Using Learning-Strategies Instruction With Students Who Are Gifted and Learning Disabled

by Amy Bisland

Julia is a third-grade student who participates in the gifted program at her school. Although she appears to work hard, she rarely finishes assignments and her desk is always a mess. She likes to write, but the teacher often has problems reading her work due to poor spelling and sloppy handwriting. Although she makes average grades, Julia’s teachers express to her that they think she could do better work if only she would put forth more effort.

Jason is a student in the fifth grade who has been identified as learning disabled. Three times a week he attends resource room sessions with a special education teacher and four other students with reading difficulties. Although he is reluctant to complete his resource work, Jason enjoys telling his teachers about the project he is working on at home. After watching a television program about architects, he decided to construct a scale blueprint and model of his house. He also plans to design a blueprint of a neighborhood recreational facility that he wishes the community would build. Jason makes B’s and C’s in his classes.

Julia and Jason share one very important characteristic in common: They are part of a unique group of individuals who are both gifted and learning disabled. Although once thought of as mutually exclusive, it is now accepted that students can possess a high level of intelligence while also having a learning disability (McEachern & Bornot, 2001). However, it is very difficult to estimate how many students actually exist in this population (Bees, 1998). Sah and Borland (1989) estimated that the gifted/learning-disabled subgroup is the largest of all subgroups of gifted and disabled students. Yet, they also noted that many students in this group remain unidentified because their gifts mask their difficulties, making it impossible to know how many exist.

Other researchers have offered suggestions of how many gifted and learning-disabled students are present in the United States. Winner (1996) estimated that between 120,000 and 180,000 students with learning disabilities also have above-average intelligence quotients (IQ). Winner also noted that approximately 10% of high-IQ students read 2 or more years below grade level. Some researchers estimate that 2–10% of all students enrolled in gifted programs also have a learning disability (McEachern & Bornot, 2001), while others predict that the actual number is closer to 2–5% of the nation’s gifted population (Delisle & Galbraith, 2002).

Regardless of prevalence, students who are gifted and learning disabled do exist in America’s public schools, and they have unique needs that must be met through our education system (Bees, 1998). Special education teachers, regular education teachers, and teachers of the gifted should be aware of the unique characteristics of students who are both gifted and learning disabled and should be aware of strategies to assist them in reaching their full potential. This article gives an overview of students who are both gifted and disabled and discusses learning strategies that will help them achieve academically.

Although there is no clear estimate of how many students fit into the overall category of gifted and learning disabled, over the past three decades, public and professional awareness of such students has increased (Fishinuma, 2000). However, historically, these students have been overlooked and underserved in the classroom. Even today, districts usually do not have identification, screening, and serving procedures outlined for these students (Brody & Mills, 1997; Fetzer, 2000). Therefore, a unique group of students in our public schools remain unidentified and are being prevented from reaching their true academic potential.

Classifying Gifted/LD Students

In analyzing students who are both gifted and learning disabled, several distinct groups emerge.

The first group contains students who are identified as gifted, but have subtle learning disabilities (Baum, Cooper, & Neu, 2001; Brody & Mills, 1997; Fetzer, 2000; Little, 2001). This group is easily identified as gifted because they demonstrate high IQ or high achievement. Teachers may notice their exceptional verbal skills, but become
frustrated with their poor spelling and handwriting (Little). These students are often disorganized and sloppy. As they advance through school, the gap between what is expected and their actual performance often widens (Fetzer). This leaves many teachers confused because they expect all children identified as gifted to achieve. Gifted students with subtle learning disabilities are usually never identified as learning disabled (Brody & Mills). Because they typically perform on grade level or above, they are often overlooked for screening procedures to identify the disability (Little).

The second group of gifted/learning-disabled students includes those whose gifts and disabilities mask one another, leaving them unidentified for either category (Baum, Cooper, & Neu, 2001; Brody & Mills, 1997; Fetzer, 2000; Little, 2001). This is the most difficult population to identify because these students’ high intelligence works to compensate for their disability, even as that disability prevents their high intelligence from shining. Therefore, most teachers do not notice either exceptionality (Little). Like the first group, these students typically function at grade level, thus indicating no need for special services. However, as coursework becomes more demanding in later years, students in this group will require accommodations to prevent further academic difficulties. If they do not receive this assistance, their performance may fall to the point where a disability is finally suspected (Brody & Mills). Fetzer referred to this group as the hidden gifted/learning-disabled and suggested that teachers may become aware of these students through a specific content area of creative output.

