION

The daily decisions made by teachers concerning which instructional methods to use in their classrooms are difficult ones. The responsibility to make the choice of any single method can seem awesome, particularly for beginning teachers who see hundreds of methods introduced during their training. Special educators need to provide intensive, direct, and special education. The methods chosen are critical. This chapter provides a general discussion on developing your teaching competencies in using selected "best practices" methods. Advice on choosing and implementing effective general and specific instructional methods is provided. Included with each section is a brief discussion of the research supporting the use of the identified methods, questions, and templates that will guide your selection as well as a set of ideas for supporting evidence for your teaching portfolio.

My Classroom

Mrs. Rice is getting ready for her first full day of teaching with her new students. She is nervous, as she knows she will need to spend a few days assessing her students to determine their instructional level in each of the content areas she is responsible for in her seventh grade. Yet she is at a loss as to what to do. Mrs. Rice remembers that she needs to determine each student's instructional level in each of the content areas she is responsible for, but she also needs to cover her state's standard curriculum. She has been taught so many different instructional strategies that she is not sure which one would be the best one to use or even what activities to design. She knows that she should begin with the standards of learning the district has provided, and the goals stated on the special education students' individualized education programs (IEPs), but then what? She wants to make sure that she is competent and effective, and that the students benefit from her instruction.

FOCUS QUESTIONS

1. Which NCATE, INTASC, and CEC standards are relevant to the development of a repertoire of instructional strategies?
2. What are several general instructional methods all effective teachers should use?
3. As an individual and a member of a team, how would you generally select and create learning experiences that are appropriate and based on principles of effective instruction?
4. Which specific teaching and learning strategies can you use to engage students in active learning opportunities that promote the development of critical thinking, problem solving, and performance capabilities?

The National Council for the Accreditation of Teacher Education (NCATE) approved the Council for Exceptional Children's (CEC's) performance-based standards for the preparation and licensure of special education teachers (CEC, 2005). The CEC Special Education Content Standards are made up of 10 narrative standards. These standards parallel those of NCATE and the 10 Interstate New Teacher and Assessment and Support Consortium (INTASC) principles (INTASC, 2001). The content standards were written to reflect a teacher's validated knowledge and skills. Two standards deal directly with developing instructional strategies: Standard 4 and Standard 7.

Standard 4, Instructional Strategies, states, "Special education teachers possess a repertoire of evidence-based instructional strategies to individualize instruction for individuals with learning needs. Special educators select, adapt, and use these instructional strategies to promote challenging learning results in general and special curricula and to appropriately modify learning environments for individuals with disabilities" (CEC, 2005).

Standard 7, Instructional Planning, states, "Special educators develop long-range individualized instructional plans anchored in both general and special curricula. In addition, special educators systematically translate these individualized plans into carefully selected shorter-range goals and objectives taking into consideration an individual's abilities and needs, the learning environment, and a myriad of cultural and linguistic factors. Individualized instructional plans emphasize explicit modeling and efficient guided practice to assure acquisition and fluency through maintenance and generalization. Understanding of these factors as well as the implications of an individual's exceptional condition, guides the special educator's selection, adaptation, and creation of materials, and the use of powerful instructional variables. Instructional plans are modified based on ongoing analysis of the individual's learning progress" (CEC, 2005).

As you will face many challenges as a beginning teacher, you may wonder which one is the most critical. Certainly two of the most critical ones are (a) knowing "what" to teach and (b) knowing how to teach the "what." Instructional strategy decision making is confounded by variability in teachers' personal teaching philosophies, training, and interventions selected (Stanford & Reeves, 2005). Teachers who use and practice certain instructional strategies and decisions are more effective and competent than teachers who do not. Effective individualized decision making and instruction is at the center of special education practice.

Certain instructional practices or competencies are strongly related to the achievement of students. The following section discusses several generally effective instructional basics. Subsequent sections discuss specific instructional methods you could use as an individual or as part of a team that are supported by research as effective techniques. Guidance is provided for you in the use of such methods in your classrooms.

