

## NASET LD Report #6

# Effective Teaching Strategies for Students with LD

## Introduction

This issue of the *LD Report* will focus on effective strategies for teaching students with LD. Effective strategies for students with LD will often emphasize all three of the following components:

- **Academic Instruction**
- **Behavioral Interventions**
- **Classroom Accommodations**

Each of these 3 components will now be addressed in this report.

## Academic Instruction

### Prepare Students for Upcoming Lessons

Research suggests that students with LD learn best with a carefully structured academic lesson one where the teacher explains what he or she wants students to learn in the current lesson and places these skills and knowledge in the context of previous lessons. A number of teaching-related practices have been found especially useful in facilitating this process:

**Discuss and establish learning expectations.** State what students are expected to learn during the lesson. For example, explain to students that a language arts lesson will involve reading a story about Paul Bunyan and identifying new vocabulary words in the story.

**Discuss and establish behavioral expectations.** Describe how students are expected to behave during the lesson. For example, tell students that they may talk quietly to their neighbors as they do their seatwork or they may raise their hands to get your attention.

**Offer an advance organizer.** Prepare students for the day's lesson by quickly summarizing the order of various activities planned. Explain, for example, that a review of the previous lesson will be followed by new information and that both group and independent work will be expected.

**Take time out to go over and Review previous lessons.** Review information about previous lessons on this topic. For example, remind students that yesterday's lesson focused on learning how to regroup in subtraction. Review several problems before describing the current lesson.

**Be very clear on materials needed.** Identify all materials that the students will need during the lesson, rather than leaving them to figure out on their own the materials required. For example,

specify that students need their journals and pencils for journal writing or their crayons, scissors, and colored paper for an art project.

**Make instructions, choices, and scheduling as easy as possible.** The simpler the expectations communicated to an LD student, the more likely it is that he or she will comprehend and complete them in a timely and productive manner.

## Conducting Effective Lessons

The following set of strategies may assist teachers in conducting effective lessons:

**Remember that reliability and predictability is essential.** Structure and consistency are very important for students with LD; many do not deal well with change. Minimal rules and minimal choices are best for these students. They need to understand clearly what is expected of them, as well as the consequences for not adhering to expectations.

**Try to get the student to participate in the classroom.** Provide students with LD with private, discreet cues to stay on task and advance warning that they will be called upon shortly. Avoid bringing attention to differences between LD students and their classmates. At all times, avoid the use of sarcasm and criticism.

**Utilize audiovisual materials.** Use a variety of audiovisual materials to present academic lessons. For example, use an overhead projector to demonstrate how to solve an addition problem requiring regrouping. The students can work on the problem at their desks while you manipulate counters on the projector screen.

**Check student performance.** Question individual students to assess their mastery of the lesson. For example, you can ask students doing seatwork (i.e., lessons completed by students at their desks in the classroom) to demonstrate how they arrived at the answer to a problem, or you can ask individual students to state, in their own words, how the main character felt at the end of the story.

**Try to ask probing questions.** Probe for the correct answer after allowing a student sufficient time to work out the answer to a question. Count at least 15 seconds before giving the answer or calling on another student. Ask follow-up questions that give students an opportunity to demonstrate what they know.

**Assess students on an ongoing basis.** Identify students who need additional assistance. Watch for signs of lack of comprehension, such as daydreaming or visual or verbal indications of frustration. Provide these students with extra explanations, or ask another student to serve as a peer tutor for the lesson.

**Help students correct their own mistakes.** Describe how students can identify and correct their own mistakes. For example, remind students that they should check their calculations in math problems and reiterate how they can check their calculations; remind students of particularly difficult spelling rules and how students can watch out for easy-to-make errors.

**Help students focus.** Remind students to keep working and to focus on their assigned task. For example, you can provide follow-up directions or assign learning partners. These practices can be directed at individual students or at the entire class.

**Provide follow-up directions.** Effective teachers of students with LD also guide them with follow-up directions:

**Oral directions.** After giving directions to the class as a whole, provide additional oral directions for a student with LD. For example, ask the student if he or she understood the directions and repeat the directions together.

**Written directions.** Provide follow-up directions in writing. For example, write the page number for an assignment on the chalkboard and remind the student to look at the chalkboard if he or she forgets the assignment.

