

---

---

# STUDENTS WITH TRAUMATIC BRAIN INJURY: IDENTIFICATION, ASSESSMENT AND CLASSROOM ACCOMMODATIONS

**Mary Hibbard**  
**Wayne A. Gordon**  
**Tamar Martin**  
**Barry Raskin**  
**Margaret Brown**

November 2001

---

---

## Meeting the Challenge of TBI . . .

To address the educational needs of students who have experienced a traumatic brain injury (TBI), educators need to clear three hurdles:

◆ **Identification.** Often the school is unaware that a child has been brain injured or that this will have serious implications for meeting the child's education needs. Appropriate methods for identifying students with TBI need to be adopted within schools. To clarify how problems arise in the identification of TBI in children, in Section One, below, we have described basic facts about TBI, how TBI differs from learning and emotional disabilities and the many reasons that children with TBI often remain unidentified and, therefore, unclassified or incorrectly classified within their schools.

◆ **Assessment.** When assessing children with TBI, the assessment goal must be expanded to delineating the specific cognitive challenges each child faces. Effective assessment requires either referral of children for neuropsychological assessment or, within the school system, a shift in assessment tools, to those that focus on cognitive deficits and strengths, in addition to those addressing traditional academic concerns. The need for a focus on cognitive challenges within assessment is discussed in Section Two.

◆ **Classroom Accommodations.** Educators need to modify classroom approaches, to address the specific capabilities and challenges of the child with TBI. These accommodations differ from those traditionally used with students with learning or emotional disabilities. Accommodations to address *cognitive* challenges associated with TBI are discussed in Section Three. Specific accommodations for *behavioral* challenges are addressed in Section Four.

## What Parents and Educators Can Do . . .

This brochure is intended to provide a **general overview** of the considerations that need to be addressed in schools, to best meet the needs of children with TBI. It is not an in-depth training manual.

◆ We suggest that **educators** read this brochure, which provides an introduction to the needs of children who are struggling in school – often failing in school – because of an injury to the brain. The primary point for educators to take away from this brochure is that what works for children with other learning challenges *does not work* with children with TBI. Children with brain injuries may be known to the school; many others will be 'hidden', as often the parents and child are unaware that a brain injury has occurred. After reading this brochure, **we suggest that educators call the Research and Training Center for technical assistance** in meeting the needs of children with TBI. **Technical assistance is discussed on Page 16.**

◆ We suggest that **parents of a child with TBI** also read this brochure, to determine if the school your child is attending is doing what it should to meet your child's needs. If you think not, please pass this material to the principal of your child's school. He/she should be willing to read these materials and then obtain technical assistance to initiate appropriate remedies. Remember, this is for your child – but not just for your child. What the school learns (through technical assistance from the Research and Training Center) to address the needs of your child will also help other children with brain injuries, whose parents and teachers are less aware that the problems their children face are the result of a brain injury. The number of children with unidentified TBI that interferes with academic progress is large – your child is not alone in needing appropriate help at school.

## SECTION ONE: IDENTIFICATION

### What Happens When a Child Has a TBI?

Both immediate and long-term changes occur after a child (or adult) experiences a sudden trauma to the head that results in changes in cognitive function. (The same is true with medical events, such as stroke.) *Immediately* the child may lose consciousness, usually lasting only a few minutes to several hours, or may instead experience an altered mental state resulting in confusion and disorientation. The injured child may not be taken to a doctor at all or may be discharged after being seen in the emergency room. In these cases, the injury may not be reported to the school. With more serious injuries, hospitalization occurs and the school is likely to become aware of the injury.

Whether the school has been notified or not, the *long-term consequences* in the student's functioning may be noted immediately when the child returns to school or may not occur for several years after injury. When unaware of the TBI, teachers may see the changes but not know why they have suddenly emerged. Even when aware of an earlier injury, teachers may fail to attribute to the TBI problems that emerge months or years later.

Four facts are important to remember about long-term changes following TBI: (1) They will vary greatly from student to student;

---

---

---

---

no two will be alike. (2) These changes are unlikely to disappear fully over time; the student’s recovery will most likely only be partial. (3) Negative consequences may not be seen immediately but only emerge when developmental demands reveal deficits and problems. (4) An injured brain is less likely to meet the increasingly complex tasks all children face as they get older.

Teachers may see any or all of the following types of changes in the student:

- ◆ **Physical changes:** tiredness, lack of interest, headaches, awkward movements, slowed reactions, heightened sensitivity to light or noise, and the like.

- ◆ **Cognitive changes:** forgetfulness, sudden failure in learning new material, word-finding difficulties, problems with organizing materials, inattention, easy distractibility, and the like.

- ◆ **Emotional changes:** moodiness, lability, depression, anxiety, and the like.

- ◆ **Behavioral changes:** irritability, aggressiveness, inability to deal with unexpected events, easy frustration over minor incidents, and the like.

## How Does TBI Differ from Learning Disabilities (LD)?

Although many difficulties experienced after TBI are similar to those found in learning disabilities, the *differences* are important, as they require different strategies for helping the student learn in school. For example, in a student with TBI, memory for information learned before the TBI may be intact, but new learning may be severely impaired – the child experiences difficulties with tasks that require new learning, but has less difficulty with activities based on old learning. Another area that differentiates children with TBI from those with LD is that they *do recover some function*, sometimes slowly, sometimes quickly, often unpredictably. Also, TBI is an *acquired disability*. The student may remember very well his or her capabilities before injury, and the differences the student perceives between old and new may lead to great anger, frustration and/or active denial. **The ways in which TBI differs from a learning disability or an emotional disability are summarized in the chart on Page 3.**

TBI is not “just a learning disability,” and students with TBI cannot be dealt with as if they have “something similar.” The constellation of impairments seen within this group differs, as do the implications for educators, requiring us to address the needs of these students on their own terms. *Jessica’s Story* (Page 13) illustrates how the challenges of TBI require different interventions than are used with students with learning or emotional disabilities.

## The Many Ways that Students with TBI Can Be Misclassified or Missed Altogether . . .

For a variety of reasons, children with TBI, who populate schools in large numbers, fail in school – also in large numbers. This failure is due to a variety of factors . . .

- ◆ Children may return to school following a severe or moderate TBI with their learning difficulties unrecognized, typically due to poor transition services between hospitals and schools. In such cases, the hospital fails to provide the school: (1) adequate information about the child’s cognitive, behavioral or other challenges, and (2) guidance as to accommodations that should be implemented to effect a smooth transition between hospital and school.

- ◆ Children with less severe (so-called “mild”) TBI can also slip through the cracks. Although studies indicate that at least 15% of people with mild TBI continue having significant problems after injury, typically a child is sent home from the emergency room or physician’s office without this possibility even being discussed with the family. The child’s school, consequently, doesn’t learn that an injury occurred. Such children resume their regular classes with all involved anticipating no further problems. However, for the student who *does* experience residual problems, education may be torture when the effects of TBI are left unrecognized. If the child’s difficulties *are* belatedly recognized, they may be attributed to other causes, such as “poor motivation.” Thus, the long-term consequences of not diagnosing post-TBI cognitive difficulties are likely to be severe.