EFFECTIVE INSTRUCTIONAL BASICS

You can employ certain instructional basics to become an effective teacher and to increase achievement and improve the social behavior of your students. Rosenshine and Stevens (1986) developed a model of effective instruction highlighting the following six teaching activities: (a) reviewing or checking previous work, (b) presenting new content and skills, (c) guiding student practice, (d) providing feedback and correction, (e) organizing independent student practice, and (f) reviewing student work on a weekly and monthly basis. Mastropieri and Scruggs (2002) suggest that "important teacher effectiveness variables include time-on-task, content covered, delivery of instruction, questioning and feedback, guided and independent practice, and formative evaluation" (pp. 1–2).

Research has supported the idea that more learning occurs in classrooms where teachers consistently ensure that students are actually engaged in learning to the greatest extent possible (Haynes & Jenkins, 1986). When students are not actively engaged in instruction, they are not learning. Many new teachers have difficulty keeping students engaged because of classroom misbehavior. (Managing classroom behavior is discussed in more detail in Chapter 7.) Try to keep your students actively engaged during the entire time you have allocated for instruction. A few guidelines for keeping students on task appear in Box 6-1.

Engaged academic time can be lost during transitions. Transition activities involve students moving from one location or subject to another. As a beginning teacher, you should try to maximize transition efficiency by setting time limits and reinforcing adherence to the time limits. For example, providing a warm-up academic activity is a good way to get your students actively engaged prior to the beginning of class. When all the students arrive and the bell rings, you should have a clear outline of the class agenda posted that helps the students know where they should be and what they should be doing. You may want to provide reinforcement initially to get the students motivated to make smooth transitions (e.g., tokens, praise, stickers, and so on). For individual students who continue to have difficulty with transitions, one or more of the following suggestions may help: (a) make certain the student can do the work assigned, (b) walk near the desk of the student who is off task, (c) provide specific rewards or consequences, or, if necessary, (d) communicate with the parents for additional ideas or support.

The content of your lesson plan should be based on specific instructional objectives derived from the students' IEPs. Lesson plans force teachers to identify what they will teach and how they will do it. Many beginning teachers do not write lesson plans, yet the plans are critical because they provide the framework for each class. Daily lesson objectives should specify the content of the objective, the conditions under which students' performance will be assessed, and the criteria for acceptable performance. For example, "The student will write four causes of the Civil War with 100% accuracy." A successful teacher

BOX 6-1 *Keeping Students On Task*

- Make instruction relevant and at the students' level of learning
- Keep eye contact with students during presentations
- Have all materials for independent seat work at each student's desk
- Do not digress from topic under discussion
- Keep directions to tasks clear and specific
- Try not to interrupt your teaching presentation to manage classroom misbehavior
- Maintain a high success rate
- Provide substantial amounts of positive feedback

will specify objectives and translate IEP objectives into relevant "best practices" methods using relevant materials. Most states have published curricula addressing their own standards of learning for all subjects across all grade levels. Developing creative and appropriate lesson plans to meet such standards and IEP goals is discussed in Chapter 5.

When you are delivering content information, you should include some type of questioning of the students. You should elicit answers from students to determine if the instruction needs modification. Allowing students to call out answers or write answers on whiteboards or complete problems on the chalkboard or the overhead are excellent ways to encourage all students in your class to actively respond to your questions. Developing a *Jeopardy* style of game for actively engaging everyone in the class is beneficial as well. Be careful to include all students, to keep records of students' responses, and to ask questions that require many levels of cognitive knowledge.

Providing appropriate feedback to students for many beginning teachers is often difficult. How you respond to a student's answers is as important as how the content is delivered or the questions asked. Teacher feedback should be overt so that all students know whether the response is correct. Feedback should also be prompt, direct and positive. Yet, just as too much praise can be embarrassing, nonspecific versus specific praise can be confusing to students (e.g., "That was a good answer!" versus "Number 23 is the correct answer—good job!"). Teachers can provide prompts to partially correct answers. When a student gives an incorrect response, teachers should not criticize the student; a better approach would be to call on another student or to state the correct response.

Students should be provided with guided and independent practice. Guided practice can consist of doing a few problems or related activities under the supervision of the teacher. Students should then be allowed to work independently. Make sure you choose activities that are motivating and relevant to the concepts taught. Such practice activities can serve as important supplements to your instruction. Cooperative learning groups and peer tutoring situations may be used during independent practice activities. See Box 6-2 for peer tutoring guidelines.