**Reduce the noise level.** Monitor the noise level in the classroom, and provide corrective feedback, as needed. If the noise level exceeds the level appropriate for the type of lesson, remind all students or individual students about the behavioral rules stated at the beginning of the lesson.

**Simplify work into smaller units.** Break down assignments into smaller, less complex tasks. For example, allow students to complete five math problems before presenting them with the remaining five problems.

**Emphasize key points.** Highlight key words in the instructions on worksheets to help the student with LD focus on the directions. Prepare the worksheet before the lesson begins, or underline key words as you and the student read the directions together. When reading, show students how to identify and highlight a key sentence, or have them write it on a separate piece of paper, before asking for a summary of the entire book. In math, show students how to underline the important facts and operations; in *Mary has two apples, and John has three, underline two, and, and three.*

**Avoid high pressure and/or timed tests.** Tests that are timed may not allow students with LD to demonstrate what they truly know due to their potential preoccupation with elapsed time. Allow students with LD more time to complete quizzes and tests in order to eliminate test anxiety, and provide them with other opportunities, methods, or test formats to demonstrate their knowledge.

**Provide group work.** Have students work together in small groups to maximize their own and each other's learning. Use strategies such as Think-Pair-Share where teachers ask students to think about a topic, pair with a partner to discuss it, and share ideas with the group.

**Learn about and use assistive technology.** All students, and those with LD in particular, can benefit from the use of technology (such as computers and projector screens), which makes instruction more visual and allows students to participate actively.

In conclusion, the most effective manner in which teachers conduct lessons for students with LD, is by periodically questioning students understanding of the material, probe for correct answers before calling on other students, and identify which students need additional assistance. Educators should always remember that moving from one lesson or class to another is often particularly difficult for students with LD. The key lies in preparing students for the transition. When they are prepared for transitions, students with LD are more likely to respond and to stay on task.

## Concluding Lessons

Effective teachers conclude their lessons by providing advance warning that the lesson is about to end, checking the completed assignments of at least some of the students with LD, and instructing students how to begin preparing for the next activity.

**Give advanced notice.** Provide advance warning that a lesson is about to end. Announce 5 or 10 minutes before the end of the lesson (particularly for seatwork and group projects) how much time remains. You may also want to tell students at the beginning of the lesson how much time they will have to complete it.

**Go over assignments.** Check completed assignments for at least some students. Review what they have learned during the lesson to get a sense of how ready the class was for the lesson and how to plan the next lesson.

**Be sure to take some time to preview the next lesson.** Instruct students on how to begin preparing for the next lesson. For example, inform students that they need to put away their textbooks and come to the front of the room for a large group spelling lesson.

## Individualizing Instructional Practices

In addition to the general strategies listed above for introducing, conducting, and concluding their lessons, effective teachers of students with LD also individualize their instructional practices in accordance with different academic subjects and the needs of their students within each area. This is because students with LD have different ways of learning and retaining information, not all of which involve traditional reading and listening. Effective teachers first identify areas in which each student requires extra assistance and then use special strategies to provide structured opportunities for the student to review and master an academic lesson that was previously presented to the entire class. Strategies that may help facilitate this goal include the following (grouped by subject area):

### Language Arts and Reading Comprehension

To help students with LD who are poor readers improve their reading comprehension skills, try the following instructional practices:

**Provide silent reading time.** Establish a fixed time each day for silent reading (e.g., D.E.A.R.: Drop Everything and Read and Sustained Silent Reading [Manzo & Zehr, 1998 and Holt & O Tuel, 1989]).

**Provide follow-along reading.** Ask the student to read a story silently while listening to other students or the teacher read the story aloud to the entire class.

**Provide partner reading activities.** Pair the student with LD with another student partner who is a strong reader. The partners take turns reading orally and listening to each other.

**Teach the student how to make a storyboard.** Ask the student to make storyboards that illustrate the sequence of main events in a story.

**Schedule storytelling.** Schedule storytelling sessions where the student can retell a story that he or she has read recently.

**Schedule playacting.** Schedule playacting sessions where the student can role play different characters in a favorite story.

**Keep a word bank.** Keep a word bank or dictionary of new or hard-to-read sight-vocabulary words.

**Play board games for reading comprehension.** Play board games that provide practice with target reading-comprehension skills or sight-vocabulary words.

**Schedule computer games for reading comprehension.** Schedule computer time for the student to have drill-and-practice with sight vocabulary words.