- ◆ Traditional approaches to psycho-educational assessment fail to provide necessary insight as to how cognitive deficits following TBI affect academic performance. This is crucial, as the characteristic effects of TBI are unlike those associated with other disabilities. For example, after TBI, the child’s current information processing, attention, processing speed, memory and behaviors typically are strongly affected, while “old learning” typically remains intact or recovers to pre-injury levels. When undergoing a traditional psycho-educational evaluation, children with TBI are often found to perform in the average range on tests of intelligence and academic achievement, and, therefore, are judged to be ‘fine’ (or, fine enough not to warrant services). If additional assessment of these cognitive functions had been performed (i.e., assessment of memory, executive functioning, processing speed and attention), profound cognitive deficits, with strong implications for future learning, would likely have been observed, despite relative preservation of intellectual and academic functions.

Text continues on Page 4

# TBI: HOW IS IT DIFFERENT?

Students with TBI differ from children with learning disabilities or emotional deficits. The chart below is designed to highlight some of the ways these groups of students differ from one another – in ways that are critical in the classroom. Always to be kept in mind is that these areas of differences between groups do not imply that students with TBI are ‘all alike’. To the contrary, each child was unique to begin with, and TBI affects each child differently.

<b>AREAS OF DIFFERENCE</b>	<b>TYPE OF DISABILITY</b>		
	<b>TRAUMATIC BRAIN INJURY</b>	<b>LEARNING DISABILITY</b>	<b>EMOTIONAL DISABILITY</b>
<i>ONSET</i>	Sudden	Early	Slow, reactive to environment
<i>CAUSE</i>	One or more blows to the head accompanied by altered mental status, including loss of consciousness	Unclear	Unclear
<i>FUNCTIONAL CHANGES</i>	Marked contrast between pre- and post-onset capacities: memory loss, reduced processing speed, impaired executive functions	No before-after contrasts in capacities	Changes in functioning emerge slowly and gradually
<i>PHYSICAL DISABILITIES</i>	May include loss of balance, weakness, paralysis, visual/sensory changes, headaches	Poor coordination is the most frequent impairment	Physical disabilities unlikely
<i>EMOTIONAL DIFFICULTIES</i>	Labile mood, depression and anxiety frequently found	Prone to outbursts related to situation	Reactions attributable to distortions of reality
<i>BEHAVIORAL DIFFICULTIES</i>	Unpredictable: possible agitation, aggressiveness, restlessness, impulsivity	Restlessness, impulsivity	Variable, depending on diagnosis
<i>AWARENESS OF DEFICITS</i>	Limited-to-full awareness	Typically aware	Varies
<i>SKILLS AND KNOWLEDGE</i>	Pre-TBI learning is largely intact	Splintered and under-developed	Acquisition may be limited by emotional difficulties
<i>DIFFICULTIES WITH LEARNING</i>	Old information is easier to recall than new	New learning <i>can</i> be linked with past learning	New learning <i>can</i> be linked with past learning
<i>ACADEMIC DEFICITS</i>	Based on disrupted cognition	Based on type of learning disability	<i>Not</i> based on impaired cognition
<i>PEER INTERACTIONS</i>	Affected by cognitive deficits, behavioral difficulties, reduced social skills	Affected by poor social skills	Affected by behavioral difficulties

---

---

◆ Children with more severe TBI typically receive special education services similar to those for children with LD. However, classroom interventions for LD children address specific deficit areas in reading and mathematics, but do not focus on the underlying cognitive impairments in attention, processing speed, memory and executive function that are impaired in children with TBI. In one of our studies, 30% of the students we screened had a positive history of a brain injury but had been incorrectly classified as LD by the school system. Thus, while students with LD benefit from traditional special education approaches to enhance academic skills, students with TBI require specialized interventions to address areas of reduced cognitive abilities.

◆ Despite significant differences in their respective disabilities, students with TBI are also often incorrectly placed into classes for children with emotional disabilities. In fact, 20% of the children in an ED class had an unclassified TBI, in a recent study by other researchers. One immediate consequence of this misclassification is that the behavioral difficulties of children with TBI are misunderstood and the cognitive deficits of the child are ignored. The child experiences not only avoidance by others and social isolation, but also failure in the classroom, which in turn results in confusion, behavioral disruptions and anger. Because the etiology of the behavioral deficits of children with TBI and with ED differ, they require different approaches in classroom settings.

◆ Deficits secondary to TBI are not always immediately apparent. Developmentally, sensory systems and the frontal lobes do not fully mature until relatively late, with higher-level cognitive functions, such as judgement and organization, not well established until later adolescence. Thus, a child who experiences a TBI early in life may appear to be academically ‘normal’ for several years following an injury, only to experience significant difficulties when new demands emerge in the middle and high school years (e.g., deductive reasoning, organizational abilities). Due to the lag between the onset of injury and emerging academic difficulties, educators and families often fail to make the connection between TBI and its consequences. This problem is illustrated in *A Mother’s Story* (Page 13).

No matter how a child with TBI ‘slips through the cracks’, the consequences of not receiving appropriate classification and focused accommodations are considerable. Unclassified or missed TBI often leads to school failure/dropout, conflict between parents and the school and the student’s becoming demoralized.

Several steps can be taken by schools to address problems of misclassification and non-identification of children with TBI. First, screening of current students can be done to identify children with probable brain injuries and with persisting problems (particularly cognitive) that may be leading them to failure at school. This Research and Training Center has developed the *Brain Injury Screening Questionnaire* for this purpose (see Page 16). Second, children who *have* been identified in the school should be followed yearly, to determine if belated academic problems related to the TBI emerge as the child develops. Procedures should be established within a school system to track children with known TBI. Third, classroom teachers should be trained to understand the nature of TBI and when to refer their students for screening. Finally, all educators need to be aware that identification is the essential first step, without which neither appropriate assessment nor accommodations in the classroom can be implemented.

## SECTION TWO: COGNITIVE ASSESSMENT

Traditional school-based assessment focuses on intellectual, emotional and academic functioning. In contrast, cognitive assessment identifies the cognitive substrate underlying academic failure, such as problems in attention, memory and executive function. Traditional assessment alone cannot meet the challenge of TBI, because questions and assumptions built into such assessments are ‘off-target’ for students with TBI.

For example, although information that a child learned prior to a brain injury often remains intact, learning *new* information is slower for children after TBI. As a result, IQ scores may decline over time as the child with TBI fails to achieve the growth of knowledge that is assumed in IQ testing. This apparent ‘decline in intelligence’ is often misattributed to psychosocial causes. Thus, in traditional testing, two elements typically are ‘off’ for the child with TBI. First, testing fails to determine which, and to what extent, the cognitive building blocks *underlying* intelligence are damaged. Second, test results are interpreted using inappropriate frames of reference. Thus, the mismatch between cognitive deficits/abilities and instruction is perpetuated.

