Tools for Schools

Assistive Technology –
The New Power Tools

Resource Materials

Tools for Schools
Assistive Technology: Checklist for Self-Assessment

Across the nation, urban, rural and suburban schools are striving to reach higher standards and to improve the academic performance of their students. The Tools for Schools teleconference series has been designed to support schools as new State assessments linked to higher learning standards are phased in. Six components that leading national educational experts and high performing schools have found effective in enhancing student performance are featured in this series. This Checklist for Self Assessment can assist school administrators, teachers and other school personnel, parents, and the greater school community in reviewing their own teaching and learning environment, and stimulate discussion towards developing strategies to raise standards for student achievement, build capacity to reach the standards and to answer for results and improve them.

Responsive Leadership	*Always*	*Frequently*	*Sometimes*	*Never*
▪ Do we set high expectations for achievement for all students in all subjects at all grade levels?				
▪ Is our vision for success of all students communicated to all school staff, students and parents?				
▪ Do we have and express a commitment to using technology to enhance our teaching strategies?				
▪ Do we recognize the diversity of students' learning styles and base our instruction on these styles?				
▪ Do we integrate use of technology for all students across all subjects and all grades?				
▪ Do we use a collaborative team approach involving special and regular education teachers to improve achievement of all students?				

Tools for Schools
Checklist for Self-Assessment

On-going Staff Development	Always	Frequently	Sometimes	Never
▪ Are teachers provided information, materials and training about instructional strategies to help all students achieve standards?				
▪ Do we use the expertise of our school's teachers who have special skills in assistive technology as part of our staff development efforts?				
▪ Are opportunities provided on a regular and on-going basis for special and regular education teachers to share strategies for instruction?				
▪ Do teachers provide input on the types of staff development they need to meet the diversity of learning needs in their classrooms?				
▪ Do teachers receive training on how to implement assistive technology to help students meet the State's learning standards?				
▪ Are the skills of special education teachers used to help develop instructional strategies for students with disabilities?				
▪ Are staff development activities on-going and related to the educational performance of all students?				

Tools for Schools
Checklist for Self-Assessment

Engaging Curriculum	*Always*	*Frequently*	*Sometimes*	*Never*
▪ Do we promote the active involvement of all of our students in their learning?				
▪ Are all of our students including students with disabilities continuously challenged to improve their academic skills?				
▪ Do we focus our instructional efforts on the learning needs of individual learners including students with disabilities?				
▪ Are all students provided interdisciplinary learning experiences to enable them to make connections across subject areas?				
▪ Are our instructional activities and use of technology designed to connect student learning to real-life experiences?				
▪ Are all students provided challenging work that enables them to strive to reach their highest potential?				
▪ Do we use cooperative learning experiences to help all students strengthen both their academic and their social skills?				
▪ Do we use technology as an integral part of teaching and learning for all students in our school?				

Tools for Schools
Checklist for Self-Assessment

Flexible Resources	Always	Frequently	Sometimes	Never
▪ Do we seek ways to ensure that the maximum amount of time during the school day is devoted to teaching and learning?				
▪ Do our special and regular education teachers share ideas and strategies for helping all students learn?				
▪ Do we draw upon the knowledge and expertise of our own teachers and school staff for using assistive technology in our school?				
▪ Do we use flexible grouping of students to adjust to different learning styles and interests of students including students with disabilities?				
▪ Do we target discretionary grants and funds to strengthen use of technology in our school?				
▪ Do we provide summer school programs to help all students achieve the State's learning standards?				
▪ Do we seek volunteers as tutors and mentors to help all students achieve success in building their skills?				
▪ Do we use school-community partnerships to provide supportive assistance to our students?				

Tools for Schools
Checklist for Self-Assessment

Supportive Involvement of Parents and Community	*Always*	*Frequently*	*Sometimes*	*Never*
▪ Do we provide information to all parents about the State's learning standards and assessments?				
▪ Do we provide information to parents about the instructional strategies we use in classrooms including the use of technology?				
▪ Do we seek input and the insights of parents about their children and the types of learning activities that they enjoy?				
▪ Do we suggest activities including use of technology that parents can use at home to reinforce skills being developed in school?				
▪ Do we assign homework projects that develop students' learning skills and promote family involvement in their learning?				
▪ Do we invite parents to serve on school district and building committees planning use of technology?				
▪ Do we consider parents' work schedules and family commitments when we schedule meetings?				
▪ Have we considered ways of involving community members to as part of our school team?				