The final group of gifted/learning-disabled students are those who are identified as learning disabled, but are also gifted (Baum, Cooper, & Neu, 2001; Brody & Mills, 1997; Fetzer, 2000; Little, 2001). Students in this group are often known for what they are unable to do, rather than what they can do (Little). They are sometimes placed in special classes for learning-disabled students because their disability prevents them from achieving at their potential based on intelligence alone (Fetzer). Students in this classification typically have more severe learning disabilities than those in the other two, thus making it easier for teachers to identify problems. However, depressed IQ scores and inadequate assessments frequently result in an underestimation of these students’ abilities (Brody & Mills). They usually never receive special services for their exceptional abilities.

**Characteristics of Gifted/LD Students**

Regardless of classification, students who are both gifted and learning disabled share many unique characteristics. These students all possess outstanding gifts or talents, but have a disability that makes academic achievement difficult (Brody & Mills, 1997). They may be skilled at abstract thinking, problem solving, and mathematical reasoning (Fetzer, 2000; McEachern & Bornot, 2001; Robinson, 1999; Weinfield, Barnes-Robinson, Jeweler, & Shevitz, 2002; Willard-Holt, 1999). They are able to perceive subtle relationships and often possess good communication skills (Fetzer). Most students who are both gifted and learning disabled are highly creative and enjoy a wide range of interests (Fetzer; McEachern & Bornot; Willard-Holt). Other positive characteristics may include curiosity; a sophisticated sense of humor; good visual memory; the ability to grasp metaphors and analogies; advanced vocabulary; exceptional ability in geometry, science, art, and music; good listening comprehension; and advanced analytic skills (Fetzer; McEachern & Bornot; Robinson; Willard-Holt).

However, not all common characteristics of students who are both gifted and learning disabled are positive. Many characteristics cause academic difficulties and require remediation or specialized instruction. Some students are easily frustrated and suffer from low self-esteem. They have difficulty with activities that require rote memorization and sequencing, as well as problems with computation, phonics, and spelling. Many have poor handwriting and poor organizational skills (Baum, Cooper, & Neu, 2001; Ferri & Gregg, 1997; Fetzer, 2000; Weinfield et. al., 2002; Willard-Holt, 1999). Students who are gifted and learning disabled frequently perform poorly on timed tests and may demonstrate overall school failure. Many do not enjoy school, but enjoy learning outside of the school environment (Robinson, 1999). Students who are both gifted and learning disabled are often perfectionists who become excessively critical of themselves or others. They may fail to complete assignments and appear distracted. They often protest basic skill repetition and drill (Robinson; Willard-Holt).

**Instructional Strategies for Gifted/LD Students**

Students who are both gifted and learning disabled do not always receive service for both areas (Rees, 1998; Brody & Mills, 1997; Little, 2001; Willard-Holt, 1999). Students need the opportunity to participate in enrichment or acceleration programs in order to express their gifts. However, it is also important to address their learning disabilities.

Robinson (1999) identified two factors that successful adults with learning disabilities feel have contributed to their success. One factor is knowledge of their own strengths and weaknesses. The other is a change in the perception of themselves and their learning characteristics from one of failure to a more positive and balanced perception of a person with
strengths and weaknesses. These adults found that their own attitudes and feelings toward themselves and their abilities were the most important factors leading to their ultimate success. Consequently, self-efficacy and independence of learning are key areas that should be stressed in preparing gifted/learning-disabled students for the future (Little, 2001).

Many recommendations have been made for better serving students who are gifted and learning disabled. Several of these are similar to those made for students who are learning disabled, but not gifted. They include allowing students to work on computers and using tape-recorded books, peer tutoring, untimed and oral tests, and cooperative activities (Brody & Mills, 1997; Dole, 2000; Fetzer, 2000). More specific suggestions include allowing students to select from a variety of products to show mastery, rather than simple pencil-and-paper tests; continuing instruction in basic skills; and focusing attention on strengths, rather than weaknesses (Fetzer). Baum, Cooper, and Neu (2001) suggested considering student interests in designing the curriculum to alleviate focus and attention problems.