Evaluation of your lessons should take place on a consistent basis. One type of evaluation, called formative evaluation, will provide you with valuable information on student progress and performance. Daily quizzes or weekly tests are examples of formative evaluation procedures that can help you make instructional decisions and modifications. Summative evaluations should be completed at the end of the grading period, semester, or year. Summative evaluation results can be used to assess students' performance and progress at the completion of a unit, a grading period, or a year.

One fundamental truth in effective teaching is that assessment results should help drive your instructional decisions. A comprehensive assessment tool furnishes an academic or behavioral growth measure that aligns with IEP goals, content area objectives, and national standards, and it enables teachers to identify trends toward meeting those expectations and monitoring them.

BOX 6-2 *Peer Tutoring*

- Involves the pairing of two peers
- Consider the students' zone of proximal development when matching
- Should be set up in a systematic manner
- Provides one-to-one instruction
- Allows for students to gain self-esteem, self-respect, and the ability to interact with each other
- Helps students learn from teaching other students
- Should involve monitoring student progress

Assessment Techniques. You may develop your own tests or use tests developed by textbook publishers that accompany adopted test materials. Any tests you use to assess your students should be reliable and valid. Reliability refers to the consistency of the test across time or items, and validity refers to the extent that the test measures what it says it measures. Many test results that beginning teachers initially encounter are results of norm-referenced tests, which are standardized tests that are given to large, representative samples of students, and appear in students' files. Intelligence tests, achievement tests, and competency tests are examples of norm-referenced tests. Often these tests are given once a year to summarize students' performances and are not used to guide the individual teacher's instruction throughout the year. In contrast, criterion-referenced tests are given to students to assess their performance in relation to a particular criterion or curriculum. If criterion-referenced tests are designed to correspond with a particular curriculum, they are called curriculum-based assessments. Many teachers give end-of-unit tests, quizzes, or other curriculum-based tests regularly. See Table 6-1 for a list of common standardized tests used to measure student progress.

Deno (1986) and others (Fuchs & Fuchs, 1986) have encouraged special educators to use curriculum-based assessment techniques to link the scope and sequence of the objectives in specific content areas to their testing. In designing curriculum-based measurement, the teacher must first determine what skills or concepts are to be developed from the instruction (Rosenfield & Kurait, 1990). These target skills are the behaviors the teacher seeks to increase, and the measure of these target skills is the curriculum-based assessment. Unlike traditional approaches to assessment, curriculum-based assessment focuses almost entirely on the performance of the individual student in response to actual instructional experiences. If a student fails to make adequate progress, the most rational explanation is that the instructional experience was inappropriate for some reason. Progress must be measured frequently throughout the instruction so that effective interventions can be implemented and so that the not-so-effective interventions can be modified. Results from such measures assist teachers in instructional decision making. Curriculum-based assessments can also be constructed to match IEP objectives.

Creating student portfolios also can be used to document students' progress toward meeting their IEP goals. Each student's portfolio could include copies of tests, samples of written work, videotapes of the student's presentations, and samples of notes taken while observing the student. Pocket folders can be used to organize the materials, and all materials should be dated. Progress can be monitored frequently and instruction modified if satisfactory progress is not being made.

TABLE 6-1 *Examples of Standardized Tests*

Intelligence Tests
Kauffman Assessment Battery for Children (Kauffman & Kauffman, 1983)
Stanford-Binet Intelligence Scale—Fourth Edition (Thorndike, Hagen, & Sattler, 1986)
Wechsler Intelligence Scale for Children—Third Edition (Wechsler, 1991)
Achievement Tests
Kauffman Test of Educational Achievement, Comprehensive Form (Kauffman & Kauffman, 1985)
Peabody Individual Achievement Test—Revised (Markwardt, 1989)
Wechsler Individual Achievement Test—Second Edition (Psychological Corporation, 2001)
Woodcock-Johnson III Tests of Achievement (Woodcock, McGrew, & Mather, 2001)

Tests are used not only to provide information on student progress but also to evaluate the performance of schools. Teachers should be aware of the different types of tests, the purposes they serve, and how their results should be interpreted. Test scores may be used to make decisions about teacher salaries and the allocation of school resources. Another consideration is whether to test individually or in a group. Many of the tests used in special education are individually administered. In this era of educational accountability, appropriate testing and reporting of assessment results has increased in importance to educators and policymakers across the nation (Bolt & Thurlow, 2004).

