

BRAIN INJURY INSTRUCTIONAL STRATEGIES

Choosing the Appropriate Approaches

The chapter on Identification and Diagnosis describes some of the more common effects of brain injury on thinking and memory, mood and behavior, and physical-sensory experiences. The chapter on Classroom Challenges describes environmental accommodations that may be appropriate for students experiencing the effects of sensory sensitivity, certain executive dysfunctions, fatigue, and slowed processing speed.

This chapter is designed to help the teacher take into consideration the particular effects of brain injury on the students' ability to master basic skills and GED requirements.

Attention and Memory

These are two of the most critical factors in learning. A student must be able to focus and sustain attention long enough to absorb information. Without at least several minutes of concentrated attention, new information cannot be encoded into memory. For this reason, what may appear to be a memory problem may be a problem with attention and concentration.

Alternative Ways to Support Learning

- Use alternative teaching materials — e.g., books on tape instead of print, if appropriate; manipulatives for learning math, even if they are designed for elementary students.
- If a student has a child in the upper grades or middle school, see if they can read together — first the child's reading assignment or book and then the parent's.
- Take turns reading GED material with a spouse, partner, or fellow student.

Pace/Vary In-Class Instruction

If possible, accommodate signs of fatigue by varying both subject matter and learning strategy when feasible. There are exceptions to this advice:

- If a student tends to repeat a behavior over and over, it may work best to have them persist with one subject and/or one strategy until it is mastered. Getting them to shift to something else later may be hard; but the student should realize there is more than one path to the GED.
- If memory is a problem, not just attention, it is better to stay with a subject and reinforce it repeatedly to help retain the new material. The student will probably initiate a break or shift if they are getting tired of one subject.

Other Ways of Combating Fatigue, Attention Span, and Memory Problems

- Provide more frequent achievement milestones with shorter (in content) distances between them.
- Vary the kind of material used to address the same subject, so more sensory modalities are tapped.

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- Relate new material to what the student already knows and is interested in, even if it means reaching outside academic subjects or across them. See if you can find material in a mechanic's or driver's manual that can reinforce what the student may be learning in Language Arts. Relate measurement principles to a project the student might want to do at home.
- Have the student learn in ways other than tests, to reveal understanding but also capitalize on strengths. Have a student write a story about or illustrate a historical event before taking a test on it. When memory for facts is a problem, engaging the student's imagination, senses, and emotions will help them reinforce it.
- Ask the student to teach someone else what she or he has just learned. This form of reinforcement also consolidates learning at a higher level than rote memory.

Knowledge Acquisition

Any abnormalities in receiving, processing, and expressing information will affect students' ability to acquire academic knowledge. It is often the case that one or more of the sensory modalities is affected by brain injury. The most important ones for learning are vision, speech, and hearing. Closely associated is the physical ability to write legibly. An up-to-date medical exam is most helpful in determining whether there is a handicapping condition in one or more of these areas.

Visual Information Processing

The teacher will have to know whether the problem is in forming an accurate image of what one sees or giving it meaning. The former can be addressed by a vision specialist or by reformatting materials for viewing (e.g., larger print, two-column per page).

If the problem is not perceiving visual information correctly but interpreting it, it may be best to offer another learning modality if possible. If a student has great difficulty responding to math problems positioned linearly on a page, he or she may do better working with manipulatives or solving a numerical problem mentally or solving it as a word problem.

Auditory Information Processing

As for the visual modality, the teacher will have to know whether the problem is in perceiving sounds accurately or in giving them meaning. The former can be addressed by an audiologist or ENT (ear, nose, throat) physician or by amplification.

If sounds are processed correctly but the person has difficulty interpreting them, another modality is recommended. This is typically easier to accomplish for a hearing disability than for visual. However, it doesn't reduce the challenge a teacher will face in trying to explain a lesson orally. In this case the teacher may have to rely predominately on demonstration or pictures.

Language Processing

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A disability in this area (described in the Aphasia chapter) will make it harder to communicate with a student. Generally the teacher and student will work together to figure out how best to make their ideas known.

If word/name retrieval is the major problem, the teacher may have available a number of words for the student to use as a reminder when the word does not come to them. These can be drawn from the current lesson and actually reinforce content, by seeing as well as saying them.

If the student has difficulty making sense of words (not as a visual but a language impairment), they will be best served by an auditory mode of instruction.

Writing

A disability labeled dysgraphia can occur with or without other language impairment, and it may be the product of abnormal fetal brain development as well as brain injury. When it is linked to acquired brain injury, it is because the motor area of the brain controlling muscle movement in the upper arm and fingers was affected.

Occupational therapy can bring improvement; but beyond that, it would be best for the student to use a mechanical device (keyboard) for written communication or provide test answers orally. The oral approach is preferred when a student has difficulty organizing as well as producing thoughts on paper.