Tools for Schools
Checklist for Self-Assessment

Comprehensive Planning	Always	Frequently	Sometimes	Never
▪ Do we develop school building plans that include high achievement standards for all students?				
▪ Do our school and district plans include assistive technology to enable all students to achieve the learning standards?				
▪ Do our plans focus on student achievement and establish specific goals for educational improvement of all students?				
▪ Do our plans build on our successes and our strengths as models for activities we could use in areas in need of improvement?				
▪ Do our plans set clear priorities and high expectations for student achievement for all students and devote resources to meet the priorities?				
▪ Do our plans include use of technology can address the learning needs of a diverse student population?				
▪ Are our plans aligned with the State's learning standards?				
▪ Do we monitor and evaluate plan implementation to determine if we are achieving our goals?				

Individuals with Disabilities Education Act (IDEA)

(from 34 CFR Part 300)

§ 300.308 Assistive technology

  (a) Each public agency shall ensure that assistive technology devices or assistive technology services, or both, as those terms are defined in §§ 300.5-300.6 are made available to a child with a disability if required as a part of the child's-
      (1) Special education under § 300.26;
      (2) Related services under § 300.34; or
      (3) Supplementary aids and services under §§ 300.28 and 300.550(b)(2).
  (b) On a case by case basis, the use of school-purchased assistive technology services in a child's home or in other settings is required if the child's IEP team determines that the child needs access to those devices in order to receive FAPE.

§ 300.5 Assistive technology device

As used in this part, *Assistive technology device* means any item, piece of equipment or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of a child with a disability.

§ 300.6 Assistive technology service

As used in this part, *Assistive technology service* means any service that directly assists a child with a disability in the selection, acquisition, or use of an assistive technology device.

The term includes:

  (a) The evaluation of the needs of a child with a disability, including a functional evaluation of the child in the child's customary environment;
  (b) Purchasing, leasing, or otherwise providing for the acquisition of assistive technology devices by children with disabilities;
  (c) Selecting, designing, fitting, customizing, adapting, applying, maintaining, repairing, or replacing assistive technology devices;
  (d) Coordinating and using other therapies, interventions, or services with assistive technology devices, such as those associated with existing education and rehabilitation plans and programs;
  (e) Training or technical assistance for a child with a disability or, if appropriate, that child's family; and
  (g) Training or technical assistance for professionals (including individuals providing education or rehabilitation services), employers, or other individuals who provide services to, employ, or are otherwise substantially involved in the major life functions of that child.

Part 200 - Students with Disabilities
Definitions Related to Assistive Technology

§ 200.1(e) Assistive Technology Device

Assistive technology device means any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of a student with a disability.

§ 200.1(f) Assistive Technology Service

Assistive technology service means any service that directly assists a student with a disability in the selection, acquisition, or use of an assistive technology device. The term includes:

- the evaluation of the needs of a student with a disability, including a functional evaluation of the student in the student's customary environment;

- purchasing, leasing, or otherwise providing for the acquisition of assistive technology devices by students with disabilities;

- selecting designing, fitting, customizing, adapting, applying, maintaining, repairing, or replacing assistive technology devices;

- coordinating and using other therapies, interventions, or services with assistive technology devices, such as those associated with existing education and rehabilitation plans and programs;

- training or technical assistance for a student with a disability, or if appropriate, that student's family; and

- training or other technical assistance for professionals (including individuals providing education or rehabilitation services), employers, or other individuals who provide services to, employ, or are otherwise substantially involved in the major life functions of that student.

§ 200.4(d)(3)(v) Consideration of Special Factors by the Committee on Special Education

Among other special factors, the Committee on Special Education shall consider whether the student requires assistive technology devices and services, including whether the use of school-purchased assistive technology devices is required to be used in the student's home or in other settings in order for the student to receive a free appropriate public education.

Assistive Technology Guidance

(New York State Education Department)

The following information will assist school districts in discussing the role of assistive technology in providing children with disabilities the ability to participate fully in the learning environment.

Assistive technology has tremendous potential to promote equity because it redefines what's possible for children with disabilities, enabling them to be more independent, self-confident, productive and integrated into the mainstream of school and society.

