This paper suggests techniques that teachers who prepare adult students for the General Educational Development (GED) tests can use with students who have learning disabilities. The first part of the paper presents a brief overview of symptoms exhibited by students who are learning disabled. Symptoms are classified under general behaviors, reading, mathematics, expressive language, organization, memory, processing difficulties, and difficulties with other psychological processes. The remainder of the paper focuses on classroom techniques for addressing adult students with learning disabilities. Information is included on choosing learning strategies, reducing stress, modifying teaching approaches, encouraging active student learning, providing multisensory activities, and stressing language development similar to that which is expected on the GED test. (KC)
The GED and Learning Disabled Students:
Suggestions for Teaching, Testing, and Understanding the Problem

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At a school in Maryland recently, I watched four young people, diagnosed with specific learning disabilities, work on a GED curriculum adapted to their needs. Their abilities were varied: a couple would likely "make it"; the other students wouldn't. And yet something here was ensuring a positive attitude toward learning. There was no clock-watching; eyes were glued to the teacher; laughter was frequent; responses to questions were fast and automatic.

There was nothing markedly "different" about any of the participants to the casual watcher. But these same individuals had once been branded by high school teachers as "lazy," "slow," "sloppy," "unmotivated," or "incapable." It was likely that previous instructors had been seeing the symptoms of learning disabilities without recognizing them. And it was obvious, too, that the same misunderstandings could just as easily have happened in a regular GED classroom. This need not be the case. As this article attempts to show, GED teachers can, on an informal basis, identify and appropriately teach those students who are at high risk for having learning disabilities.

Given the relative unavailability and expense of special programs, LD students--diagnosed and undiagnosed--do appear in regular GED classes. Further, their numbers may be significant, depending on the adequacy of the secondary school systems in meeting their academic needs.

Often GED teachers will be the only source of academic remediation that the LD adult will ever turn to. And the good news is, there is much that such teachers can do to ensure success.

Diagnosis

Lists of LD characteristics abound. While the following does not attempt to replace such lists, it presents a brief overview of signs that the classroom teacher would be expected to observe. These symptoms are given as they would present themselves in classroom activities.

General Behaviors

As experienced teachers know, avoidant behaviors may occur in any student, LD and non-LD alike. For both, avoiding may be a way to shrink from challenge; in LD students, it may also demonstrate an awareness of their deficiencies.
For example, the learning disabled student with visual processing problems may be quite willing to take part in class discussions, but will clown, forget his glasses, feign illness, or find other reasons to escape reading out loud in front of his peers.

LD-related deficits may also contribute to apparent misbehavior. The student who has only carried out the first part of important oral instructions may have auditory processing or auditory memory problems; worse, he may have believed that he understood, and that the teacher is "the one with the problem."

Reading

Oral Reading: The student reads with a clear overdependence on guessing words, using the general word configuration. As a consequence, comprehension is compromised. (Guessing based on context, of course, is to be encouraged.) The LD student may also substitute, delete, add, or transpose letters and syllables. Such a reader may also lose his place on a page or within a paragraph.

Silent Reading: The student may appear to be re-reading or reading very slowly to complete a passage; the student may also have significant errors in answering questions related to text due to overguessing.

These difficulties may be attributable to poor visual processing, compounded by inappropriate training in reading with undue stress on phonics at the expense of reading comprehension.

[Note: The LD student can be singled out from non-LD peers in these respects by relatively high achievement in other areas--including oral discussion and understanding of technical issues.]

Math

Calculation: The student may demonstrate inconsistent mastery of facts and procedures due to problems with long-term memory. For example, he may show understanding of pre-algebra, but not fractions. There may be difficulty in recalling the sequence of a process which is particularly important in multi-step operations, such as in geometry.

It is not unusual for LD students with strong short-term, but weak long-term memories to have incompletely mastered the multiplication tables and other rote facts--yet show good ability when learning or re-learning procedures. (Use of calculators may be helpful in classroom instruction, if so, even though they are not permitted on the GED Math Test.)