Gifted/learning-disabled students may also require specialized counseling. Counselors can help students improve classroom behavior, increase self-esteem, and develop positive interpersonal relationships (McEachern & Bornot, 2001). These benefits of counseling can help increase academic performance as students gain self-confidence in their own abilities. Staff development may be necessary for educators to ensure that all teachers have the information necessary to screen, identify, and successfully teach gifted/LD students (Fetzer, 2000).

Students who are gifted and learning disabled have the intellectual capacity to comprehend great amounts of information and to process that information at high levels. However, what they often lack are strategies to compensate for their area of disability. Coleman (2001) suggested that teachers move away from traditional remediation programming when working with students who are twice-exceptional. Instead, she advocated giving students specific strategies to help them overcome their learning problems. This is best achieved through direct instruction of coping strategies, study skills, self-advocacy, and curricular modification techniques.

Many researchers have noted the need for instruction in specific strategies to help students who are both gifted and learning disabled compensate for their disability in order to become more independent learners (Baum, Cooper, & Neu, 2001; Coleman, 2001; Dole, 2000; Ferri & Gregg, 1997; Fetzer, 2000; McEachern & Bornot, 2001; Robinson, 1999; Weinfeld et al., 2002). Therefore, gifted education teachers, special educators, and regular education teachers should consider implementing learning-strategies instruction within their classrooms to assist these students. Learning-strategies instruction has been widely recognized as an effective practice for the past 30 years (Hamman, 1998). Each individual strategy is actually a compilation of several small steps that can be used as an instructional routine to complete assignments (Deschler & Schumaker, 1993). Although some teachers assume that all students know how to approach learning and assessment situations, they frequently do not. Therefore, learning strategies can be an efficient method to teach these skills (Davidson & Smith, 1990).

One of the largest benefits of learning-strategies instruction is that it guides students to independent learning. Rather than spending time tutoring specific content material, teachers give students the tools they need to keep up with content demands themselves (King-Sears, 1997). This is especially important for students who are gifted and learning disabled because they have the intellectual capacity to process large amounts of information, but often lack the skills to remember and apply that information on their own. Through learning-strategies instruction, they are empowered to take control of their own learning, allowing their performance to match their potential. Learning strategies help students with all stages of information processing—perception, storage, retention, and recall (Davidson & Smith, 1990).

Implementing Learning-Strategies Instruction

Gifted/learning-disabled students need instruction in strategies that relate to the academic areas affected by their disability. These may include such areas as writing, reading, math calculations, organizational skills, test-taking skills, self-determination skills, and social skills (Weinfeld et al., 2002). Strategy instruction should begin by determining instructional goals. Students should be involved in this process because it gives them the perception of control over their own learning (Deschler & Schumaker, 1993), which increases the likelihood that they will put their time and energy into learning the strategy. In selecting the correct strategy, teachers should consider the overall outcome desired. Many strategies are available, but the best strategy is the one that is most appropriate to the student’s learning needs (Levin, 1986).

Another consideration in beginning learning-strategies instruction for gifted/learning-disabled students is where the instruction will take place. Although it may seem natural for the special education teacher to deliver any and all compensatory instruction, a twice-exceptional student typically encounters at least three teachers in any given week (Robinson, 1999). It is important that the regular education
and gifted education teacher also be aware of any learning-strategies instruction in an effort to incorporate the skills throughout the student’s learning. Kennedy (2002) noted that regular education teachers rarely have training to teach students with multiple exception- alities in their classroom. Similarly, special education teachers rarely receive any training in the unique needs of the gifted. Therefore, collaboration is an important aspect of teaching students who are both gifted and learning disabled.

Once location of instruction has been determined, the teacher should then begin implementing instruction. Schumaker and Deschler (1995) have advocated an eight-step process for teaching learning strategies to students.

1. First, teachers should pretest students to find areas of weakness, as well as obtaining a commitment from the student to master a learning strategy.

