



**BRAIN INJURY  
ASSOCIATION  
OF NEW JERSEY**

825 Georges Road, Second Floor  
North Brunswick, NJ 08902  
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[www.bianj.org](http://www.bianj.org)

Helpline: 1-800-669-4323

No Brain Injury is  
Too Mild to Ignore,  
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Lose Hope

## **An Introduction to Assistive Technology for Students with Brain Injury**

*By Susan Paradise*

### **What is Assistive Technology?**

As it relates to school, assistive technology (AT) is considered a device or service that may be a potential support for a student with brain injury to access and benefit from his or her educational program. The device or service can be “low tech” to “high tech”, from simple everyday organizational tools to sophisticated hardware and /or software depending on a student’s needs. The purpose of the device or tool is to significantly help a student function in the school setting by equalizing the learning environment, assisting a student to achieve academically and allowing them to participate within the curriculum. The use of assistive technology often has other positive effects for students with brain injuries, for example: decreasing a student’s frustration, increasing efficiency, and reducing the level of exertion, which, in turn, saves the student valuable cognitive and physical energy for learning the curriculum.

The technology may not even cost, it may be as simple as activating the easy access controls on a computer’s control panel to stop keys from repeating letters to assist with ataxia, or default the background color to a different shade or increasing the font size to assist with vision challenges. The device or service can be “low tech” to “high tech”, from simple everyday organizational tools to sophisticated hardware and /or software depending on a student’s needs.

An important key to success with assistive technology is “keeping it simple”, which is why the evaluation process for AT starts with understanding a student’s needs and what a student is going to be expected to do. Then the evaluation process begins to match tools, moving from low tech and trialing the tools to determine if it successfully meets the needs, moving to higher tech if lower tech options did not work.

### **How is Assistive Technology Accessed for School Aged Students?**

Access to AT for a school age student is governed through two main sources, IDEA, also known as Special Education services (through an IEP), or Section 504 of the Rehabilitation Act of 1973 with the addition of Section 508, equal rights, antidiscrimination legislation. To get started, a parent contacts the school and requests, in writing, for their student to be



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*evaluated for assistive technology needs.* A teacher or support staff can also make the request for an assistive technology evaluation. An evaluation includes: assessing what a student is required to do within the curriculum, what physical and cognitive issues may interfere with the requirements, a student's motivation and ability to use tools, what tools may match the student's needs best, and then trialing/training the tools, evaluating the tools' effectiveness. This approach of looking at a student's needs first, not just plugging a device in place is another key to effective matching of technology. Some school systems can do the evaluation within the district and others use outside agencies to complete the evaluation.

For school age students, (before their high school graduation), there are some important questions that are worth knowing the answers to before requesting AT. For example: "What can be included in the request for assistive technology?" This is a good question because the answer is critically important to effective use of AT for a student with a brain injury. All of the following can be requested: assessment for AT, acquisition of appropriate AT hardware and/or software, training of staff, student and parents when appropriate, and ongoing follow-up of training and maintenance of equipment. These steps are all eligible for being included in the IEP or 504 plan, ***but must be clearly written into the plan to be the responsibility of the school.***

Another tidbit to know is that the school cannot require a family to pay for AT written into the plan, (a family may choose to buy a device on their own or agree to share the cost, but families cannot be ***required*** to pay.) The family's income and resources are NOT considered for eligibility. On the other hand, when the school district purchases an AT device for a student to use, the student and family must realize that the device is owned by the district and not the child. Although the district owns it, this does not mean that the student has to use the equipment only at school. The device can go home whenever necessary for the achievement of stated IEP goals or for the child to benefit from his/her educational program, with only a few exceptions. Taking the device home should also be written into the plan if that is needed to complete school tasks.

The process of getting and evaluation started can be long and confusing for those that have not had exposure to the steps, but there are several agencies that can assist parents. An agency that can connect callers to knowledgeable sources to help with understanding the procedure is the Brain Injury Association of New Jersey Helpline, 1-800-669-4323 or [www.bianj.org](http://www.bianj.org).



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Other agencies that can assist with support and advocacy through the process are Statewide Parent Advocacy Network, (SPAN) (800) 654-7726 or [www.spannj.org](http://www.spannj.org) and Disability Rights New Jersey, formerly known as New Jersey Protection & Advocacy, (800) 922-7233 or [www.drnj.org](http://www.drnj.org).