There may also be difficulty in orientation (subtracting may proceed from the wrong direction) and perseveration (after completing several addition problems, the student may continue to add when encountering multiplication or subtraction signs). Signs may also be
confused because of problems with angulation: at first glance as a task begins, an addition sign may appear to be a multiplication sign.

Word Problems: The LD student often has a discrepancy between calculation skills and achievement with word problems—in favor of the former. The level of abstraction resulting from the language used and the logic of the wording may need "translation" by the teacher into computational processes before the student can interpret the problem.

Expressive Language

Writing—or managing language in an unstructured format—demands one of the highest levels of skills integration of any classroom task. Therefore, this test requirement can be depended upon to reveal the LD adult’s worst deficit—weak visual memory for spelling; poor organization (prioritizing and sequencing of ideas); inconsistent memory for sentence mechanics; and problems with grammar and semantics.

For LD persons, a requirement to develop a 200-word essay in "one fell swoop" is therefore highly anxiety-producing. (For alternatives, see Modifications to Teaching Approaches, which follow.)

LD SYMPTOMS; THE QUICK LIST

There is no "typical" LD student. In fact, all of the symptoms listed below tend to be true of most individuals. The degree to which they are manifested in some persons results in them appearing to be learning disabled. However, those GED adults who show irregular gaps in academic skills, as well as clear discrepancies between skill areas, often suffer from the following deficits:

Poor organization of concepts and tasks, as well as the physical environment, including problems with

- Prioritizing
- Sequencing
- Relating a part to the whole such as relating an isolated idea to a unifying concept
- Grasping similarities between items
- Grouping or categorizing

Memory Difficulties

- Long-term versus short-term memory difficulties (student may retain ideas well from one day to the next, but if information is not continually rehearsed and associated with previously learned material, they will "lose" concepts learned weeks earlier)
Variable or unpredictable performance (with student losing information in periods of stress or overload, but recalling it again later)

[Note: Attention deficits may be mistaken for memory deficits. Such students have problems in coming to attention and/or sustaining attention.]

Processing Difficulties

- Visual difficulties (for reading from board or text). Such problems may include visual sequencing ("museum" is copied from the blackboard as "musuem"), visual perception ("b" is seen as "d"), and visual memory (spelling, especially of non-phonetic words, is poor).

- Auditory difficulties (with following directions, absorbing all major ideas from lectures and discussions). Included are problems with auditory sequencing ("1984" is heard as "1894"), auditory processing ("Bill of Rights" may be "pillow fights"), and auditory memory (a complete thought heard in a lecture cannot be retained long enough to put into notes). Also, note-taking may prove difficult when a student cannot do two things (listen and write) at the same time.

- Perceptual-Motor difficulties (for tasks combining visual or auditory skills with writing, and sometimes memory as well). Problems seen include poor letter formation, poor spatial orientation, and deterioration of written expressive language skills. Both copying and composition skills may be affected.

Difficulties with Other Psychological Processes

- Rigidity: The student may be reluctant to change class routine, use new approaches, resist having a substitute teacher or challenge opinions from others without a logical foundation (or earlier preparation for the change).

- Impulsivity: The student may speak or act before thinking.

- Concreteness: The student may have difficulty managing abstract ideas or need to relate concepts to personal or immediate experience.

- Perseveration: The student may feel compelled to stay on a task or use a procedure past the point of its being appropriate. (Such a student, for example, may continue to fill out a worksheet after a teacher has called "time," seemingly unaware of the need to stop or may dwell on a point excessively in discussion.)

- Distractibility: The student may not be able to maintain focus or is thrown off by small noises and minor activity, or by visual clutter in the environment.
Addressing LD Deficits in the Classroom

For the LD adult with significant deficits, long-term remediation (ideally through skilled tutoring) is always a worthwhile pursuit. Unfortunately such help is often not practical from the student's point of view. With the assumption, then, that the GED teacher may be the individual's last link with formal education, the following section proposes teaching ideas useful at the classroom level. These suggestions have been proven effective for teaching learning and test-taking skills to non-LD students as well.