Technology is for all students. For students with disabilities, it may need to be more personalized. "The IEP/IFSP is a powerful tool to assist educators, parents, and students to develop effective ways of putting assistive technology solutions into educational programs which meet students' needs and promote an equitable environment – one in which accommodations for them are seen as regular, normal and expected" (RESNA, 1992).

Most assistive technology is low in cost, but if we don't think ahead, the few high cost items will create chaos in balancing school budgets. Costs of assistive technology depend on individual student needs and the district's use of existing resources. However, the costs of not providing assistive technology are far greater:
- Students' needs may go unmet
- Less coordination of programs and services for all children
- District's technology resources (human/material) go unused
- Increased potential for hearings and their financial drain for the district

Districts are mandated to make assistive technology available to all students with disabilities. In developing each child's IEP, the IEP team shall consider whether the child requires assistive technology devices and services. If the IEP team determines that a child needs a particular device or service (including intervention, accommodation or other program modification) in order to receive a Free Appropriate Public Education, the IEP team must include a statement to that effect in the child's IEP.

There is access to local, regional, and national resources to help districts to take control and create a desirable future for your students and your district.

There are four outcomes that the assistive technology requirements in IDEA support:
- The District's long range technology and special education plans, procedures, services, and budget include assistive technology.
- All staff are able to appropriately "consider" students for assistive technology services and/or devices.
- Staff are trained to integrate technology in teaching to help students with disabilities gain skills and achieve higher standards – their own as well as the Regents.
- Assistive technology is used to support inclusion of students with disabilities in regular education placements.

Adapted from TRE Center materials available at www.trecenter.org

Universal Design –
Meeting the Diverse Needs of All Students

Applied to instruction, the principles of universal design can guide the development of educational tools to accommodate the diverse needs of all students, including those with disabilities.

As a new paradigm for teaching, learning, assessment and curriculum development, Universal Design for Learning (UDL) draws upon and extends principals of universal design as used in architecture and product design. Architects practicing universal design create structures which accommodate the widest spectrum of users possible, including those with disabilities. In universally designed environments adaptability is subtle and integrated into the design. Designing for the divergent needs of special populations increases usability for everyone. The curb cut is a classic example. Although they were originally designed to help those in wheel chairs negotiate curbs, curb cuts ease travel for those pushing carriages, riding skateboards, pedestrians with canes, as well as, the average walker.

UDL shifts old assumptions about teaching and learning in four fundamental ways:
- Students with disabilities fall along a continuum of learner differences rather than constituting a separate category.
- Teacher adjustments for learner differences should occur for all students, not just those with disabilities.
- Curriculum materials should be varied and diverse including digital and online resources, rather than centering on a single textbook.
- Instead of remediating students so that they can learn from a set curriculum, curriculum should be made flexible to accommodate learner differences.

The central practical premise of UDL is that a curriculum should include alternatives to make it accessible and appropriate for individuals with different backgrounds, learning styles, abilities, and disabilities in widely varied learning contexts. The "universal" in universal design does not imply one optimal solution for everyone. Rather, it reflects an awareness of the unique nature of each learner and the need to accommodate differences, creating learning experiences that suit the learner and maximize his or her ability to progress.

Central tenets of universal design are being expanded and applied in the development of products, transit systems, public and private buildings, and the design of electronic media and Web sites. (See the Trace Research and Development Center Web site, the Sun Microsystems' Enabling Technologies Program Web site, and the Microsoft's Accessibility and Disabilities Site for examples.) The goal is to increase access for people with divergent needs and preferences. Technological advances in three arenas have made CAST's conception of universal design for learning possible: new cognitive neuroscience research tools, new digital multimedia learning tools, and new network technologies.

This article was reprinted from the Center for Applied Special Technology (CAST) web site. Founded in 1984, CAST is an educational, not-for-profit organization that uses technology to expand opportunities for all people, including those with disabilities. More information regarding CAST and the principles of universal design can be found at http://www.cast.org

Using Assistive Technology in the Early Grades Classrooms

Technology is bursting into the classroom at all levels, as a tool for teachers to develop, monitor, and provide instructions, and for students to access and engage in learning. All students can benefit from assistive technology. For students with disabilities, assistive technology can support students to reach higher standards. Most assistive technology can be provided at low cost and within the classroom setting. Following are illustrations of assistive technology for students with disabilities.