Cognitive deficits vary in intensity across students with TBI, but typically include deficits in attention, information processing speed, memory/learning and problem solving/organization. Because these cognitive domains are not assessed traditionally, deficits within these domains remain unidentified and unaddressed. The consequences for one child are described in *Julie’s Story* (Page 14). *The key to addressing cognitive deficits in the classroom is by first identifying them, through the addition of cognitive testing within school-based evaluations or the referral of a child for neuropsychological evaluation.* The resulting cognitive profile provides the key to shaping classroom accommodations in specific ways to meet the unique challenge for each child.

---

---

What can school-based assessment teams do? They need either to refer the child for neuropsychological evaluation or add new tools to their information-gathering tool kit. Through administering both traditional *and* cognitive tests, assessors will be able to identify cognitive strengths and challenges in children with TBI. **In the chart on Page 6, the questions that can be answered through cognitive assessment are listed. On Page 7, a chart compares the tools used and the focus of assessment in traditional and cognitive assessments, respectively.**

## SECTION THREE: CLASSROOM INTERVENTIONS FOR COGNITIVE PROBLEMS

Once a student has been identified as a child with TBI and appropriately assessed, What's next? In the chart on Page 7, the approach required of each member of the assessment team is summarized, the overall goal of which is developing an IEP that specifically identifies a student's cognitive strengths and deficits, as well as offers suggestions for teaching to the student's strengths, while also addressing his/her deficits in the classroom.

**The goal of this section is to discuss *how* educators can use cognitive assessment information to develop appropriate accommodations in the classroom.** (The focus of this section is on *cognitive* challenges, while Section Four focuses on *behavioral* problems.)

How can educators meet the challenge when teaching students with specific cognitive needs stemming from brain injury? Many types of simple modifications of what normally occurs in the classroom can be adopted to help students with TBI. These simple accommodations are essential to a student's being able to learn, versus failing. **Accommodations useful to a child with TBI often benefit most (or all) of the other students in the classroom.**

Before discussing classroom accommodations for children with TBI, we will first briefly describe the nature of the cognitive challenges these students face. Brain injury typically results in four types of cognitive problems, which a student with TBI may experience with greater or lesser severity, and in any combination:

- ◆ **Attention/concentration.** Students may experience problems in sustaining attention over lengthy periods. They may be unable to attend to two tasks simultaneously, such as listening to a teacher while taking notes. They may have greater difficulty attending to auditory information than to visual. However, visual material that is complex may overwhelm the student's ability to comprehend information; simpler materials are preferred to those that are highly detailed and 'dense'.

- ◆ **Information processing speed.** Students with TBI may process visual and/or auditory information more slowly than many other children in class. They may still be 'working on' what the teacher just said, as the rest of the class is moving on to a new idea or topic. Students with challenges in information processing speed need more time to work through one idea before moving on and need a slower pacing of information.

- ◆ **Memory.** Students with post-TBI memory problems are not like the rest of us who are occasionally forgetful. Instead, they have consistent, long-term challenges in learning, storing and retrieving new information. Thus, they may have difficulty with hearing or reading something only once and then being able to recall the new facts or ideas. Two points are critical in helping students with memory problems learn: First, using different modes of input may help. Thus, students may better remember *written* materials than those presented *orally*, and remember better after several *repetitions*. Second, when students are being tested, newly learned material may be accessible primarily (or only) at the level of *recognition* and less at the level of *recall*. Thus, the student with TBI may be unable to volunteer that Sacramento is the capital of California, but may be easily able to select this city from a list of state capitals. As a result, when documenting the student's acquisition of new knowledge, open-ended test items are less useful than multiple-choice formats.

- ◆ **Executive function.** Students with TBI are often confronted with a reduction in so-called 'executive' skills, such as prioritizing, shifting topics, thinking abstractly, organizing themselves, planning ahead, solving problems and carrying out sequential activities. These difficulties become more critical as students enter middle or high school, because 'executive' functions are expected to have developed by this age. We don't expect first graders to plan ahead, but we do expect eighth or tenth graders to do so.

In addressing these cognitive challenges, several types of accommodations can be used in the classroom, **examples of which are provided in the chart on Page 8:**

- ◆ First, the teacher can modify the **classroom macro-environment**, i.e., shaping the external world to better fit the needs of the child with TBI. For example, for students with problems in sustaining attention, environmental distractors (e.g., a noisy

*Text continues on Page 9.*

---

---

---

---

---

## QUESTIONS TO BE ADDRESSED USING COGNITIVE ASSESSMENT, WITHIN FOUR COGNITIVE DOMAINS:

---

### ***ATTENTION: Is the student ...***

- Able to concentrate for brief periods?
- Able to concentrate for longer periods?
- Able to 'hold onto' and mentally manipulate information?
- Able to concentrate on more than one task at a time?
- Able to concentrate better on written, compared to orally presented, information?
- Accurate when carrying out complex tasks?

### ***INFORMATION PROCESSING SPEED: Is the student ...***

- Accurate but slow in tasks?
- Accurate in tasks, when time limits are ignored?
- Penalized on timed tasks due to slowness?
- Slow to respond verbally to questions or directions?

### ***MEMORY:***

- Can the student retain new information – from one day to the next?
- Does providing a context improve learning?
- Are verbal and visual memory skills equally proficient?
- Does repetition of information increase learning?
- Does the student attempt to 'chunk' or organize similar information to aid recall?
- Is more information recalled via recognition or through spontaneous recall?

### ***EXECUTIVE FUNCTIONING: Can the student...***

- Think independently?
  - Prioritize the steps in completing a task?
  - Follow through to complete a task logically?
  - Use problem-solving strategies?
  - Organize a task if given structure?
  - Benefit from feedback from others, using feedback to improve performance on tasks?
  - Shift from one task to another?
-

**COGNITIVE ASSESSMENT:** In this chart, the tools and focus of traditional and cognitive (neuropsychological) assessments are compared. With each approach to testing, examples of tools are suggested that address the objectives of the assessment.