**Utilize recorded books.** These materials, available from many libraries, can stimulate interest in traditional reading and can be used to reinforce and complement reading lessons.

**Have backup materials for home use.** Make available to students a second set of books and materials that they can use at home.

**Provide summary materials.** Allow and encourage students to use published book summaries, synopses, and digests of major reading assignments to review (not replace) reading assignments.

## Phonics

To help students with LD master rules of phonics, the following are effective:

**Teach the student mnemonics for phonics.** Teach the student mnemonics that provide reminders about hard-to-learn phonics rules (e.g., when two vowels go walking, the first does the talking ) (Scruggs & Mastropieri, 2000).

**Teach word families.** Teach the student to recognize and read word families that illustrate particular phonetic concepts (e.g., ph sounds, at-bat-cat ).

**Provide and play board games for phonics.** Have students play board games, such as bingo, that allow them to practice phonetically irregular words.

**Use computer games for phonics.** Use a computer to provide opportunities for students to drill and practice with phonics or grammar lessons.

**Use picture-letter charts.** Use these for students who know sounds but do not know the letters that go with them.

## Writing

In composing stories or other writing assignments, students with LD benefit from the following practices:

**Provide standards for writing assignments.** Identify and teach the student classroom standards for acceptable written work, such as format and style.

**Teach students to recognize parts of a story.** Teach the student how to describe the major parts of a story (e.g., plot, main characters, setting, conflict, and resolution). Use a storyboard with parts listed for this purpose.

**Establish a post office.** Establish a post office in the classroom, and provide students with opportunities to write, mail, and receive letters to and from their classmates and teacher.

**Teach Visualization.** Ask the student to close his or her eyes and visualize a paragraph that the teacher reads aloud. Another variation of this technique is to ask a student to describe a recent event while the other students close their eyes and visualize what is being said as a written paragraph.

**Require students to proofread their own work.** Require that the student proofread his or her work before turning in written assignments. Provide the student with a list of items to check when proofreading his or her own work.

### Spelling

To help students with LD who are poor spellers, the following techniques have been found to be helpful:

**Use everyday examples of difficult spelling words.** Take advantage of everyday events to teach difficult spelling words in context. For example, ask a student eating a cheese sandwich to spell sandwich.

**Assign frequently used words.** Assign spelling words that the student routinely uses in his or her speech each day.

**Have students keep a dictionary of misspelled words.** Ask the student to keep a personal dictionary of frequently misspelled words.

**Partner spelling activities.** Pair the student with another student. Ask the partners to quiz each other on the spelling of new words. Encourage both students to guess the correct spelling.

**Use manipulatives.** Use cutout letters or other manipulatives to spell out hard-to-learn words.

**Use color-coded letters.** Color code different letters in hard-to-spell words (e.g., receipt).

**Use movement activities.** Combine movement activities with spelling lessons (e.g., jump rope while spelling words out loud).

**Use word banks.** Use 3" x 5" index cards of frequently misspelled words sorted alphabetically.

### Handwriting

Students with LD who have difficulty with manuscript or cursive writing may well benefit from their teacher's use of the following instructional practices:

**Provide individual chalkboards.** Ask the student to practice copying and erasing the target words on a small, individual chalkboard. Two students can be paired to practice their target words together.

**Provide quiet places for handwriting.** Provide the student with a special quiet place (e.g., a table outside the classroom) to complete his or her handwriting assignments.

**Teach spacing words on a page.** Teach the student to use his or her finger to measure how much space to leave between each word in a written assignment.

**Have the student use special writing paper.** Ask the student to use special paper with vertical lines to learn to space letters and words on a page.

### **Math Computation**

Numerous individualized instructional practices can help students with LD improve their basic computation skills. The following are just a few:

**Teach students to recognize patterns in math.** Teach the student to recognize patterns when adding, subtracting, multiplying, or dividing whole numbers. (e.g., the digits of numbers which are multiples of 9 [18, 27, 36 . . . ] add up to 9).

**Partner students for math activities.** Pair a student with LD with another student and provide opportunities for the partners to quiz each other about basic computation skills.

**Review and be sure students understand math symbols.** If students do not understand the symbols used in math, they will not be able to do the work. For instance, do they understand that the plus in  $1 + 3$  means to add and that the minus means to take away?