Sabrina, an engaging five-year-old girl with cerebral palsy, cannot speak or point. To help her communicate her preferences, she sometimes uses an eye-gaze board, a simple apparatus consisting of a Plexiglas frame with Velcro tabs. During free choice time, Jan, Sabrina's aide, places the eye-gaze board perpendicular to Sabrina's wheelchair tray and fastens six pictures of her preferred activities (e.g., reading a book or listening to music) around its edges. Jan stands behind the board to gauge where Sabrina's eyes are pointing. By looking directly at one of the pictures, Sabrina chooses *Bobby, Bobby, What Can You Do?* her favorite electronic story book. Often, young children who are non-speaking are given one choice at a time and asked to indicate "yes" or "no," while typically developing children pick from a field of choices. By featuring a range of options, the eye-gaze board allows Sabrina to make authentic choices.

Lindsay, a four year old girl with Leigh's disease, takes a turn at the computer. Leigh's disease is a neurogenerative disorder that affects both movement and speech. Lindsay uses a wheelchair, and is able to activate switches and select large targets with her hands. Today, Lindsay requests a nursery rhyme activity from Intellipics, which she accesses via Intellikeys (both by Intellitools). On the Intellikeys overlay are four pictures representing different nursery rhymes. When Lindsay picks London Bridge is Falling Down, the first line of the nursery rhyme is sung aloud by the computer, accompanied by an animated picture of the story line. To activate each successive line of the rhyme, Lindsay must choose the "more" target on the right-hand side of the keyboard. Amanda, a non-disabled student, spontaneously joins Lindsay at the computer and they take turns choosing nursery rhymes.

Ricky's aide, Beth, displays three magazines and Ricky uses his fist to point to the one on the left. Beth slowly turns the pages and when Ricky sees a page he wants to use, he hits his BIGmack switch (Ablenet) which has been programmed to say, "Stop!" Beth begins to scan the small items on the page with her finger and Ricky reactivates his switch when she reaches the one he wants to cut out. A set of electric scissors are plugged into an environmental control unit and the timer is set for thirty seconds. Beth positions the scissors appropriately on the page and Ricky initiates the cutting by pressing his switch. After 30 seconds the scissors stop and Ricky must reactivate them when the time is right. When Ricky indicates he is ready to stop collecting pictures, he glues them on the page with hand-over-hand assistance.

During story time in an elementary classroom, (Susan rotates the small groups every fifteen minutes), Robert, Barbara, and Mark are seated with Susan to read *The Very Busy Spider*. Robert is an eight year old with Down Syndrome who loves books. He communicates using a combination of signs, single words, and pointing. Barbara has cerebral palsy, is nonspeaking, and has reduced muscle strength. Mark, a very verbal eight year old with cerebral palsy and severe visual impairments, also sits in.

Barbara has a BIGmack (Ablenet) switch with the spider's repeated line ("but she was too busy"), Mark has a communication board with just a few locations on it containing characters in the story, and Robert is using the vocabulary sheet Susan used with the earlier group. Susan also has a yellow flannel board with enlarged picture symbols of the animals in the story mounted on it. One by one as she goes through the story, Susan asks the children to point to the animal coming up in the story or identify on their communication boards specific vocabulary. At one point, it is Barbara's turn to say "but she was too busy," so Robert leans over and hits her switch.

Modifying Instructional Strategies, Materials and Tools to Meet Individual Needs

Because every student with a disability has complex and unique needs, the strategies and tools of instruction must be constantly modified so that each student can succeed at learning. Researchers at the *Center for Literacy and Disabilities Studies* have identified dimensions of learning tasks that teachers can modify to engender success.

Physical Demands

Typical learning tasks can be physically challenging for students with motor and/or cognitive impairments. Some students may be physically incapable of manipulating the tasks and tools of learning in standard ways. Others may find physical tasks quite strenuous and readily become fatigued. A careful analysis of the physical demands of the tasks and tools of learning can result in effective modification along this dimension. For example, when students are unable to physically turn pages of typical books, minor adaptations such as foam block page separators may be helpful. Students who are unable to use their hands in this way can access many titles on the computer, turning pages by simply hitting a switch. For students who have difficulty writing, adapted pencils and crayons can be provided, as well as computers with specialized software and hardware.