Accommodations and Modifications. Several federal laws call for accommodations to be provided for individuals with disabilities in many large-scale standardized testing procedures (Bolt & Thurlow, 2004). Accommodations are tools or procedures that provide equal access to instruction and assessment for students with disabilities. They are provided to "level the playing field." Nearly every state has developed a list of accommodations that are permissible on statewide competency tests. The types of accommodations available fall into five basic categories: presentation (e.g., read aloud); time (e.g., extended time); setting (e.g., small group); response (e.g., dictated response); and aids (e.g., calculators). Much controversy surrounds the issue of which accommodations are appropriate.

In many cases, if a student is allowed an accommodation when assessed in his or her classroom and it is noted on the IEP, they are also allowed the accommodation on the standardized test. The student's IEP/Section 504 team should select the accommodations for both instruction and assessments. They should be selected on the basis of the individual's needs, not on the basis of the disability category, grade level, or instructional setting. Ideally, you should match accommodations with a student's needs and the demands of the assessment to allow the student to perform at the best of his or her abilities without altering what the test measures (Edgemon, Jablonski, & Lloyd, 2006). In some cases, standardized statewide assessments may not be appropriate for your students with disabilities, and in those cases an alternative assessment may be used.

The term *test modification* is often used interchangeably with *test accommodation*. It is important to clarify that these terms can mean different things. Accommodations are intended to lessen the effects of the student's disability, not to reduce the learning expectations. "Modification is typically reserved for those test alterations that change the given construct" (Bolt & Thurlow, 2004, p. 142). You want to be cautious about allowing for modifications. Yet you may attempt to maximize the use of the least intrusive accommodations that do not change the construct being measured. Be certain the student has had time to experience the accommodations prior to using them in a testing situation. Lack of familiarity may limit the student's optimal use of the accommodation on the test. In addition, research has shown that providing specific instruction on test-taking strategies can improve the test performance of students with disabilities (Hughes, 1996). Thus, the need for accommodations may be lessened with such specific strategy instruction.

As you begin to design your own assessment devices or to use tests already prepared to measure your students' progress, you might want to include such completed assessment measures in your teaching portfolio. Demonstrating competency in giving tests, analyzing test results, and using the results to guide your instructional decisions is a mark of an effective teacher. See Table 6-2 for examples of assessment evidence you might provide in your teaching portfolio.

As a special educator, you will need to select, adapt, and use instructional strategies that promote learning and to appropriately modify learning

TABLE 6-2 *Examples of Specific Assessment Evidence for Teaching Portfolio*

To provide evidence of competency in the area of assessment, you might include the following:

- ❏ Protocol from a completed standardized test, including analysis, that was administered by teacher
- ❏ Worksheets and student copies of a curriculum-based measurement project
- ❏ Copy of narrative description of student's present level of performance used on IEP
- ❏ Copies of unit assessments (tests and essays) and unit assessment plans
- ❏ Copies of rubrics used to guide instruction
- ❏ Copies of assessments (tests) that were given to students in general education classrooms with accommodations
- ❏ Informal checks for understanding that are used

Note. Student confidentiality should be maintained. Please block out any identifying information.

environments for students with disabilities. Your selections will need to enhance the students' critical thinking, problem-solving, and performance skills while increasing their self-awareness, self-management, self-control, self-reliance, and self-esteem. In addition, you will need to emphasize the development, maintenance, and generalization of your students' knowledge and skills across environments, settings, and the life span. Wow—you will be busy! The following section discusses specific instructional strategies that have been shown to be effective and that may help you get started.