2. Next, teachers should introduce the new strategy to the student through a verbal description. Many times, a mnemonic device is used to assist students in remembering each step in the strategy. Pictures or icons may also be used. This phase may also include brainstorming of how the student may utilize the strategy within daily school tasks (Deschler, Ellis, & Lenz, 1996).

3. The next step is modeling the learning strategy by narrating aloud while performing the strategy. This allows students to understand the thought process they will be experienc- ing each time they utilize the learning strategy. Teachers should prompt students to perform gradually more and more of the thought processes themselves in preparation for the performance of the strategy (Deschler, Ellis, & Lenz, 1996).

4. Following modeling, the teacher should guide the student through verbal rehearsal of the steps involved. This should continue until the student has fully memorized the steps in the correct sequence.

5. Once the student has memo- rized the steps involved, the teacher should then allow the student time for controlled practice and feedback. This should be done using material that is above grade level or below. If a fifth-grade student is learning a reading comprehension strategy, then the teacher should consider using a third- or fourth-grade text so that decoding does not interfere with the practice of the actual strategy. Teacher feedback should be structured in a way that students have a model for later self-evaluation.

6. Following controlled practice and feedback, the student should be given opportunities for advanced practice and feedback. This process is similar to the previous step, but it utilizes advanced or on-grade-level material. In this stage, focus shifts from simply learning the strategy to applying it (Deschler, Ellis, & Lenz, 1996). Feedback provided at this level should promote student self-evaluation. During this phase, it is also important that teachers begin to fade instructional prompts and cues so that students begin taking responsibility for using and evaluating the strategy (Deschler, Ellis, & Lenz).

7. After advanced practice, the teacher should assess if the student has successfully acquired the new learning strategy. It is most helpful to posttest in the same format as the pretest so that there is a direct comparison of student performance before and after using the strategy (King-Sears, 1997). Students will never implement the strategy inde- pendently if they are not completely comfortable with it at the time of acquisi- tion (Deschler & Schumaker, 1993; King-Sears).

8. The final stage in teaching new learning strategies to students is generalization. Although mentioned through- out the process, this stage focuses on where, when, why, and how the student can use the strategy (Schumaker & Deschler, 1995). Deschler, Ellis, and Lenz (1996) advocated the following six goals to be achieved during the generalization phase: (a) discriminate when to use the strategy in everyday classroom situations, (b) develop methods for remembering to use the strategy appropriately, (c) experiment with how the strategy can be used across circumstances encountered across settings, (d) receive and use feedback to develop goals and plans to improve performance, (e) adapt the strategy to meet additional problems and demands, and (f) incorporate the strategy and various adaptations of it into the student’s permanent system for approaching problems across settings and time.

**When to Use Learning Strategies**

**Memorization Strategies**

Learning-strategies instruction can help compensate for many of the common weaknesses shared by gifted students with learning disabilities.

One of the most frequently cited deficiencies of gifted/learning-disabled students is weakness of memory (Bee, 1998; Dole, 2000; Ferri & Gregg, 1997; Fetzer, 2000; Robinson, 1999; Weinfield et. al., 2002; Willard-Holt, 1999). Teachers may choose among many strategies available to assist students develop their memory, including LINKS (Deschler, Ellis, & Lenz, 1996). Following the procedure discussed in the previous section, teachers introduce students to the following steps: (1) list the parts, (2) imagine a picture, (3) note a reminding word, (4) construct a LINCing story, and (5) self-test. This strategy is particularly appropriate for gifted/learning-disabled students because
it allows them to utilize their strength in creativity and visual memory.

1. Step one of this procedure requires students to write a vocabulary word on one side of a note card and the definition or key points on the other side.

2. In the next step, they develop a mental image of what the word or term is about and describes that image.

3. Step three requires students to think of a familiar word that sounds similar to the new word or part of the new word.

4. Following this association, students think of a short story about the new word that includes the reminding word.

5. Students are then ready to test themselves using their original index card in order to see if they can recall the word given the definition or the definition given the word.