Sensory Demands

Typical learning tasks have both visual and auditory components which can be challenging for students with visual or hearing difficulties. Therefore teachers must adjust the sensory demands of learning tasks and/or provide specific tools that circumvent these demands. For example, students with visual impairments can benefit from large-print books, Braille translations or specialized storybooks that integrate tactile cues to meaning. Software programs with auditory feedback, including music and speech output, are helpful. Students who are deaf or hard of hearing can benefit from software and videos with either captions or American Sign Language translations.

Communication Demands

The ability to communicate can be significantly limited by motor, cognitive, linguistic or socio-emotional difficulties. Whether a child is non-speaking as a result of cerebral palsy, or is unable to engage socially with peers due to autism, strategies and tools can be manipulated to foster interaction and ensure that all children have the opportunity to express their needs and preferences. The systemic use of alternative communication strategies can provide all students access to the key concepts and vocabulary embedded within the curriculum. As you tour Barbara's and Susan's classrooms, you will see numerous examples of how picture communication symbols and boards and simple communication devices with speech output are integrated into all activities to ensure students are full communicative partners.

Experience Demands

Prior experience is an important component of learning new information. Students with disabilities may have less exposure to the broad range of experiences that comprise a student's background knowledge. Students' opportunities to explore their immediate environments can be limited by the disabling condition itself and the demands it places on students and caregivers. However, instructional strategies can be modified to ensure that students have the necessary foundation for learning. For example, before encountering new concepts or vocabulary, students can be immersed in discussion and examples to build a necessary referential base for deeper learning. Students can be encouraged to identify what they do know about a topic and expand this knowledge through language experience stories.

Emotional Demands

Some students with disabilities struggle with tasks that require risk-taking, perseverance, and self-motivation. Students with disabilities frequently rely on assistance from caregivers to initiate and complete tasks; therefore their opportunities may be limited to develop autonomy and a sense of self-worth. However, tasks can be "scaffolded" in such a way that students can achieve independence and success. That is, tasks can be broken down into component parts and students can be given the necessary structure and prompts to succeed over time. For example, repeated reading of the same words, sentences and passages can promote fluency and confidence in reading. Similarly providing a series of increasingly complex written language models can offer students the structure they need to be creative.

Educational Choices in Assistive Technology

Instructional Use of Video & Captioning
Video and captioning are powerful educational tools for students with disabilities when effectively integrated into the instructional process. Increasingly, educators are experimenting with a variety of video and captioning techniques to bolster literacy skills in students who are deaf and hard of hearing and/or who have learning disabilities.

Multimedia
Multimedia offers students with disabilities alternative ways to access and represent knowledge and information. Multimedia tools can range from simple graphics to the integration of text, graphics, video, music, and sound effects. Increasingly, teachers are discovering that multimedia projects can tap undiscovered strengths and talents that enable students with disabilities to more fully participate in the learning process.

Organizing Tools
Organizing tools refers to a type of software designed to help students organize information and ideas, primarily through the use of "webs" or "concept maps." These visual outlines often appeal to students who feel constrained by the linear nature of text.

Providing Access to Portable Tools   *http://www2.edc.org/NCIP/library/laptops/toc.htm*
Portable computers and other electronic writing aids can provide students with disabilities flexible access to word processing and computing across educational environments. Educators are beginning to learn how to manage the complex implementation issues that arise when schools provide their students with laptops.

Technology in Early Childhood Education   *http://www2.edc.org/NCIP/library/ec/toc.htm*
A variety of lo- and hi-tech tools can greatly enhance educational programming for our youngest students with disabilities. Early childhood educators are discovering the power of technology for promoting growth in communication, social interaction and cognitive development among preschoolers.

Telecommunications *http://www2.edc.org/NCIP/library/telecom/toc.htm*
Telecommunications can provide students with disabilities access to a broad range of authentic learning opportunities through communication with others outside their immediate environments. As special educators begin to explore the information superhighway, they quite frequently do so together with their students.

Word Prediction
Word prediction is an adaptive software feature of some word processing and communications programs which reduce the number of keystrokes necessary to encode words, and which provides online spelling assistance. Word prediction can greatly benefit students with motor impairments, communication impairments, and or/learning disabilities.

Recommended Competencies
in the Area of Assistive Technology
National Association of State Directors of Special Education (NASDSE)

Basic Knowledge of Assistive Technology (AT) Services and Devices

- Understand AT including legal requirements, its purpose and functional application for the student's educational program.

- Demonstrate awareness of a variety of assistive technology devices and services and the ability to integrate technology into educational programs.