A Note on Metacognitive Strategies

One of the chief advantages of working with any ABE student is the adult status itself: This allows both teacher and student not only to share common experiences, but to come to a mutual understanding about learning styles.

First, open discussion of learning differences can serve as a happy eye-opener for LD students. Their metacognition—or awareness of their own thinking processes—is often underdeveloped. It may be too painful to examine their mistakes closely, or they may be unable to independently step back to look at their own performance without assistance.

Informal discussion (or informal testing procedures) will help these students discover whether they learn best by seeing (visual learning), by hearing/talking (auditory learning), or by doing/touching (kinesthetic learning). Teachers can guide the realization that there is no "ideal" learning style. And by role modeling and discussion, the teacher can show that every adult has learning deficits that can, to a great extent, be compensated.

Students also need to know that specific learning enhancements, such as the ones described below for use by the teacher, can often be consciously adopted by the student to meet their personal learning needs, in and out of the classroom.

Teaching and Test-Taking Competencies

The stress of test-taking is often particularly troublesome to LD individuals because their long-term memory—already undependable—may fall by the wayside. Still others with impulsivity problems or a concrete approach to tasks may never have discovered the principles of reasoned guessing in multiple choice tests. Without the benefit of diagnosis, it remains for the instructor to verify that all students have mastered test taking skills and strategies.

Stress reduction

Students should know that proper diet and sleep before testing enhances performance; that "cramming" up until the last minute is overstimulation, creating information overload that cannot be accessed
easily. On the other hand, slow, quiet breathing before and during the tests aids relaxation.

Stress is often reduced when students sign up with or sit near people they know. They will also be more comfortable, of course, if the following testing formats are thoroughly familiar: instructions; multiple choice for right answers; multiple choice for locating errors; expressive writing.

It is not unusual for test-induced anxiety to aggravate the student's disorganization, so that testing tools are misplaced or lost (e.g., pencils, test booklet, answer sheet, scratch paper, etc.). A cycle of escalating stress then ensues. Habit formation for the regular placement of materials, then, should be taught to disorganized individuals.

Scratch paper can be used for visual tracking—the student slips it down the reading, line by line—when text becomes lengthy. It can also come in handy for blocking irrelevant and distracting material.

Students should also be reminded to leave time blocks for self-correction, and to fill in every item; GED does not penalize guessing.

Finally, teachers need to bear in mind that the procedure that seems perfectly obvious to the non-LD adult may need to be directly taught to the concrete LD learners. Do they pencil in ovals so that they are machine readable? Are erasures complete? Has the student made sure that end numbers for test sections and test booklets match? Brief, direct teaching may help avoid potential disaster.

Modifications of Teaching Approaches

Verification of Learning

Like many failure-prone students, LD students often adopt a posture of "learned passivity," rarely volunteering information or admitting (or even realizing) confusion. Teachers must thus work harder to ensure that ideas are understood, retained, and accessible even under the duress of testing. Teachers can do immediate verification of student preparedness by means of the following:

- Teacher-initiated questions to individual students;
- Mutual student-to-student questioning, facilitated by the teacher;
- Frequent reviews and "overlearning" to enhance long-term memory;
- Teaching incrementally, which leads student from the concrete to the more abstract (e.g., personal vendettas vs. nationalist concerns vs. international issues, etc.).
Active Student Learning

Students known or suspected to be LD need classroom experiences clearly different from those of the past that allowed them to fail. Past teachers' implicit acceptance of the LD student's passive tendencies may even have contributed to the failure.

Encouraging these students to take responsibility for learning is a start. Then, too, they need to know that this approach is a specific technique for enhancing learning, rather than a potentially threatening "teacher's quirk" (see "A Note on Metacognition").