TRADITIONAL ASSESSMENT		COGNITIVE ASSESSMENT	
TEAM MEMBER	INFORMATION SOURCES AND TOOLS	ASSESSMENT FOCUS	ADDITIONAL ASSESSMENT TOOLS AND STRATEGIES
<b>SOCIAL WORKER</b>	<ul style="list-style-type: none"> <li>• Parent interview</li> <li>• Classroom observation</li> </ul>	<ul style="list-style-type: none"> <li>• Reason referred to team</li> <li>• Developmental, educational, and medical history of child</li> <li>• Family history, composition; attitude toward special education and due process</li> </ul>	<p><i>ASSESSMENT FOCUS</i></p> <ul style="list-style-type: none"> <li>• Identify if a brain injury is a source of school failure</li> <li>• Identify physical, cognitive and behavioral changes secondary to BI</li> </ul>
<b>SCHOOL PSYCHOLOGIST</b>	<ul style="list-style-type: none"> <li>• IQ testing, e.g., WPPSI-R, WISC-III, Stanford-Binet</li> <li>• Bender Gestalt</li> <li>• Projective testing, e.g., Thematic Apperception Test (TAT), Rorschach, Human Figure Drawing</li> </ul>	<ul style="list-style-type: none"> <li>• Level of intellectual functioning</li> <li>• Pattern of verbal and performance abilities</li> <li>• Visual and perceptual functioning</li> <li>• Emotional adjustment</li> </ul>	<ul style="list-style-type: none"> <li>• Additional IQ subtests, e.g., WISC-III Mazes, WISC-III Index Scores</li> <li>• Additional testing of memory function, e.g., Wide Range Assessment of Memory and Learning (WRAML), California Verbal Learning Test for Children (CVLT-C), Children's Memory Test</li> <li>• Assessment of executive functions, e.g., Rey Complex Figure (RCF), Children's Category Test (CCT), Trail Making Test</li> </ul> <ul style="list-style-type: none"> <li>• Identify cognitive strengths and weaknesses in: information processing speed, attention (simple, complex, divided), memory (verbal, visual; short vs. long-term recall), learning (amount of repetition needed to acquire information, best modality for learning), problem solving, cognitive flexibility, planning, prioritizing, and organization</li> </ul>
<b>EDUCATION EVALUATOR</b>	<ul style="list-style-type: none"> <li>• Achievement testing, e.g., Woodcock Johnson (WJ)-Test of Achievement Skills, Key Math</li> </ul>	<ul style="list-style-type: none"> <li>• Grade and age equivalents for core academic abilities</li> </ul>	<ul style="list-style-type: none"> <li>• Cognitive testing, e.g., WJ Tests of Cognitive Abilities</li> <li>• Evaluation of strengths and weaknesses within academic testing</li> </ul> <ul style="list-style-type: none"> <li>• Validate cognitive findings within traditional academic assessment</li> </ul>

Examples of Classroom Accommodations Addressing Cognitive Challenges				
Post-TBI Cognitive Challenges	Macro-environment	Micro-environment	Structure and Pacing	Teaching Style
ATTENTION/ CONCENTRATION	<ul style="list-style-type: none"> <li>● Seat student in the classroom near teacher</li> <li>● Minimize distractions</li> <li>● Use FM unit and earplugs to minimize external noise</li> <li>● Out-of-classroom activities should be provided in low-stimulation environments</li> </ul>	<ul style="list-style-type: none"> <li>● Use peer note takers</li> <li>● Use tape recorders</li> <li>● Provide assignments and current activities in writing</li> <li>● Use large print books, with low density on the page</li> </ul>	<ul style="list-style-type: none"> <li>● Use small groups for teaching</li> <li>● Alternate instruction, activity and rest</li> <li>● Schedule classes to capitalize on periods of highest attention</li> </ul>	<ul style="list-style-type: none"> <li>● Refocus student with verbal and/or non-verbal cues</li> <li>● Plan frequent breaks</li> </ul>
INFORMATION PROCESSING SPEED		<ul style="list-style-type: none"> <li>● Use peer notetakers and tape recorders</li> <li>● Review taped materials/peer notes to identify missed, but critical, information</li> </ul>	<ul style="list-style-type: none"> <li>● Slow the pace of classroom presentations</li> <li>● Allow extra time for completion of in-class tests/ assignments/homework</li> <li>● Reduce homework load</li> <li>● Allow more time for student to respond</li> </ul>	<ul style="list-style-type: none"> <li>● Do not rush or challenge the student</li> <li>● Provide anticipatory cuing to prepare responses in advance</li> <li>● Frequently repeat information, to enhance processing abilities</li> </ul>
MEMORY	<ul style="list-style-type: none"> <li>● Seat student next to electrical outlet, for use of tape recorder</li> <li>● Provide written materials to back-up class instruction</li> </ul>	<ul style="list-style-type: none"> <li>● Use tape recorders to review critical information</li> <li>● Use an organizer as an external memory aid</li> <li>● Test using multiple-choice format</li> <li>● Use fact cards and cue sheets to aid recall</li> <li>● Use highlighters to attend to information</li> </ul>	<ul style="list-style-type: none"> <li>● Utilize the student's best learning modality (visual vs. auditory input)</li> <li>● Encourage taping new class content</li> <li>● Encourage writing down class assignments in daily organizer</li> </ul>	<ul style="list-style-type: none"> <li>● Provide adequate repetition for mastery</li> <li>● Encourage student to repeat information to ensure comprehension</li> </ul>
EXECUTIVE FUNCTIONING	<ul style="list-style-type: none"> <li>● Designate a specific location to return homework</li> <li>● Display classroom activities schedule</li> </ul>	<ul style="list-style-type: none"> <li>● Develop a system to indicate that homework has been handed in</li> <li>● Use a binder with subject sections and pockets for homework</li> <li>● Color code sections of binder and book covers, by subject</li> <li>● Create maps to aid between-class travel; do in-school travel training</li> </ul>	<ul style="list-style-type: none"> <li>● Review daily routines to re-orient students</li> <li>● Cue student to record homework assignments, check for accuracy</li> <li>● Encourage outlining oral and written assignments</li> </ul>	<ul style="list-style-type: none"> <li>● Encourage student to use organizer daily</li> <li>● Break large projects or tasks into component parts or steps</li> <li>● Prepare student before the topic shifts</li> </ul>

---

---

classmate, windows, a busy doorway) can be minimized by changing where the child is seated within the classroom. This is a simple step in helping the student pay attention.

◆ Second, the teacher can modify the **classroom micro-environment**, i.e., teaching tools. For example, students with memory problems should be taught the use of a daily organizer as an external memory system. This organizer can be carried by the student throughout the school day and at home.

◆ Third, the teacher can modify the **structure or pacing of teaching**. For example, frequent breaks for the student with TBI can be scheduled during the day to decrease problems stemming from inattention and fatigue. For students with slowed information processing speed, the teacher can reduce the pace of classroom presentations.

◆ Fourth, teachers can modify their **teaching style**. For example, for students with problems in information processing speed, the teacher should not rush or challenge the student; this is a counterproductive teaching style for students who process information slowly. Providing additional time for task completion will allow students to perform maximally.

◆ Most important, the teacher can modify the **expectations and values that are often built subtly into teaching**. For example, the teacher may feel that the only test of ‘true’ learning is to ask the student under *time-limited* conditions to *recall* ideas and facts. For many students with TBI, their learning can best be tested through *recognition* tests, e.g., multiple choice. Thus, an important accommodation is the teacher’s shift in his/her expectations of what comprises competence, as the teacher acknowledges that the ‘idea’ is there but cannot be accessed by the student in the way the teacher normally expects. Efficiency (or speed) is also a ‘hidden’ value in teaching, i.e., the child who is learning will do so quickly and, when tested, will be able to recall material quickly. However, students with TBI typically need additional time and repetition to learn, as well as additional time in test situations. The student with TBI may have learned the fact/idea, but may not produce it in testing as quickly as other students.