**Teach mnemonics for basic computation.** Teach the student mnemonics that describe basic steps in computing whole numbers. For example, Don't Miss Susie's Boat can be used to help the student recall the basic steps in long division (i.e., divide, multiply, subtract, and bring down).

**Use real-life examples of money skills.** Provide the student with real-life opportunities to practice target money skills. For example, ask the student to calculate his or her change when paying for lunch in the school cafeteria, or set up a class store where students can practice calculating change.

**Use color coding arithmetic symbols.** Color code basic arithmetic symbols, such as  $+$ ,  $-$ , and  $=$ , to provide visual cues for students when they are computing whole numbers.

**Use calculators to check basic computation.** Ask the student to use a calculator to check addition, subtraction, multiplication, or division.

**Provide board games for basic computation.** Ask the student to play board games to practice adding, subtracting, multiplying, and dividing whole numbers.

**Schedule computer games for basic computation.** Schedule computer time for the student to drill and practice basic computations, using appropriate games.

**Have students Perform Magic minute drills.** Have students perform a quick (60-second) drill every day to practice basic computation of math facts, and have students track their own performance.

## Solving Math Word Problems

To help students with LD improve their skill in solving word problems in mathematics, try the following:

**Reread the problem.** Teach the student to read a word problem two times before beginning to compute the answer.

**Use clue words.** Teach the student clue words that identify which operation to use when solving word problems. For example, words such as sum, total, or all together may indicate an addition operation.

**Use Guided questions for word problems.** Teach students to ask guiding questions in solving word problems. For example: What is the question asked in the problem? What information do you need to figure out the answer? What operation should you use to compute the answer?

**Use real-life examples of word problems.** Ask the student to create and solve word problems that provide practice with specific target operations, such as addition, subtraction, multiplication, or division. These problems can be based on recent, real-life events in the student's life.

**Allow calculators for students to check word problems.** Ask the student to use a calculator to check computations made in answering assigned word problems.

## Use of Special Materials in Math

Some students with LD benefit from using special materials to help them complete their math assignments, including:

**Provide number lines.** Provide number lines for the student to use when computing whole numbers.

**Use manipulatives.** Use manipulatives to help students gain basic computation skills, such as counting poker chips when adding single-digit numbers.

**Use graph paper for organization.** Ask the student to use graph paper to help organize columns when adding, subtracting, multiplying, or dividing whole numbers.

## Organizational and Study Skills Useful for Academic Instruction of Students with LD

Many students with LD are easily distracted and have difficulty focusing their attention on assigned tasks. However, the following practices can help students with LD improve their organization of homework and other daily assignments:

**Designate one teacher as the student's advisor or coordinator.** This teacher will regularly review the student's progress through progress reports submitted by other teachers and will act as the liaison between home and school. Permit the student to meet with this advisor on a regular basis (e.g., Monday morning) to plan and organize for the week and to review progress and problems from the past week.



**Provide assignment notebooks.** Provide the student with an assignment notebook to help organize homework and other seatwork.

**Use color-coded folders.** Provide the student with color-coded folders to help organize assignments for different academic subjects (e.g., reading, mathematics, social science, and science).

**Assign students a homework partner.** Assign the student a partner to help record homework and other seatwork in the assignment notebook and file work sheets and other papers in the proper folders.

**Periodically have students clean out desks and book bags.** Ask the student to periodically sort through and clean out his or her desk, book bag, and other special places where written assignments are stored.

**Use visual aids as reminders of subject material.** Use banners, charts, lists, pie graphs, and diagrams situated throughout the classroom to remind students of the subject material being learned.

### **Assisting Students with LD with Time Management**

Students with LD often have difficulty finishing their assignments on time and can thus benefit from special materials and practices that help them to improve their time management skills, including:

**Use a clock or wristwatch.** Teach the student how to read and use a clock or wristwatch to manage time when completing assigned work.

**Use a calendar.** Teach the student how to read and use a calendar to schedule assignments.

**Practice sequencing activities.** Provide the student with supervised opportunities to break down a long assignment into a sequence of short, interrelated activities.

**Create a daily activity schedule.** Tape a schedule of planned daily activities to the student's desk.

### **Helpful Study Skills for Students with LD**

Students with LD often have difficulty in learning how to study effectively on their own. The following strategies may assist LD students in developing the study skills necessary for academic success:

**Adapt worksheets.** Teach a student how to adapt instructional worksheets. For example, help a student fold his or her reading worksheet to reveal only one question at a time. The student can also use a blank piece of paper to cover the other questions on the page.