SPECIFIC INSTRUCTIONAL STRATEGIES

Many different methods have been developed to remediate problems of individual students with disabilities. The instructional methods you choose should be ones that have the greatest benefit and that will produce the greatest gains. Lloyd, Forness, and Kavale (1998, p. 198) recommend that educators do the following:

- Intervene early
- Monitor students' progress and provide positive consequences for improvement
- Teach academic and cognitive skills directly and systematically
- Teach mnemonic strategies for understanding and remembering what one learns
- Teach cognitive strategies and behavioral self-management
- Use behavioral techniques to promote acquisition of academic and social behaviors

We discuss several specific instructional methods that you can use in the classroom. Suggestions for developing competency in using each strategy are discussed. In addition, suggestions for evidence you can use in your teaching portfolio are provided at the conclusion. The instructional methods discussed are teacher-directed instruction, cognitive learning strategies, mnemonic techniques, graphic organizers, and self-management techniques.

Teacher-Directed Instruction. Most instruction begins with teacher-delivered presentations. Mastropieri and Scruggs (2002) suggest that when teachers are presenting information and communicating content, they should employ the techniques easily remembered with the following acronym:

S (structure)—Provide a structured presentation

C (clarity)—Speak clearly and directly to the point of the objective

R (redundancy)—Emphasize and reinforce the most important aspects of the lessons

E (enthusiasm)—Display enthusiasm for the content and the lesson

A (appropriate rate)—Provide a brisk pace of instruction

M (maximized engagement)—Select material that is at the correct level of difficulty for the students

Teacher-directed instruction involves a systematic approach that includes well-sequenced, highly focused lessons that are presented briskly (Gersten, Woodward, & Darsch, 1997). One of the most widely used teacher-directed approaches is the use of direct instruction. Many different versions of direct instruction are suggested in teaching methods textbooks. Typically, if you were to use direct instruction to teach a student a certain skill, you would explain, teach, model, and practice the skill with the student and then give feedback on the student's skill performance. Polloway, Patton, and Serna (2005) suggest the following acronym for beginning teachers to use to remember the direct instruction format: PURPOSE (see Box 6-3).

Teacher-directed, explicit instruction is essential for students with disabilities to make the associations they need for both skill acquisition and generalization (Carnine, Silbert, Kameenui, & Tarver, 2004). Beginning readers especially need to be provided with instruction that is both explicit and systematic (National Reading Panel, 2000; Snow, Burns, & Griffin, 1998). Most students need explicit decoding instruction in order to gain an understanding of the alphabetic principle and to become good readers (Beck & Juel, 1995; Foorman, Francis, Fletcher, Schatschneider, & Mehta, 1998). Curriculum materials are available that contain a code-emphasis approach to reading instruction, such as *Reading Mastery* (Engelmann & Bruner, 1995), and *Corrective Reading: Decoding Series* (Engelmann, Becker, Hanner, & Johnson, 1988). Both of these series use scripted teacher modeling and demonstration, frequent student responding and feedback, and practice with controlled materials.

Teacher-directed instructional strategies, when used appropriately, can offer well-designed scripted lessons for the beginning teacher. Keep the pace brisk and the instruction explicit.

Cognitive Learning Strategies. Learning strategies are task-specific techniques that students use in responding to classroom tasks. Using a learning strategies approach teaches students how to learn rather than what to learn. Students are taught specific cognitive strategies that can be generalized to

BOX 6-3 *PURPOSE*

Polloway, Patton, and Serna (2005) suggest the following acronym for remembering the direct instruction steps:

P—Prepare the student to learn (define the skill, tell why it is important, and explain where it can be used)

U—Understand the skill steps (review components of the skill, give example of each, and state why each step is essential)

R—Rehearse the skill (model the skill and have students rehearse the skill)

P—Perform a self-check (have students perform a self-check on each skill component)

O—Overcome any performance barrier (may need to develop supplemental materials)

S—Select another situation where the skill can be performed (work on generalization of skill)

E—Evaluate skill performance (have students evaluate their performance)

Source: From Polloway, Edward; Patton, JR; Serna, L, *Strategies for teaching learners with special needs*, 8th Edition, © 2005, pp. 95–97. Adapted by permission of Pearson Education, Inc., Upper Saddle River, NJ.

general education classrooms and later to a postsecondary environment. Ellis and Lenz (1996, p. 38) suggest using the following steps to teach learning strategies:

1. Pretest the strategy to be taught and obtain a commitment from the student to learn
2. Describe the particular strategy to be taught
3. Model the use of the strategy
4. Engage the student in the verbal elaboration and rehearsal of the strategy
5. Provide practice in the application of the strategy in controlled materials (e.g., reading materials at the instructional level of the student)
6. Provide advanced practice in the application of the strategy in content materials (e.g., regular social studies textbook) and provide feedback
7. Confirm acquisition and obtain the student's commitment to generalize the strategy
8. Achieve generalization through four phases: (a) orientation as to where it can be applied, (b) activation of the strategy by moving from explicit to less explicit instructions and assignments, (c) adaptation through understanding the strategy and being able to make changes to meet different setting demands, (d) strategy maintenance over time

A learning strategies approach teaches students to learn how to learn and focuses on the development of independence. The approach stresses using the strategies across classrooms and environments. Specific strategies can be effective in enhancing reading comprehension, test taking, proofreading, and note taking. Many examples of learning strategies exist in the special education professional literature (e.g., Sabornie & deBettencourt, 2004).

Two examples are (a) RAP, a paraphrasing strategy appropriate for elementary school students with reading content area paragraphs or papers (Ellis, 1996), and (b) PIRATES, a test-taking strategy appropriate for students taking a multiple-choice test (Hughes, 1996). See Box 6-4 for more detail on these two examples of learning strategies. See also the following Web site for more strategies and information on learning strategy instruction: http://www.ku-crl.org/sim/index.html.

These two examples represent only a few of the many cognitive strategies currently discussed in the literature. It is critical to give students training in cognitive

BOX 6-4 *Examples of Learning Strategies*

The paraphrasing strategy (Ellis, 1996) suggests the following cognitive steps:

RAP:

- Read a paragraph
- Ask yourself what the paragraph was about
- Put the main idea and two details in your words

PIRATES (Hughes, 1996) has the following steps:

- P—Prepare for the test and prepare to succeed
  - Put your name and PIRATES on the test
  - Allot time and order to sections
  - Say affirmations
- Start within 2 minutes
- I—Inspect the instructions
  - Read instructions carefully
  - Underline what to do and where to respond
  - Notice special requirements
- R—Read each question
- A—Answer or abandon each question
- T—Turn back
- E—Estimate answers for the remaining questions
  - Avoid absolutes
  - Choose the longest and most detailed choice
- Estimate similar choices
- S—Survey your test

Source: From *Teaching adolescents with learning disabilities* (2nd ed.), by Deshler, DD, Ellis ED, & Lenz, BK, 1996, pp. 73, 251. Reproduced by permission of Love Publishing Company.

strategies under controlled conditions so that they are encouraged to generalize across settings. Ellis, Lenz, and Sabornie (1987, p. 8) suggest the following:

1. The learning strategy should contain a set of steps that lead to a specific outcome.
2. The learning strategy should be designed to cue the use of cognitive strategies and metacognitive processes.
3. The strategy should contain no more than seven steps.
4. Each step should begin with a verb or other word that directly relates to the action being cued.
5. A remembering system should be attached to the strategy to facilitate recall.
6. The learning strategy should be task specific.

Mnemonic Techniques. Several research studies have investigated using mnemonic instruction with students with disabilities (e.g., Scruggs & Mastropieri, 1992; Scruggs, Mastropieri, Levin, & Gaffney, 1985). Research on teaching mnemonic strategies to students with disabilities has occurred across the elementary through secondary levels (Wong, Harris, Graham, & Butler, 2003).

In their meta-analysis of 24 studies involving instruction in key-word and key-word–peg-word mnemonics, Mastropieri and Scruggs (1989) reported an overall effect size of 1.62. "An effect size for any one comparison can be calculated by subtracting the average score of the students in the control group (say, 19) from the average score for the students in the treated group (say, 20); this difference is divided by a measure of the variance in the sample, the standard deviation (say, 3) to obtain the effect size (0.33 in our example). Effect size may be thought of as a z-score or standard deviation unit—that is, 0 is average and an effect size of +1.0 is above average" (Lloyd et al., 1998, p. 197). The use of mnemonics in many research studies has shown an above average effect size.