Finally, one of the most important keys to success in modifying classrooms to address the needs of students with TBI can be summarized in one word: **CONSISTENCY**. For example, if homework assignments are written on the blackboard in the upper right hand corner in English class, given orally in biology and are written in the lower left corner of the board in science, the student with TBI is confronted with a dizzying and dismaying array of signals. Teachers of the same student need to agree on a strategy and apply it consistently throughout the student’s day and week.

We have provided on Page 14 in *Yvette’s Story* a brief description of classroom modifications for a 15-year-old high school student who experienced a moderately severe TBI.

This section and the next emphasize accommodations in the classroom. If your school has a **Resource Room**, a possible role for resource room teachers in assisting students with TBI is discussed on Page 16. **Counseling Interventions** are discussed separately on Page 16, as these interventions are important to many students with TBI.

## **SECTION FOUR: CLASSROOM INTERVENTIONS FOR BEHAVIORAL CHALLENGES**

This section focuses on the behavioral challenges that students with TBI may display within school settings – emphasizing what educators can do to help.

**An example of a typical episode:** The teacher in a high school English class announces a minor shift in the day’s schedule. A student with TBI becomes highly agitated and distressed, throwing her books on the floor; later, she becomes abjectly apologetic. How can an educator understand such behavior and either prevent it or respond to it effectively?

Behavioral challenges in students with TBI stem from many interacting factors (see Figure 1, p. 10). The first point to note is that such behaviors emerge out of **the interaction of the child and the school environment**. Thus, the ‘problem’ resides neither in the student nor in the school, but instead is determined by how these two parts of the picture come together – how well they fit or fail to fit each other.

### **Etiology of Behavioral Challenges for the Student with TBI**

**Within the child**, Figure 1 depicts four sets of challenges a student with TBI faces: First, the student experiences varying **physical challenges** post TBI – most commonly fatigue, headaches and dizziness. Fatigue, in particular, is a major contributor to behavioral challenges, as it undermines the student’s ability to deal with emotional and cognitive issues that are commonly found post TBI. Fatigue is a major limiting factor in the student’s ability to meet challenges that the school environment typically presents.

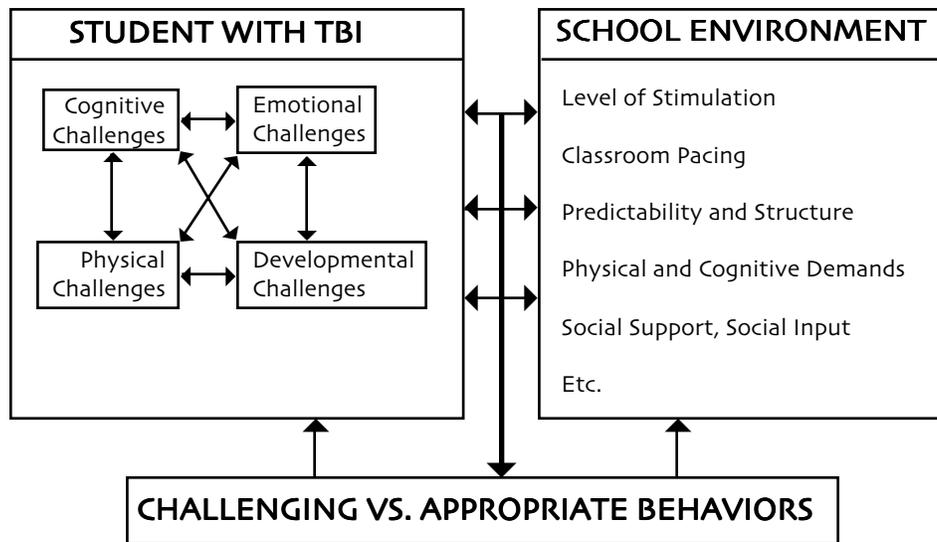


FIGURE 1: Etiology of Behavioral Challenges for Students after TBI

Second, most students experience significant **emotional challenges** after TBI, including depression, anxiety, difficulty in accepting changes in oneself and problems in controlling the expression of emotions. Emotional reactions to brain injury (for example, sadness, self-blame, feelings of worthlessness, nervousness, irritability) can directly lead to behaviors that are counterproductive within the classroom. For example, a student may withdraw from classroom activities due to depression.

Emotional challenges often stem from the child’s inability to ‘read’ social situations (including how the student himself feels about it) and then react to situations appropriately – a skill that normally develops by the time of adolescence. This aspect of emotional functioning is typically affected by TBI, with the behavioral result referred to as emotional dyscontrol – the student will be seen as impulsive, risk taking, explosive and/or unpredictable.

What would an observer see in a situation of behavioral dyscontrol? Incidents would seem to erupt ‘in an instant’. The student may appear to be reacting to an external stimulus, but the behavior produced seems irrational to the observer, as it seems to serve no purpose. The behavior may appear extreme relative to the precipitating event. Such excessive outbursts often lead to the student’s apologizing for the incident, as he is often aware that the behavior is not within his character and is beyond his control.

**Cognitive deficits**, the third area of challenge, also may lead to behavioral issues. For example, a common problem for children after TBI is memory difficulties. Student may appear ‘not to care’ about school or lack motivation because they neglect their homework or fail to follow-up on assignments. Impaired memory skills, instead, may underlie these behaviors.

The final issue, ‘**developmental challenges**’, refers to brain injury’s having a differing impact on a student’s functioning depending upon the child’s age at injury. For example, students who are injured in adolescence will have already developed a sense of ‘who I am’ prior to injury. In the context of TBI, changes in the self will be more emotionally upsetting for these adolescents than for the younger child, with a less well developed self-image. Developmental challenges also refer to the fact that the impact of injury shifts as the student is confronted with increasingly complex age-appropriate tasks. For example, the student with TBI may easily handle simple arithmetic problems only to experience increasing frustration and failure as math becomes more cognitively complex. Developmental challenges also appear in social contexts – as the ‘rules’ of social living change in the teen years. As students with TBI fail to learn increasingly complex social ‘rules’, they feel more alienated in social situations. Finally, students with TBI face developmental challenges based on the degree to which (before or after injury) the developmental tasks of each phase of childhood have been achieved. For example, a student injured at age five experiences greater challenges, in that foundations for *all* subsequent learning – learning to listen, question and engage socially – need to be established after brain injury. Failure (because of TBI) in this early-childhood developmental task will have a proportionally stronger effect on learning that follows.