Specific Tips

A number of recommendations are offered by educators and therapists who are accustomed to working with individuals post brain injury:

1. Always structure what you are going to work on that day so that the student can focus their attention.
2. Always summarize what you accomplished that day so the student feels a sense of progress and can take notes to share, study, and review for the next class.
3. Provide structure; organize class information into a binder.
4. Try to keep routines and staff consistent. If something changes, give a preview to the student so that they can process and re-focus.
5. Break tasks down into steps. Each student will have a number of steps that they can process before it gets to be too much.
6. Shorten written assignments if necessary, allowing the student to demonstrate their knowledge, but lessen their frustration.
7. Try to teach one thing at a time first, ensuring mastery before moving onto the next item.
8. Computer based, self-paced learning can be beneficial for students who are self-directed.
9. Allow extra time to express thoughts, process information, get organized, and accomplish the task.

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10. Use visuals whenever possible to back up verbal information.
11. Use large fonts and extra space between lines to make documents easier to read.
12. Have the student paraphrase back to you instructions, so that you know they understand.
13. If a student has trouble articulating let them use signs and pictures.
14. If the student is easily distracted, ask them what you can do to help them to get back on task.
15. Model the use of organizational/study skills strategies such as checklists, highlighting, color coding, etc.
16. Encourage “over learning” through the use of repetition, clarification and paraphrasing.
17. Try to give immediate (as able), concrete feedback.
18. Give direct feedback to inappropriate behavior without raising your voice.
19. Use language that is explicit (not subtle) and speak clearly.
20. Give written instructions with homework.
21. If sequencing is an issue, provide the sequences.
22. Use rulers or paper to have the person read one line at a time and follow their place on a page.
23. Remembering something just read can be challenging. Teach the person to highlight main points or to do summaries as they go along, hopefully extending how much they can remember over time.
24. If the individual impulsively interrupts, find a signal that will tell them to wait.
25. Have rules clearly posted in large print and clear language.
26. Show samples of tests, writing assignments and math problems.
27. For timed tests, work to alleviate anxiety by doing practice tests.
28. Praise the student often and build on each small success. Make sure they are proud of their accomplishments.

When Written Communication is a Challenge

1. Use vertical lines to separate columns.
2. Use short sentences. Separate each thought.
3. Use commas whenever you would naturally pause. Read the piece aloud and punctuate it the same way.
4. Keep writing simple and direct.
5. Use pictures (photos and graphics) to enhance the content.
6. Keep length to one page if possible.
7. Repeat major thoughts and ideas.
8. Use underlining and/or bold type to highlight or emphasize a thought.
9. Spacing between lines is more important than font size.
10. Use dark ink with light paper. The contrast should be good, but not harsh.
11. Avoid hyphenation at the ends of lines. Avoid abbreviations and acronyms.
12. Double space between paragraphs.
13. Use paper heavy enough to be held in one hand.

Accommodations in the Classroom

- If there is a support person for the student, engage them in the process and make sure they understand the expectations re: homework, progress, testing, and need for their active support.
- Pay attention to lighting; fluorescent lights can be irritating.
- Notice how many visuals you have around the room, and eliminate distractions.

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- Allow extra time for task completion and test taking.
- Try an oral exam versus a written one.
- Post a problem solving guide and other helpful sequences.
- Keep a consistent room arrangement
- Use a volunteer to work with students who are more independent, so that you can give some extra time to any who are struggling.
- Use large print and clear fonts.
- Incorporate breaks.
- Give students a set number of times in a period of time that they can ask questions or move around, and give visual reminders.
- Ensure the physical comfort of the student: table height, chair.
- Keep assignments posted until completed.
- Provide maps of the building with the classroom and bathrooms highlighted
- Limit the amount of information on a page or screen.
- You may wish to have a written student goal plan that can be kept in their binder for reference as needed.

Effects on Mood and Behavior

The behavioral effects of changes in executive functions and self management were addressed in Classroom Challenges. What remains for discussion is the effect on the individual who has experienced a brain injury.

Many become depressed in response to their sense of lost identity and lost competence. They fear a bleak future, having recognized that after the initial months post-injury, their recovery appears to have stopped. It doesn't have to; individuals can continue to improve their capabilities through a process of slow, spontaneous recovery and new experiences.

Most individuals with a brain injury are reminded again when they enter the classroom of cognitive deficiencies they have tried to avoid. They may express considerable frustration and be tempted to give up prematurely.

By understanding the effects of brain injury and realizing that each person retains certain strengths, a teacher can offer both understanding and encouragement to a discouraged student. ABE teachers can invite the student to work with them to:

1. Understand the effects of injury
2. Decide how best to minimize these effects in a learning environment
3. Adapt instruction to capitalize on strengths and interests
4. Plan for frequent milestones and rewards
5. Design supportive strategies both within and outside the classroom, including the social community
6. Chart progress and celebrate accomplishments
7. Get external help when needed (e.g., health exam, community services, etc.)
8. Advocate for accommodations on exams

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Satisfactory progress must be demonstrated. However, many individuals that have been able to accept life post brain injury come with a new incentive to enrich their lives, knowing it will be harder than before but often willing to accept more responsibility for their achievement now than previously. Many of them become highly rewarding students. At minimum, the teacher is in a position to enhance the skills a student needs to be more literate in a world that requires it.

There is no question you will be offering the student a worthwhile experience by employing the qualities that make you a great teacher: a positive attitude, hopefulness, excitement for learning, adaptability and patience.