According to Scruggs and Mastropieri (1990), a mnemonic is a specific reconstruction of target content that is intended to tie new information to the learner's existing knowledge base and therefore facilitate retrieval. The use of mnemonic instruction can help students remember and retain information that is difficult to recall. See Box 6-5 for an example of the use of mnemonics.

Mastropieri and Scruggs (2004, p. 292) suggest that mnemonic strategies are most effective when they are

- used to reinforce objectives to remember specific content,
- taught and practiced directly,
- combined with comprehension instruction, and
- included with application activities.

Three specific types of mnemonic strategies are the key-word method, the peg-word method, and letter strategies (Mastropieri, Scruggs, Whittaker, &

BOX 6-5 *Example of Mnemonics*

HOMES—a mnemonic used to remember the Great Lakes:

H—Huron

O—Ontario

M—Michigan

E—Erie

S—Superior

Bakken, 1994). The key-word method is used to strengthen the connection between a new word and associated information. The key word is known to the student and sounds like the new word. A picture is used to help the student remember. Mastropieri, Scruggs, Bakken, and Brigham (1992) used a key-word method for memorizing the states and capitals. For example, for Arkansas (Ark) and Little Rock (little rock), students were given a picture of Noah's Ark landing on a little rock. Peg words are rhyming words for numbers and are helpful in learning information in order. Mastropieri and Scruggs (2004) suggest, "To remember that insects have six legs, picture an insect crawling on sticks (peg-word for six)," and "to remember that spiders have eight legs, picture a spider spinning a web on a gate (pegword for eight)" (p. 296). Letter strategies help remember lists of things. The use of the acronym HOMES is an easy way to remember the Great Lakes. An acronym or a phrase can be used to help remember a list of items. To remember the planets in order, one only needs to remember, "My very educated mother just served us nine pizzas," which would help remember the following names: Mecury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, and Pluto. Letter strategies can be combined with key words or peg words. Using mnemonic strategies such as the key-word method, the peg-word method, and letter strategies promotes students' learning of unfamiliar content. See the following Web site for more details on using the mnemonic strategies discussed here: http://www.ldonline.org/ldindepth/teachingtechniques/mnemonicstrategies.html.

Graphic Organizers. Graphic organizers (i.e., visual formats or structures) are any types of visual representation of concepts that help students organize information in a manner that makes the information easier to learn. When graphic organizers are coupled with mnemonics (e.g., key-word mnemonics), students often remember the information with greater ease. The visual representations organize concepts in a manner that facilitates students' understanding and learning (Fisher, Schumaker, & Deshler, 1995). The organizer can be used before instruction to elicit students' prior knowledge, during the instruction to help students conceptualize the information, or at the end of instruction to summarize or review concepts as well as to assess students' understanding. Graphic organizers include such items as Venn diagrams, flowcharts, concept maps, time lines, and two-column notes.

Several studies have investigated using graphic organizers with students with disabilities (e.g., Bulgren, Schumaker, & Deshler, 1988; DiCecco & Gleason, 2002; Horton, Lovitt, & Bergerud, 1990). Graphic organizers can be used across different content areas and grade levels. See Figure 6-1 for an example of a

FIGURE 6-1 *Example of a Graphic Organizer.*

Compare/Contrast Matrix

Date: **Class:**	**Topic A:**	**Topic B:**
Main idea		
Similarities		
Differences		
Points to remember		

TABLE 6-3 *Template for Self-Monitoring at the Secondary Level*

(Can be put on a small index card)

Name: *Justin* Date: *9/12/06*

Identified task to monitor: *Working on my math worksheets during study hall*

Time of monitoring: *3rd Period week of 9/18-9/22*

Directions: *Mark an X in the box under the correct heading every 5-6 min of the period. Stop and ask yourself if you are on-task.*

Am I on Task?

On Task	Off Task

graphic organizer. See the following Website for more details on graphic organizers and easy-to-use templates: http://www.graphicorganizers.com.