Another learning strategy used to aid memory is mnemonics. Rather than giving students rhymes or sayings to remember key words and facts, learning strategies designed to enhance memorization capacity enable students to develop their own meaningful mnemonics. Students can be taught to develop short sentences with the initial letter of each word forming one of the names or words to recall in the correct sequence. They may also learn to assemble a sequence of letters with each letter representing one of the key words to remember (Richards, 2002). Creating mnemonic devices allows gifted/learning-disabled students to use one of their strengths: creativity. Two popular methods for student development of mnemonics are FIRST and LISTS (Deschler, Ellis, & Lenz, 1996).

FIRST employs the following steps: (1) form a word, (2) insert a letter(s), (3) rearrange the letters, (4) shape a sentence, and (5) try combinations.

1. In the beginning step of FIRST, students write down the first letters of each of the words in the list that they are trying to recall.

2. They then determine if these letters form a recognizable word (Deschler, Ellis, & Lenz, 1996). For example, the names of the great lakes (Michigan, Ontario, Erie, and Superior) form the word HOMES when using the first letter of each (Richard, 2002). If a word is not formed by the first letters alone, then students move to step two, where they attempt to insert a letter in order to form a recognizable word (Deschler, Ellis, & Lenz, 1996). In remembering the three oceans (Pacific, Atlantic, and Indian), students may add the letter n from Indian to form PAIn.

3. If students are not successful adding letters, they must then move to the next step, which is rearranging the first letters to form a recognizable word. This is helpful if the words do not have to be remembered in a particular order.

4. The fourth step in the FIRST process is to form a sentence where each word begins with the first letter of one of the words on the list. If a student is trying to remember the nine planets in order, a sentence such as “My very elegant mother just stepped upon nine pies” may be helpful (Richards, 2002).

5. If the student is unable to form a sentence using the first four steps, then trying combinations of these steps may prove successful (Deschler, Ellis, & Lenz, 1996). For example, if students need to remember the parts of speech (noun, pronoun, verb, adverb, preposition, and adjective), they may rearrange the words and then make up a sentence such as “Adam always paints very nicely.”

The LISTS strategy is also helpful in developing personalized mnemonic devices (Deschler, Ellis, & Lenz, 1996). However, this strategy is employed when students must identify listed information within text to memorize. It utilizes the following steps: (1) look for clues, (2) investigate the items, (3) select a mnemonic device using FIRST, (4) transfer the information to a card, and (5) self-test. Because gifted students with learning disabilities often demonstrate poor organizational skills (Baum, Cooper, & Neu, 2001; Ferri & Gregg, 1997; Fetzner, 2000; Weinfield et. al., 2002; Willard-Holt, 1999), this method can be a helpful study aid. It assists students in identifying important information within textbooks on which to focus and commit to memory.

1. The first step requires students to scan class notes and textbooks to find contextual clues that may indicate listed information. Headings and subheadings are helpful indicators as are words such as first, second, many, several, stages, steps, and examples.

2. Once a list is located, students must then determine which items should be included. These items should be recorded on an index card along with a heading indicating the topic of the list.

3. After the actual list is constructed, students should then follow the FIRST strategy to develop a mnemonic device. Students may again utilize such techniques as acrostics or acronyms (Richards, 2002).

4. Once a mnemonic has been chosen, students should transfer it to the upper left hand corner of the index card with the list items in the center.

5. They are then ready to administer a self-test through practice retrieval.

Organization Strategies

Another area where poor organizational skills presents a challenge is in note taking. Gifted/learning-disabled students often become distracted and have difficulty organizing content into major topics and subtopics. Their recorded facts may appear separate and
of equal importance, making it difficult to use their notes as memory aids or study tools (Baum, Cooper, & Neu, 2001). As with memorization, learning strategies can be helpful in teaching students to organize their notes (Davidson & Smith, 1990).

One technique that teachers may choose is the two-column strategy for content area subjects (Rooney, 2002). In this strategy, students divide their paper into two columns by folding the paper in half or drawing a vertical line down the center of the paper. In the first column, the students record specific information such as names, numbers, and terms that will need to be recalled. The second column is used to record the definitions, explanations, or related information that correlates with the name, number, or term on the opposite side of the paper. When notes are taken in this format, they may then be used for a study aid. When using the notes to study, students should fold the paper in half so that only the key points are revealed. They may then use a self-check system to recall information on the other side of the paper. This system also provides area for elaboration if students wish to explore the topic more in depth.