- Demonstrate knowledge in their specialty area of assistive technology (e.g., access, alternative/augmentative communication, computer-based instruction, mobility, positioning, assistive listening and signaling devices, recreation/leisure/play, vision technology, environmental control, and activities of daily living).

- Demonstrate the ability to apply discipline specific knowledge regarding AT.

- Demonstrate the ability to use appropriate AT in a variety of educational settings.

- Demonstrate the recognition of the need for ongoing individual professional development and maintaining knowledge of emerging technologies.

Collaboration and Communication

- Understand the transdisciplinary nature of AT application and contribution of a variety of disciplines to the service delivery process.

- Understand skills required to serve as a member of a transdiciplinary team providing services for assistive technology.

- Ability to include parents as team members.

- Ability to listen and respond to input from other tram members.

- Demonstrate effective group process skills.

- Know when and where to refer to other resources for assistive technology.

- Utilize resources to meet technology needs for students with disabilities.

- Demonstrate the ability to network with others in the community, including parents and general educators for technical information and problem solving.

Assessment, Planning and Implementation Process Assessment

- Identify appropriate, qualified team members necessary to determine AT needs and strengths.

- Determine, in collaboration with other members of the assessment team, assistive technology needs as part of a comprehensive transdisciplinary evaluation which addresses all areas related to the disability and is based on a student's strengths, tasks, and expectations.

Recommended Competencies in the Area of Assistive Technology, continued

■ Use appropriate data gathering procedures and strategies to conduct an assistive technology evaluation utilizing a team approach to assess the student in customary environments.

■ Integrate and discuss, in collaboration with the transdisciplinary team, all evaluation information including formulating recommendations and preparing a report.

Planning

■ Develop a plan utilizing appropriate, qualified team members.

■ Identify and design appropriate AT devices, services, and strategies in the plan.

Implementation

■ Implement the plan using a collaborative approach.

■ Evaluate, measure, and report on the effectiveness of the plan to meet the student's needs.

■ Modify the plan as required to meet the student's needs.

■ Identify areas that require further assessment or reevaluation on an ongoing basis.

Resources

■ Identify, in collaboration with team members, assistive technology resources at the classroom, building, district, region, community, state and national level:

– Funding resources;

– Product resources; i.e., augmentative communication, computer access;

– Print and electronic resources; i.e., books, web sites, journals, list serves;

– Human resources; i.e., individuals who can provide assessment, training, customization; and

– Problem solving, maintenance and repair.

■ Recognize own scope of knowledge and skills and utilize identified resources to augment knowledge and skills represented within team.

■ Serve as a resource for others.

■ Identify staff development needs and opportunities which meet needs.

■ Participate in staff development opportunities that address identified needs.

Source: National Association of State Directors of Special Education (NASDSE).

Technology Resources for Education

The Technology Resources for Education (TRE) Center is a co-sponsored project of the New York State Education Department, Office of Vocational Educational Services for Individuals with Disabilities (VESID) and the Albany-Schoharie-Schenectady-Saratoga BOCES.

The TRE Center is developing "Guidelines for Assistive Technology for Service Providers in New York State" that will help districts provide students with disabilities access to learning technologies and ensure compliance with Federal mandates for Assistive Technology.

The TRE Center provides a wide variety of services free of charge. Among them are:

- **Information And Referral Via Toll Free Hotline or Online**: Hotline # is free to anyone in N.Y.S. Any questions about assistive technology, integrating children with special needs into regular classrooms using assistive tech, what to buy, how to use devices, software...(low tech/cheaper solutions as well as high tech). If our staff doesn't know the answer, we will point you to someone who does.

- **C.A.A.T.S.P.A.**: Capital Area Assistive Technology Service Provider Association: A group of people who are working to facilitate access through technology services to persons with disabilities.

- **New York State Assistive Technology Implementation Guidelines for Schools**: The TRE Center has been working with other service providers via it's "advisory council", and "CAATSPA" organizations as well as other providers around the country to help the state formulate a concise set of guidelines for implementing assistive technology in the classroom environment. These have been "in the works" for years now and should be released soon. Look here to download the guidelines when they are released from the State Education Dept.

- **T.R.E. Matters Newsletter**: (FREE - Online or snail mail) Keep up to date on A.T. happenings, *http://www.trecenter.org/newsltrs.htm*

- **Building Delegate Program**: (Educators getting free training to act as a resource for their school or district) They hold theme based monthly meetings.