## Environmental Triggers

Figure 1 also depicts the **school environment as a co-determinant of the student’s behavior**. Several common environmental precipitators of negative behaviors in the student with TBI include:

---

---

◆ **High levels of stimulation** (e.g., noisy hallways; simultaneous activities, each of which demands the child’s attention; crowded classes; and the like) can lead to students with TBI becoming overstimulated, which in turn may lead to decreased cognitive processing and increased emotional distress.

◆ **Rapid classroom pacing** can result in dyscontrol for many students with TBI: too much information presented too rapidly is another form of over-stimulation.

◆ **Lack of predictability and clear structure.** Due to deficits in the child’s ability to think flexibly and to problem solve, a student with TBI may respond negatively to unexpected changes. (The example at the beginning of Section Four illustrates this problem.)

◆ **Physical and cognitive demands** within school settings may overwhelm the student to the point of an emotional outburst. These types of outbursts are more common as the student’s level of fatigue increases throughout the day.

◆ **Negative social input** is a common precipitator of challenging behaviors. The child with TBI is surrounded by fellow students and by teachers, who may either become part of the problem (through ridicule, rigid demands and the like) or part of the solution (through positive social support).

## Analyzing the Student’s Challenging Behaviors

The arrows at the center of Figure 1 show that the student and the environment interact to produce either appropriate or challenging behaviors. The arrows at the bottom of the figure, in the reverse direction, suggest that the resulting behavior feeds back into the system, to affect both the student with TBI and the school environment.

Behavior that is counterproductive in school does not ‘just emerge’. It follows a pattern, which may be complex but, nevertheless, *is* a pattern. The educator’s task is to detect and analyze the pattern, based on discussion with the student, family and teachers, as well as on observation in the classroom. Accommodations in the class setting can then be developed – to minimize ‘triggers’ of inappropriate behavior, to enhance the student’s behavior, to support learning and, importantly, to decrease classroom disruption.

The **key to analysis** is to avoid labelling the student (she “hates math” or “isn’t motivated”). The most important question to ask is, What are the student’s actions trying to communicate? Talk to and observe the student – to identify what is happening in the environment, what is going on within the student (i.e., the student’s interpretation) and how these two sets of events interact to ‘trigger’ the specific problematic behavior in question.

First, **talk to the student**, using the ideas depicted in the figure: What aspects of the student’s *emotional* functioning (e.g., poor self-esteem, depression), *physical* functioning (e.g., headaches, fatigue), *cognitive* functioning (e.g., poor memory, inattention) and/or *developmental* issues (e.g., lagged social skills) are contributing to the student’s behavioral flare-ups?

Then, **evaluate the environment.** It is important to determine if a pattern can be found that triggers behavioral disturbances. Is too much noise or too much activity occurring? Is the work too complex for the student with TBI? Are classmates contributing (e.g., by teasing, being noisy)? Is the pace too fast? Is it late in the afternoon when outbursts occur? Are unexpected events or changes triggering problems?

Once educators have taken the time to examine what is happening with respect to a *specific* student within a *specific* educational environment, strategies that can be applied to help produce more appropriate behavior will become clear. For example, if fatigue is a problem, the student might be encouraged to take brief pre-planned breaks every 20 minutes. This respite may prevent outbursts precipitated by the student’s being overloaded by classroom demands. Another example: If peer behaviors (e.g., teasing) are inadvertently triggering behavioral outbursts, peer sensitization in the classroom may be beneficial.

## Planning Ahead: Prevention, Prevention, Prevention

Proactive strategies designed to **prevent behavioral problems** from occurring are much more powerful than reactive strategies, which solely focus on problem behaviors *after* they occur. A key component of a prevention strategy is to communicate (in writing and in class discussion) the **specific expectations** the educator has for *all* students in the classroom. These expectations might be written on the blackboard, as educators should not assume that students (with TBI or without) will spontaneously remember these expectations over the weeks and months of the school year.

Working individually with the student with TBI, the educator should help the student **recognize the internal and environmental ‘triggers’ of negative behaviors** that get in the way of learning. Specific, agreed-upon behavioral alternatives should be worked out with the student to prevent the escalation of negative behaviors. For example, a student could be offered options such as taking a ‘time out’, by leaving the classroom briefly or putting her head on her desk for a few minutes.

---

---

---

---

To encourage alternative behaviors, educators have been successful when using the following approach: **modeling** the behaviors the educator wants to elicit, **cueing** the student to perform desired behaviors, **rehearsing** behavior sequences for use in the future, providing **immediate feedback**, **praising** near success and **reinforcing** the student's efforts.

Providing a **clear structure** and **predictable** routines in the classroom is also important to prevention. Related to the need for predictability is the student's need for **consistency** – prevention strategies should be consistent from class to class, from school to home, and from school to school.

Classroom activities and procedures that are 'TBI friendly' are key elements in prevention. Thus, attention to the **pace of teaching** is important, to avoid cognitive overload and frustration on the part of students, leading to emotional dyscontrol.

In planning ahead, educators need to consider their role in prevention. That is, they need to maintain **realistic expectations** based upon a review of the student's abilities – both strengths and areas of challenge. Also, teachers should avoid comparisons of the student's pre- and post-injury abilities.

**Peers** should be included as an integral part of prevention. They should be educated about TBI and the nature of the challenges it can impose. Fellow students can be solicited to assist the student with TBI, e.g., as a peer note-taker or helping the student get from one class to the next. They can also be asked to alter their social interactions to lessen the chance of triggering negative behaviors, e.g., speaking slower and giving the student with TBI more time to formulate responses to questions. Classmates should be advised of specific prevention strategies to be used in the classroom and how such strategies are key to eliciting positive behaviors from the student with TBI, which will, in turn, reduce their frustration with the behavior of a classmate with TBI.

## **When Prevention Fails: Managing Problem Behaviors**

When prevention fails and behavioral challenges emerge, management activities are important to have as a backup. First, the educator should **take action as soon as triggers are recognized**. For example, if a known trigger is classmates' laughing at a student with TBI, the educator should have a pre-arranged signal that cues an alternative behavior for the student, such as tapping on the student's desk to signal that he should withdraw briefly from the classroom or to signal the class to cease their triggering behaviors.

The educator also should **provide private feedback to the student with TBI** to help him redirect his behaviors and evaluate the negative impact of such behavior on peers.

A variety of techniques often used in schools to 'control' behaviors of students are clearly ineffective with students with TBI, e.g., peer mediation, direct criticism, any form of delayed consequences. For example, keeping a student with TBI after class in detention (a delayed consequence) is ineffective, as the student may have little memory of what specifically led to her being punished. Similarly, peer mediation may precipitate a new confrontation for the student, who does not remember the behavioral episode in question.

*Yvette's Story* (Page 14) illustrates the approach used in her school to manage her behavioral issues in the classroom.

## **IN SUM:**

This brochure has highlighted the needs of students with traumatic brain injury. Such students must be identified, appropriately assessed and then taught in ways that both address their challenges and teach to their strengths. The information in this brochure is a first step: It conveys to educators and to advocates for children with TBI, particularly their parents, what needs to be done. The second step is for schools to obtain the expert input they need to put programs in place that will help children with TBI (and that will also help other students) avoid failure and achieve optimally in school.