**Teach students how to use Venn diagrams.** Teach a student how to use Venn diagrams to help illustrate and organize key concepts in reading, mathematics, or other academic subjects.

**Teach note-taking skills.** Teach a student with LD how to take notes when organizing key academic concepts that he or she has learned, perhaps with the use of a program such as Anita Archer's Skills for School Success (Archer & Gleason, 2002).

**Provide students with a checklist of frequent mistakes.** Provide the student with a checklist of mistakes that he or she frequently makes in written assignments (e.g., punctuation or capitalization errors), mathematics (e.g., addition or subtraction errors), or other academic subjects. Teach the student how to use this list when proofreading his or her work at home and school.

**Provide students with a checklist of homework supplies.** Provide the student with a checklist that identifies categories of items needed for homework assignments (e.g., books, pencils, and homework assignment sheets).

**Teach students about the importance of an uncluttered workspace.** Teach a student with LD how to prepare an uncluttered workspace to complete assignments. For example, instruct the student to clear away unnecessary books or other materials before beginning his or her seatwork.

**Track the progress of homework assignments.** Keep track of how well your students with LD complete their assigned homework. Discuss and resolve with them and their parents any problems in completing these assignments. For example, evaluate the difficulty of the assignments and how long the students spend on their homework each night. Keep in mind that the quality, rather than the quantity, of homework assigned is the most important issue. While doing homework is an important part of developing study skills, it should be used to reinforce skills and to review material learned in class, rather than to present, in advance, large amounts of material that is new to the student.

## Behavioral Interventions

The second major component of effective instruction for students with LD involves the use of behavioral interventions. Exhibiting behavior that resembles that of younger students, students with LD often act immaturely and have difficulty learning how to control their impulsiveness and hyperactivity. They may have problems forming friendships with other students in the class and may have difficulty thinking through the social consequences of their actions.

The purpose of behavioral interventions is to assist students in displaying the behaviors that are most conducive to their own learning and that of classmates. Well-managed classrooms prevent many disciplinary problems and provide an environment that is most favorable for learning. When a teacher's time must be spent interacting with students whose behaviors are not focused on the lesson being presented, less time is available for assisting other students. Behavioral interventions should be viewed as an opportunity for teaching in the most effective and efficient manner, rather than as an opportunity for punishment.

### Effective Behavioral Intervention Techniques

Effective teachers use a number of behavioral intervention techniques to help students learn how to control their behavior. Perhaps the most important and effective of these is verbal reinforcement of appropriate behavior. The most common form of verbal reinforcement is praise given to a student when he or she begins and completes an activity or exhibits a particular

desired behavior. Simple phrases such as good job encourage a student to act appropriately. Effective teachers praise students with LD frequently and look for a behavior to praise before, and not after, a student gets off task.

The following strategies provide some guidance regarding the use of praise:

**Define the appropriate behavior while giving praise.** Praise should be specific for the positive behavior displayed by the student: The comments should focus on what the student did right and should include exactly what part(s) of the student's behavior was desirable. Rather than praising a student for not disturbing the class, for example, a teacher should praise him or her for quietly completing a math lesson on time.

**Provide praise immediately.** The sooner that approval is given regarding appropriate behavior, the more likely the student will repeat it.

**Vary the statements given as praise.** The comments used by teachers to praise appropriate behavior should vary; when students hear the same praise statement repeated over and over, it may lose its value.

**Be consistent and sincere with praise.** Appropriate behavior should receive consistent praise. Consistency among teachers with respect to desired behavior is important in order to avoid confusion on the part of students with LD. Similarly, students will notice when teachers give insincere praise, and this insincerity will make praise less effective.

It is important to keep in mind that the most effective teachers focus their behavioral intervention strategies on praise rather than on punishment. Negative consequences may temporarily change behavior, but they rarely change attitudes and may actually increase the frequency and intensity of inappropriate behavior by rewarding misbehaving students with attention. Moreover, punishment may only teach students what not to do; it does not provide students with the skills that they need to do what is expected. Positive reinforcement produces the changes in attitudes that will shape a student's behavior over the long term.