Self-Management Techniques. Another consideration when attempting to change student behavior is the ability of the student to manage his or her own behavior. The goal of self-management programs is to try to make students more aware of their own thinking processes and their strategies for approaching tasks and to give them responsibility for their own reinforcement (Reeve, 1990). Self-management of behavior is often broken into three types: self-monitoring, self-reinforcement, and self-evaluation (Vallecorsa, deBettencourt, & Zigmond, 2000). In self-monitoring, the student is taught to recognize the behavior and record how often it may occur (Reid, Trout, & Schartz, 2005). A middle or high school student may be asked to note how many times he or she is off task during a specific instructional period. An elementary school student may be asked to circle a happy or sad face at a specific time period throughout the day to begin understanding his or her feelings. See Table 6-3 for an example of a template for self-monitoring at the secondary level.

In self-reinforcement and self-evaluation, students are asked to self-evaluate their progress or achievement on the behavior and to reward themselves. Self-evaluation or self-reinforcement involves the learner in determining the need for change in the behavior and then measuring (in some form) the change. Self-evaluation is an important skill for students to learn, as it helps them develop a sense of personal responsibility.

This section provided a review of a few specific instructional strategies. It is critical that you know what to teach and how to teach so that the most learning can occur. See Table 6-4 for suggestions on instructional strategies evidence for your teaching portfolio.

TABLE 6-4 *Examples of Specific Instructional Strategies Evidence for Teaching Portfolio*

To provide evidence of competency in the area of instructional strategies, a special education teacher might include the following in a teaching portfolio:

- ❑ Copies of lesson or unit plans describing instructional activities and accommodations or modifications for special needs students
- ❑ Copies of handouts with specific strategies noted (mnemonics)
- ❑ Copies of student homework
- ❑ Copies of graphic organizers used by students (hamburger paragraph for writing)
- ❑ Copies of documentation of progress toward academic IEP goals
- ❑ Photos of student engaged in learning activities (circle time or silent reading)
- ❑ Photos of classroom posters and posted student work

Note. Student confidentiality should be maintained. Please block out any identifying information.

SUMMARY

As more and more students with disabilities enter general education classrooms, it becomes increasingly important to examine the instructional strategies associated with learning in these environments. Research has shown that adequately meeting the needs of diverse learners, particularly students with high-incidence disabilities in general education content area classrooms, has been a problem under traditional instructional circumstances (Zigmond & Baker, 1994). These challenges are more acute in this era of high standards and student outcomes. You and your coteachers need to select direct, intense, and specific instructional strategies that have been shown to be effective.

ACTIVITY QUESTIONS

1. Discuss instructional techniques and ideas with your mentor or another teacher. Do they have suggestions that you can incorporate?
2. Observe other classroom teachers. What instructional techniques do they employ? Which ideas can you use in your classroom?
3. Review your instructional plans based on the IEP goals for the students on your caseload. Consult with your supervisor about the match.

SELECTED WEBSITES

http://www.teachingld.org
TeachingLD is a service of the Division for Learning Disabilities (DLD) of the Council for Exceptional Children. DLD is the largest international professional organization focused on learning disabilities. The purpose of TeachingLD is to provide trustworthy and up-to-date resources about teaching students with learning disabilities.

http://curry.edschool.virginia.edu/sped/projects/ose/information/mega
This site illustrates John Lloyd's presentation about the relative effectiveness of various familiar special education interventions. The slides included are from a presentation but are not accompanied by the spoken narrative that one would hear at the presentation. Other research links are included, as is a link to the article published discussing the meta-analysis conducted.

http://www.sraonline.com/index.php/home/curriculumsolutions/di/correctivereading/102
This site offers information on the Corrective Reading program, which provides intensive intervention for students in grades 4 to 12 who are reading 1 or more years below grade level. This program delivers tightly sequenced, carefully planned lessons that give struggling students the structure and practice necessary to become skilled, fluent readers and better learners.

http://www.mindtools.com/pages/main/newMNTIM.htm
This site contains an overview of mnemonic techniques and gives several specific strategies.

http://www.ku-crl.org/sim/index.html
This site gives more details on the strategy intervention model (SIM) developed at the University of Kansas Center for Research. SIM strives to help teachers make decisions about what is of greatest importance, what we can teach students to help them learn, and how to teach them well.

REFLECTION JOURNAL ACTIVITIES

1. In what ways can you encourage efficient transitions from one activity to another with the students in your classroom?
2. In what ways are student portfolios similar to your teaching portfolio, and in what ways are they different?

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