Teachers may also choose to instruct their students in the LINKS strategy (Deschler, Ellis, & Lenz, 1996). In this method, students follow these steps: (1) listen, (2) identify verbal clues, (3) note key words, and (4) stack information into outline form. This strategy encourages students to identify and record only the important points in a lecture. The first two steps in this process require students to listen attentively, particularly for key words and other verbal clues provided by the instructor. These clues may include repeated words or phrases, a change in voice tone or inflection, or verbal spelling of words. It may also include phrases such as “This is important,” “Listen carefully,” or “You should remember this.” Students should then note key words, phrases, or short details that follow these verbal clues. Abbreviations should be utilized (complete sentences are not necessary). The final step suggests that students utilize the two-column format discussed previously to record information once it has been identified as important.

Written Expression Strategies

A third area where learning strategy can benefit students who are both gifted and learning disabled is written expression. Many gifted/learning-disabled students struggle to write clear and well-organized paragraphs and essays (Baum, Cooper, & Neu, 2001; Bees, 1998; Ferri & Gregg, 1997; Robinson, 1999; Weinfeld et. al., 2001). These students benefit from direct instruction in such writing strategies as sentence structure and paragraph organization. One popular learning strategy used for writing is DEFENDS (Deschler, Ellis, & Lenz, 1996; Ellis, 1993). In this strategy, students follow the following steps: (1) decide on goals and theme, (2) estimate main ideas and details, (3) figure best order of main ideas and details, (4) express the theme in the first sentence, (5) note each main idea and supporting points, (6) drive home the message in the last sentence, and (7) search for errors and correct. DEFENDS is particularly useful for gifted/learning-disabled students because it improves the organizational flow of student writing.

1. The first step requires students to determine overall writing goals and themes. This includes considering both the audience and what type of information will be communicated. Students are encouraged to record these goals on paper.

2. They should then brainstorm at least two main ideas that support the overall theme of their essay. These main ideas should be followed by at least three supporting details.

3. Once main ideas and details have been recorded, students should analyze what they have recorded in order to determine the best order of these items within the paper. Order should be logical and should enhance the overall flow of the paper. At this point, students are ready to move past prewriting to the actual writing of their essay or paper (Ellis, 1993).

4. The next step encourages students to state the overall theme within the first sentence. This establishes focus for both the writer and the reader.

5. Students then continue their essay by moving into the main points and details that were listed during prewriting. These should be in complete sentences and should follow the logical order determined in planning.

6. The sixth step instructs students to restate their overall theme in the last sentence of the essay. The wording should be different from the first sentence, but should summarize the main point.

7. Following completion of the essay, students should search for errors through editing steps, including rereading the essay to see if it makes sense; checking for correct capitalization, punctuation, and spelling; and looking for clarity of the overall theme (Ellis, 1993).

Learning-strategies instruction is just one suggested accommodation for use with gifted/learning-disabled students. It is one method that utilizes these students’ strengths while still accommodating their disability. This is extremely important if students are to reach their academic potential (Willard-Holt, 1999). Learning-strategies instruction can be delivered in isolation by the special education teacher or in the context of meaningful instruction by the regular education teacher or gifted education...
teacher. As students receive the “what” of the curriculum, they also receive instruction in how to think, how to act, and how to survive (Robinson, 1999).

**Conclusion**

As we increase our awareness of gifted students with learning disabilities, we also increase our awareness of the unique characteristics and needs these students possess. Gifted/learning-disabled students require a wide variety of adaptations, strategies, and accommodations. They benefit from instruction in skills and strategies in academic areas that are affected by their disability (Baum, Cooper, & Neu, 2001; Weinfeld et al., 2002). They also need an opportunity to explore their strengths as they overcome their learning disability (Willard-Holt, 1999). In giving gifted students with learning disabilities opportunities for enrichment and tools to compensate for their disability, teachers are giving them the chance to reach their full academic potential. 

**References**


Delisle, J., & Galbraith, J. When gifted kids don’t have all the answers. Minneapolis: Free Spirit.


Robinson, S. M. (1999). Meeting the needs of students who are gifted and have learning disabilities. *Intervention in School and Clinic, 34*, 195–204.