In addition to verbal reinforcement, the following set of generalized behavioral intervention techniques has proven helpful with students with LD as well:

**Selectively ignore inappropriate behavior.** It is sometimes helpful for teachers to selectively ignore inappropriate behavior. This technique is particularly useful when the behavior is unintentional or unlikely to recur or is intended solely to gain the attention of teachers or classmates without disrupting the classroom or interfering with the learning of others.

**Remove nuisance items.** Teachers often find that certain objects (such as rubber bands and toys) distract the attention of students with LD in the classroom. The removal of nuisance items is generally most effective after the student has been given the choice of putting it away immediately and then fails to do so.

**Provide calming manipulatives.** While some toys and other objects can be distracting for both the students with LD and peers in the classroom, some students with LD can benefit from having access to objects that can be manipulated quietly. Manipulatives may help students gain some needed sensory input while still attending to the lesson.

**Allow for escape valve outlets.** Permitting students with LD to leave class for a moment, perhaps on an errand (such as returning a book to the library), can be an effective means of settling them down and allowing them to return to the room ready to concentrate.

**Provide activity reinforcement.** Students receive activity reinforcement when they are encouraged to perform a less desirable behavior before a preferred one.

**Hold parent conferences.** Parents have a critical role in the education of students, and this axiom may be particularly true for those with LD. As such, parents must be included as partners in planning for the student's success. Partnering with parents entails including parental input in behavioral intervention strategies, maintaining frequent communication between parents and teachers, and collaborating in monitoring the student's progress.

**Utilize peer mediation.** Members of a student's peer group can positively impact the behavior of students with LD. Many schools now have formalized peer mediation programs, in which students receive training in order to manage disputes involving their classmates.

**Effective teachers also use behavioral prompts with their students.** These prompts help remind students about expectations for their learning and behavior in the classroom. Three, which may be particularly helpful, are the following:

**Visual cues.** Establish simple, nonintrusive visual cues to remind the student to remain on task. For example, you can point at the student while looking him or her in the eye, or you can hold out your hand, palm down, near the student.

**Proximity control.** When talking to a student, move to where the student is standing or sitting. Your physical proximity to the student will help the student to focus and pay attention to what you are saying.

**Hand gestures.** Use hand signals to communicate privately with a student with LD. For example, ask the student to raise his or her hand every time you ask a question. A closed fist can signal that the student knows the answer; an open palm can signal that he or she does not know the answer. You would call on the student to answer only when he or she makes a fist. In some instances, students with LD benefit from instruction designed to help students learn how to manage their own behavior:

**Social skills classes.** Teach students with LD appropriate social skills using a structured class. For example, you can ask the students to role-play and model different solutions to common social problems. It is critical to provide for the generalization of these skills, including structured opportunities for the students to use the social skills that they learn. Offering such classes, or experiences, to the general school population can positively affect the school climate.

**Problem solving sessions.** Discuss how to resolve social conflicts. Conduct impromptu discussions with one student or with a small group of students where the conflict arises. In this setting, ask two students who are arguing about a game to discuss how to settle their differences. Encourage the students to resolve their problem by talking to each other in a supervised setting.

For many students with LD, functional behavioral assessments and positive behavioral interventions and supports, including behavioral contracts and management plans, tangible

rewards, or token economy systems, are helpful in teaching them how to manage their own behavior. Because students individual needs are different, it is important for teachers, along with the family and other involved professionals, to evaluate whether these practices are appropriate for their classrooms. Examples of these techniques, along with steps to follow when using them, include the following:

**Functional Behavioral Assessment (FBA).** FBA is a systematic process for describing problem behavior and identifying the environmental factors and surrounding events associated with problem behavior. The team that works closely with the student exhibiting problem behavior (1) observes the behavior and identifies and defines its problematic characteristics, (2) identifies which actions or events precede and follow the behavior, and (3) determines how often the behavior occurs. The results of the FBA should be used to develop an effective and efficient intervention and support plan. (Gable, et al., 1997)

**Positive Behavioral Interventions and Supports (PBIS).** This method is an application of a behaviorally based systems approach that is grounded in research regarding behavior in the context of the settings in which it occurs. Using this method, schools, families, and communities work to design effective environments to improve behavior. The goal of PBIS is to eliminate problem behavior, to replace it with more appropriate behavior, and to increase a person s skills and opportunities for an enhanced quality of life (Todd, Horner, Sugai, & Sprague, 1999).