The remainder of this brochure describes cases studies that have been referred to throughout this text. **On Page 16, technical assistance that is available to educators from the Research and Training Center is described.**

---

---

## **PERSONAL STORIES**

### **Jessica's Story**

The story of one 15-year-old student, whom we will call Jessica, illustrates how the differences between TBI and other disabilities often dictate different strategies for helping students. We met this student when her school contacted us to obtain help, as they felt they had reached a 'dead end' with her.

Jessica had been hit by a car the previous year and was now attending regular high school classes, with resource room supports. The school's needs primarily focused on Jessica's relationships with her peers. She was being teased and called names because of her forgetfulness and slowness. She would usually respond by yelling at her classmates, which would disrupt the class for several minutes each day, with the length and frequency of disruption escalating over time.

Our staff met with her teachers and others involved in Jessica's program. We developed a two-pronged approach: to address concerns about classroom disruptions while helping Jessica, so that she could benefit better from classes and possibly decrease the teasing that triggered her outbreaks. We discussed with the school staff specific techniques to help her decrease negative outbursts; for example, we reviewed the need for a daily planner to help her get and stay organized, we urged the use of a tape recorder and we encouraged that the resource room teacher provide Jessica a program to structure her time and activities before and after school. These cognitive interventions would ultimately enhance Jessica's functioning and her success in the classroom, and, as a result, decrease ridicule by her peers.

In looking at the behavioral issues, one incident illustrates how the school's approach to conflict resolution was ineffective for Jessica. On one occasion, Jessica was being teased about her memory problems; she raised her hand and asked to be excused from the classroom. The teacher denied her request. The teasing continued, resulting in Jessica's becoming increasingly agitated, eventually leading her to roughly push another student. The teacher removed both students from class and brought them to the school counselor for 'peer mediation'. By the time Jessica arrived at the counselor's office, she had minimal recall of the altercation. However, the guidance counselor was unaware of how the 'usual approach' of peer mediation, which would be helpful to most students, was inappropriate, and, in fact, was counterproductive with a student with memory impairments. The counselor insisted that Jessica recount the story about being teased, which Jessica literally was unable to do. Then the counselor brought the other student in and asked Jessica to sit and listen to the other student's side of the altercation. This approach triggered a second round of agitation and more yelling from Jessica. Obviously, no resolution of this conflict was achieved.

Our team, upon hearing this story in their meeting with Jessica's teachers and counselor, suggested ways to handle such problems in the future, but also pointed out that Jessica was already finding ways to handle her problems. She had developed an appropriate technique for herself: asking to be excused allowed her to remove herself from potential conflict, thus, giving herself time to calm down in a quiet place. The teachers were encouraged to allow Jessica to leave the classroom for brief periods, whenever she experienced increasing fatigue or agitation.

The good news about Jessica is that she has been maintained in her mainstream classroom and is doing well. Her behaviors are less frustrating for the school's staff, as their knowledge of TBI and their understanding of the strategies that work for Jessica have expanded.

### **A Mother's Story**

Sometimes one person's story can convey the stories of a thousand people. One such story comes from a mother, who is also a special educator. Wearing her special educator 'hat,' she was attending a workshop on TBI when she realized "her son was being described." This child, who is now five, was brain injured when he was 18 months old. So, for over three years, she felt she had been "living in a fog" – a fog of not knowing what his problem was nor how to really help him. No one had put together the fact that her son's brain injury was the cause of his subsequent problems, including expressive language difficulty. He had been getting speech therapy all along, but his progress was so slow that this mother was beginning to feel her child was possibly retarded. Following formal evaluation, her son is now working with a speech therapist who specializes in working with children with TBI. This mother has learned a variety of ways to reach him, to get around his deficit. Her experience in solving the puzzle of her son has been an awakening for her, to the point that she now wants to become an advocate for children with TBI. She says that one of the things she has learned in this experience is that as a teacher of children with learning disabilities she has usually taught to the child's deficits. As a mother of a child with TBI, she now sees that she must primarily work to the strengths of her son.

---

---

## Julie's Story

Julie was referred for psychoeducational evaluation when she was six. Her teacher was concerned about her, as she seemed immature, accident prone and unfocused. Yet, her parents and teacher also knew Julie to be highly verbal. She was from a family of high achievers: expectations ran high. Her history was 'normal'. She was a full-term baby, was healthy and had reached all developmental milestones as expected. One historical fact should have flashed a warning light, but didn't: She had been in a car accident when she was two years old.

On the WPPSI-R, Julie was found to have average intelligence; her strengths were seen in verbal skills, while her weaknesses were in performance tasks. She was easily distracted, had great difficulty following directions and spoke very slowly. Based on this traditional approach, she was classified as learning disabled and was placed in a classroom for LD children.

At seven-and-a-half, she was reevaluated. Her IQ scores had not changed, with continued strengths in verbal abilities noted. Weaknesses were now observed in short-term memory and continued in performance skills. She tested below grade in academic areas. For example, in math she lacked calculation skills and knowledge of math concepts. Julie was shy and lonely. Her speech remained impaired, and instructions had to be repeated. She continued in the LD classroom, with the addition of speech/language therapy and counseling.

After two years, her parents requested a reevaluation, as she was "falling behind" in school and they felt that she might benefit from exposure to "mainstream expectations of learning". At 10, Julie's IQ had declined to the low average range. She no longer evidenced verbal strengths and continued to show weaknesses in short-term memory. Speech/language evaluation indicated delays in receptive vocabulary, word-finding difficulties and poor articulation. Julie was observed as being restless, distractible, anxious and depressed. She was again classified as LD, but, largely because of parental pressure, she was transferred to a mainstream class, with a continuation of speech therapy and counseling.

Over the next four years, despite the best efforts of all, Julie continued to fare poorly. On repeat evaluation, her IQ had fallen into the upper range of borderline. Her speech/language functioning had also declined.

Her teachers and counselors revisited her case record to seek an explanation for her continuing failure. They consulted our staff, who encouraged them to review the *Brain Injury Screening Questionnaire* with the parents to document the nature of the 'car accident' Julie experienced as a preschooler. Julie, it turns out, had been unconscious for several hours and had been hospitalized for one week. As often happens, she had been discharged home with no further medical involvement and with expectations of 'complete' recovery. No education had been provided to her parents about potential long-term cognitive difficulties or the need for periodic evaluation.

Clearly, Julie did *not* experience a full cognitive recovery. Her brain had been injured early in her development and this had affected all subsequent learning. Our staff suggested that the school psychologist reassess Julie using a cognitive battery designed to pinpoint Julie's cognitive deficits/strengths. This assessment will give her teachers and therapists a better idea about how to reach and teach Julie in the future.