The following are among those activities that encourage responsibility for learning:

- Student-student Q&A, both verbal and written (For example, one student may be assigned a special reading, and the second must question the first student on it. An appropriate list of questions can be developed by either the teacher or the student.)
- Peer teaching, one-on-one (For example, a student with a good biology background could teach a classification system to a classroom peer)
- Student creation of an oral presentation of hands-on projects (for example, maps, models, etc.)
- Student speeches—to explain an experience related to GED learning or to express an opinion on a topic of general interest (student volunteering is recommended, to avoid "speech anxiety")
- Panel discussion (teacher-directed) on a topic of interest (for example, each student might express a different Latin American country's position on its relations with the United States.)
- Opportunities for self-correction and self-evaluation of written work by students
- Opportunities for student reviews of other students' work (for example, examining compositions for accuracy on one criteria, such as punctuation). Here, using ID numbers on papers, rather than names, will help avoid self-consciousness.
- Group games and competitions (for example, to see if women/men, first row/next row are first to list certain events in a correct sequence or to complete a chart)
- Skits and role playing (using subjects from history, psychology, literature, sociology)
- Opportunities for students to help plan certain aspects of the curriculum (for example, sequencing of activities for the night with relative weight given to certain topics)
Class "brainstorming" after a unit is completed about what did and didn’t facilitate learning

**Multisensory Activities**

The weaker processing modes—whether visual, auditory, or motor/kinesthetic—may be strengthened in activities that combine all three. Although many such activities are traditionally seen as the proper jurisdiction of pre-school or elementary school, adults accept them, given reasonable explanations of their learning value.

Multisensory activities are also useful for relieving the monotony of routine. They include:

- Non-discourse writing, kinesthetic/tactile tasks (copying, charting, graphing, tracing, drawing, creating models)
- Sorting and matching by the individual (terms and definitions; items and their categories; events and dates; etc.)
- Silent reading by the class while one or more individuals read same text aloud (silent readers will be more active learners if they are alerted in advance about questions the teacher will ask about the reading)
- Whole-body movement accompanying responses (students stand to answer questions; students move to arrange themselves in small discussion groups)
- Class gives choral response to teacher prompt (useful for well-taught short answers, sequenced material)
- Group competitions (again, see above) involving manipulation of materials (matching cards in "Concentration" games; sequencing cards; moving parts of models)

**Language Development**

LD individuals may also fail to meet test expectations because language used in the classroom may be altered slightly in the exam situation. Concreteness, rigidity, and vocabulary deficits may keep them from making the appropriate connections.

Language difficulties, as previously discussed, also impact profoundly on expressive writing abilities. The following will prove helpful:

- Key vocabulary should be extracted from texts and taught or reviewed and related to the text before the learner is asked to read new material.
- Students can develop better sentence and paragraph sense by regularly writing summaries and short answers as class assignments.
Teachers should "zero in" on use of cue words ("however," "but," "therefore," etc.) signalling direction of meaning in readings.

Free writing and brainstorming should be encouraged as pre-requisites to structuring ideas in formal compositions.

To minimize the stress often associated with expressive writing, the teacher should initially emphasize that sentence mechanics are secondary to the flow of ideas—and that all students have a lifetime of good experiences from which ideas can emanate.

The above represents suggestions only for the test-taking aspects and content areas of the GED Tests. Organizational strategies, as well as physical testing accommodations for the learning disabled, will be addressed in a future issue of GED Items.

This section of GED Items was facilitated by the staff of the HEATH Resource Center, another program of the American Council on Education. HEATH is an acronym for Higher Education and Adult Training for people with Handicaps and is the national clearinghouse on postsecondary education and disability issues. HEATH publishes a Resource Directory for LD Adults as well as a variety of other materials about education after high school for people with disabilities. For a publications list or specific inquiries, contact HEATH Resource Center, One Dupont Circle, Suite 800, Washington, DC 20036-1193, (202)939-9320 or (800)544-3284 from outside the Washington metropolitan area.