### **Once a Student has Graduated from High School, is AT still available?**

At the college level, Section 504 is the main avenue to secure AT. Within New Jersey, there is an assistive technology equipment lending service available. Contacting the Student Support Services at his/her college is the starting point for a college student. Documentation of a disability must be provided to the college support staff by the student requesting AT, and then a meeting is set up to review eligibility for a 504 plan and to discern the next step toward securing assistive technology for the student. There are a wide variety of tools available to trial and borrow through the college system before a student would need to buy hardware and/or software that is considered assistive technology. Most colleges have some assistive technology equipment on campus and, in addition to what each college has, there is a central office, The Adaptive Technology Center for New Jersey, that is located on the grounds of College of New Jersey from where technology is dispensed to a student through his/her attending college.

Funding for AT after high school can often be problematic because of the expense. When a student needs assistance with funding, there are variables that go into determining what sources apply to each individual. Contacting the Traumatic Brain Injury Fund, a branch of the Department of Human Services, Division of Disabilities Services at 1-888-285-3036 for an application and/or contacting one of the advocacy groups listed above can be a starting point.

Technology is an important avenue to consider for a student with a brain injury because it can significantly increase access to the curriculum, although it must be considered carefully. There are pitfalls as well. Too often, expensive equipment is bought and sits on shelves of schools and homes. Adequate training of staff, family members and student is often neglected in school plans and renders a tool to the shelf. Recognizing the uniqueness of traumatic brain injury as it relates to new learning can be another stumbling block; training and support for the student often needs to be longer than for other students. As well as, technology changes very quickly, and what use to be considered assistive only 2-5 years ago, is now built into phones, PDA's and computers, so looking at mainstream computer ware may solve some needs without moving to higher tech or



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more expensive options. Matching needs, training, understanding the student's motivation, abilities, and ongoing support and training are keys to making it AT effective.

Below is only a sampling of options of lower tech to higher tech AT tools matched to skill areas.

<b>SKILL</b>	<b>SAMPLE LOWER TECH</b>	<b>SAMPLE HIGHER TECH</b>
Attention and concentration	<ul style="list-style-type: none"> <li>-checklists</li> <li>-timers, kitchen or digital</li> <li>-reduced amount of info on a page</li> <li>-head phones or ear plugs to reduce distractions</li> </ul>	<ul style="list-style-type: none"> <li>-vibrating watch</li> <li>-timer downloaded, for computer screen to self-monitor comp. use</li> <li>-software designed to practice increasing attn. and concentration</li> </ul>
Memory	<ul style="list-style-type: none"> <li>-planner, TO DO sheets</li> <li>-journal, memory book</li> <li>-white board</li> <li>-written directions w/ oral directions</li> <li>-tape recorder</li> <li>-answering machine messages</li> </ul>	<ul style="list-style-type: none"> <li>-computerized watches w/alarms and written reminders</li> <li>-phone, PDA, computer alarms</li> <li>-software exercises designed to improve memory</li> <li>-computer planner programs</li> </ul>
Organization	<ul style="list-style-type: none"> <li>-planner</li> <li>-labeled baskets</li> <li>-clear storage containers</li> <li>-locker organizers</li> <li>-zipper pouches</li> </ul>	<ul style="list-style-type: none"> <li>-PDA</li> <li>-desktop calendar on computer</li> </ul>



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Time management	<ul style="list-style-type: none"> <li>-person to help structure and plan</li> <li>-worksheets w/time prediction/eval</li> <li>-kitchen or digital timer</li> </ul>	<ul style="list-style-type: none"> <li>-alarm watches/phones</li> <li>-PDA</li> <li>-time management software</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>-pictures or written steps with cues of questions to ask self to mediate in given situations</li> <li>-reference page of problem solving strategy</li> </ul>	<ul style="list-style-type: none"> <li>-problem solving software to practice skill</li> </ul>
Reading	<ul style="list-style-type: none"> <li>-ruler/index card/cutout to keep place while reading</li> <li>-enlarged print books</li> <li>-smaller amount on a page</li> <li>-high interest, low level content</li> <li>-reader</li> </ul>	<ul style="list-style-type: none"> <li>-audio books with speed control</li> <li>-text to speech software w/or w/o study skills features</li> <li>-computerized reading programs for acquisition of reading skills</li> </ul>
Spelling	<ul style="list-style-type: none"> <li>-dictionary</li> <li>-spell check built into computer</li> </ul>	<ul style="list-style-type: none"> <li>-electronic speller w/speech</li> <li>-word prediction software</li> </ul>

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