## Yvette's Story

Yvette is a 15-year-old, who prior to her brain injury was earning A's and B's and was on the honor role. In the ninth grade, she was in a car crash that left her in a coma. After regaining consciousness, she underwent rehabilitation for several weeks. Five months after injury, neuropsychological testing revealed that Yvette's major cognitive problems were in the areas of memory, information processing speed and executive functioning. Her verbal skills and reasoning remained relatively intact and serve as cognitive strengths.

Based on these results, accommodations for her return to school were recommended, most importantly that she be given cognitive remediation to teach her meta-skills to compensate for her deficits and that she use her school's resource room at the beginning and end of the school day to help her organize her daily classroom and home assignments and to review new classroom content.

Because of her cognitive challenges, many of the accommodations indicated in the chart on Page 8 were suggested as aids in her learning in the classroom. For example, to help compensate for memory problems, the use of a lap top computer and tape recorder was recommended. To help her avoid distractions, it was recommended that her desk be placed away from competing stimuli (e.g., the window, door and 'noisy' classmates). In terms of teaching style, it was recommended that directions be broken down into steps and that concrete demonstrations be used in 'translating' abstract ideas/concepts.

When these suggested accommodations were presented to her teachers, some were willing to adapt. Others were not. Her computer

---

---

---

---

teacher was in the latter group. Yvette eventually had to drop the class, as she was not able to learn the material without the recommended accommodations. The gym teacher didn't 'get it' because she literally couldn't *see* Yvette's problems. She saw a physically 'able' adolescent. But – due to the TBI – Yvette also had severe stamina problems and headaches brought on by physical activity and a highly distracting environment. The gym teacher was unwilling to modify her program because of the 'invisibility' of Yvette's physical and cognitive challenges. However, other teachers' willingness to modify their usual teaching strategies and to adopt approaches to teach to her strengths and provide supports for her deficits was rewarded. For example, her science teacher assessed her learning using multiple-choice tests and provided her additional test time. Yvette taped all new classroom content, and was given lecture outlines by this teacher for review prior to each class. By the end of the semester, her grade had improved from a 65 to 80. In math, a consultant teacher worked with her daily. The consultant used repetition of materials to aid Yvette's learning of math, and helped her break down problems into simpler steps and create 'fact cards' for essential information to be remembered. Yvette's grade in math improved – from 60 to 79.

A second area of concern for Yvette were behavioral changes after injury. Yvette had difficulty in initiating activities, such as conversing with classmates or asking questions in class. This problem was exacerbated by the normal tendency of teenagers to insist on independence and not ask for help. Unfortunately, her relatively low level of activity got mislabelled as "lack of motivation" and "laziness". She was not participating in class, and also was becoming increasingly isolated from her peers. Consultants met with a group of Yvette's teachers and helped them analyze her behavior and develop strategies to encourage Yvette's participation in class: reinforcing any initiative she took during class and helping her remain focused in class by establishing a signal, when she loses focus, to redirect her back to whatever is going on in class. Strategies also include the teachers' avoiding asking Yvette direct questions, which typically led to her 'retreat' when she does not know an answer; instead they ask her to think about a delayed answer to the question. Classmates were identified to assist Yvette, as peer note-takers. Increased socialization with these peers resulted in decreased isolation for her.

A final problem that Yvette faced was that she was most fatigued in the afternoon, which was when her most academically challenging classes were scheduled. A simple rescheduling allowed her to bring more energy and focus to her school work, which was very important to her.

The point of this example is that with her teachers' willingness to adapt, Yvette was able to learn and to achieve at a level similar to her pre-TBI abilities. Teachers who were unable to respond to this student's unique needs became part of her problem, not part of the solution.

At the completion of the academic year, insights about Yvette's post-TBI cognitive, emotional, physical and behavioral challenges, as well as accommodations that were effective for her, were shared with her next year's teachers.

---

---

## IMPORTANT RESOURCES WITHIN SCHOOLS

---

### Resource Room Teachers: A Critical Shift in Roles

The clear need for a consistent approach to students with TBI points to a major role for resource room staff in helping students with TBI. Their role should include advocating that *all* teachers meet the student's particular needs – helping translate recommended accommodations of the IEP into a useful and consistent program for the child with TBI, in each classroom setting.

The resource room role also includes helping students with TBI organize themselves for the school day and for homework assignments; serving as liaison between the student, parents and staff; teaching abstraction skills; developing written schedules; teaching the student to use calendars and other 'external' memory aids; previewing and reviewing new learning, from either class notes or taped lectures; planning scheduled events and time usage; using a checklist to help the child organize and complete assigned tasks; and encouraging independent functioning within the school to the highest degree possible for the child.

### Counseling Interventions

Counseling for students with TBI is useful in a variety of situations: when the student's parents hold expectations for the student that are clearly incongruent with his abilities; when the student lags in the development of social skills; and during times of transition, as when the child is being transferred to a less restrictive or more challenging setting, or to a new school.

Counselors are a key member of the student's behavioral team. They help in identifying trigger situations, formulating strategies to identify these triggers, as well as teaching alternative coping strategies to increase school-appropriate behaviors. Counselors should provide opportunities for the student to practice alternative behaviors, as well as discuss the impact of the student's behaviors and cognitive difficulties on her academic and social functioning within the school.

## TECHNICAL ASSISTANCE FROM THE RESEARCH AND TRAINING CENTER

---

This brochure has made the point that addressing the needs of students who have experienced a TBI requires three forms of action:

- ◆ **Identifying** the children – both those who have been hospitalized and the many more who have not, who are often unknown to their schools as children with a TBI. The Research and Training Center offers technical assistance in understanding TBI and in using the *Brain Injury Screening Questionnaire* as a screening device.

- ◆ **Assessing** educational needs of these children appropriately – implying an expansion of the 'traditional' assessment paradigm to include a clear focus on delineating cognitive challenges and strengths. Training programs are available from the Center to help assessment staff meet this challenge.

- ◆ **Modifying** classrooms to fit the needs of children with TBI – which typically means modifying classrooms to better teach ALL children. Training activities are available from the Center focussing on accommodations needed to maximize functioning of children with TBI in the classroom.

The staff of the Center provides technical assistance to educators who wish to better meet the needs of children in schools who have identified or unidentified TBI. After initially consulting with the interested parties, a plan is developed to implement a program **suited for that educational site**. Training programs and continuing technical assistance, to support the implementation of adopted interventions, are available.

If you are interested in obtaining more information about technical assistance, you can phone, write or e-mail the Center:

Dr. Wayne A. Gordon  
Mount Sinai School of Medicine  
Department of Rehabilitation Medicine, Box 1240  
New York, New York 10029  
Tel: 212 659-9372  
e-mail: Wayne.Gordon@msnyuhealth.org

Dr. Mary R. Hibbard  
Mount Sinai School of Medicine  
Department of Rehabilitation Medicine, Box 1240  
New York, New York 10029  
Tel: 212 659-9374  
e-mail: Mary.Hibbard@msnyuhealth.org