**Behavioral contracts and management plans.** Identify specific academic or behavioral goals for the student with LD, along with behavior that needs to change and strategies for responding to inappropriate behavior. Work with the student to cooperatively identify appropriate goals, such as completing homework assignments on time and obeying safety rules on the school playground. Take the time to ensure that the student agrees that his or her goals are important to master. Behavioral contracts and management plans are typically used with individual students, as opposed to entire classes, and should be prepared with input from parents.

**Tangible rewards.** Use tangible rewards to reinforce appropriate behavior. These rewards can include stickers, such as happy faces or sports team emblems, or privileges, such as extra time on the computer or lunch with the teacher. Students should be involved in the selection of the reward. If students are invested in the reward, they are more likely to work for it.

**Token economy systems.** Use token economy systems to motivate a student to achieve a goal identified in a behavioral contract. For example, a student can earn points for each homework assignment completed on time. In some cases, students also lose points for each homework assignment not completed on time. After earning a specified number of points, the student receives a tangible reward, such as extra time on a computer or a free period on Friday afternoon. Token economy systems are often used for entire classrooms, as opposed to solely for individual students.

**Self-management systems.** Train students to monitor and evaluate their own behavior without constant feedback from the teacher. In a typical self-management system, the teacher identifies behaviors that will be managed by a student and provides a written rating scale that includes the performance criteria for each rating. The teacher and student separately rate student behavior during an activity and compare ratings. The student earns points if the ratings match or are within one point and receives no points if ratings are more than one point apart; points are exchanged for privileges. With time, the teacher involvement is removed, and the student

becomes responsible for self-monitoring (DuPaul & Stoner as cited in Shinn, Walker, & Stoner, 2002).

## Classroom Accommodations

The third component of a strategy for effectively educating students with LD involves physical classroom accommodations. Students with LD often have difficulty adjusting to the structured environment of a classroom, determining what is important, and focusing on their assigned work. They are easily distracted by other students or by nearby activities in the classroom. As a result, many students with LD benefit from accommodations that reduce distractions in the classroom environment and help them to stay on task and learn. Certain accommodations within the physical and learning environments of the classroom can benefit students with LD.

### Special Classroom Seating Arrangements for LD Students

One of the most common accommodations that can be made to the physical environment of the classroom involves determining where a student with LD will sit. Three special seating assignments may be especially useful:

**Seat the student near the teacher.** Assign the student a seat near your desk or the front of the room. This seating assignment provides opportunities for you to monitor and reinforce the student's on-task behavior.

**Seat the student near a student role model.** Assign the student a seat near a student role model. This seat arrangement provides opportunity for students to work cooperatively and to learn from their peers in the class.

**Provide low-distraction work areas.** As space permits, teachers should make available a quiet, distraction-free room or area for quiet study time and test taking. Students should be directed to this room or area privately and discreetly in order to avoid the appearance of punishment.

### Instructional Tools and the Physical Learning Environment

Skilled teachers use special instructional tools to modify the classroom learning environment and accommodate the special needs of their students with LD. They also monitor the physical environment, keeping in mind the needs of these students. The following tools and techniques may be helpful:

**Pointers.** Teach the student to use a pointer to help visually track written words on a page. For example, provide the student with a bookmark to help him or her follow along when students are taking turns reading aloud.

**Egg timers.** Note for the students the time at which the lesson is starting and the time at which it will conclude. Set a timer to indicate to students how much time remains in the lesson and place the timer at the front of the classroom; the students can check the timer to see how much time remains. Interim prompts can be used as well. For instance, students can monitor their own progress during a 30-minute lesson if the timer is set for 10 minutes three times.

**Classroom lights.** Turning the classroom lights on and off prompts students that the noise level in the room is too high and they should be quiet. This practice can also be used to signal that it is time to begin preparing for the next lesson.

**Music.** Play music on a tape recorder or chords on a piano to prompt students that they are too noisy. In addition, playing different types of music on a tape recorder communicates to students what level of activity is appropriate for a particular lesson. For example, play quiet classical music for quiet activities done independently and jazz for active group activities.

**Proper use of furniture.** The desk and chair used by students with LD need to be the right size; if they are not, the student will be more inclined to squirm and fidget. A general rule of thumb is that a student should be able to put his or her elbows on the surface of the desk and have his or her chin fit comfortably in the palm of the hand.