- **Preview Center**: See *Software* (Macintosh, PC DOS/Windows, Apple II) *http://www.trecenter.org/software.htm*, *Hardware* (switches, boards, etc) *http://www.trecenter.org/hardware.htm*, *Videos http://www.trecenter.org/videos.htm*, and *Printed Resource Materials http://www.trecenter.org/printmats.htm*

- **Web Page**: T.R.E.'s Web site is *http://www.trecenter.org*

Services are also available at BOCES Fee Rates:

- **Student Technology Consultations**: (STC's): Provides recommendations of an effective match between assistive technologies and the student's instructional needs for the student's IEP, *http://www.trecenter.org/stc.htm*

- **Assistive Technology Itinerant Service**: Onsite technical support, planning, and training for school districts, *http://www.trecenter.org/itinerant.htm*

- **Assistive Technology Device Loan Service**: (To School Districts) Districts create and access an extensive library of A.T. devices, and share in training sessions for them. This is a short term (60 Days) loan so that districts can make sure that a device is appropriate for a student before they buy it.

- **Assistive Technology Training including**: Awareness and Detailed Assistive Technology Training; Computer Access Software & Hardware; Funding; Augmentative Communication; Implementing the Statewide A.T. Guidelines Initiative; Team Assessment Training; and Customized Staff Development, *http://www.trecenter.org/workshops.htm*

Contact the TRE Center:

David Grapka, Project Coordinator
T.R.E. Center
Capital Region BOCES
Maywood School
1979 Central Avenue, Albany, NY 12205
Phone: (518) 456-9290 Fax: (518) 456-9289
Toll Free in NY: 1-800-248-9873
Web site: *http://www.trecenter.org*
E-mail: TRECenter1@aol.com

Linking Emergent Literacy and Accountability for Students with Profound Disabilities

by Linda Reece, Sharon Miller, & Lynn Grant

There are few standardized tests that are functional as assessment tools for students with profound disabilities. Up to recently most classrooms for these students did not have a strong academic basis. Often students were not active participants. Teachers and aides took more of a caretaking role and completed activities for them. After attending "Connsense" conference four years ago and "Closing the Gap" the following fall, we decided to adopt Emergent Literacy as our curriculum. At the same time Integrated Therapy was being introduced into our BOCES programs. As a team (teacher, speech, OT, PT, APE, nurse), we chose to use a theme and storybook that enabled us to meet student goals and objectives through meaningful, experiential activities. A core vocabulary was chosen from the storybook theme using the picture communications symbols from Mayer Johnson's Boardmaker.

Our goal was to reinforce the acquisition of this vocabulary throughout our classroom activities. We used many types of instructional media. Books were scanned into the computer for switch access through the IntelliPics program. Interactive laminated storybooks were utilized daily. Songs were developed around our themes and accessed through Hyperstudio and IntelliPics. As appropriate, some students used velcro boards with their selected vocabulary. For the nonverbal students voice output devices such as Big Macs, Multi Levels, Step by Steps, Tech Talks and Tech Speaks were programmed with repetitive lines, comments, questions, directions, etc. for participation in the story activities.

As we became more comfortable with the Emergent Literacy curriculum, we found that the students needed three to four weeks of theme immersion. Accountability with the severe and profound has always been difficult to assess. Now we felt we finally had a vehicle upon which to base more tangible assessments. Our assessments range from observations to data collections. Prior to beginning a unit we choose vocabulary based on student ability. One student may have ten words and another only four. For those students who we feel can't indicate a preference or choice we establish more observational criteria. The observational criteria may include awareness levels, body language, gross vocalizations, toleration of the activity as well as increased length of participation.

Students are assessed at the beginning of the unit and the results are noted. Students are then assessed throughout the unit and at the completion of the unit using the same measure. This repetition of assessment gives us more reliable results since our students have variable performance based on physical status changes.

The types of assessment we used are based on student abilities. Some students use the picture communication symbols to make choices upon request using manual selection or eye gaze. Some students are asked to reach and touch a picture when given verbal cues. Other students use their communication devices to indicate the requested vocabulary or to fill in a blank in the story line. In addition students use the Intellikeys to indicate choices or build simple sentences about the unit. The more verbal students were able to answer comprehension questions using the picture symbols as tools for retrieval. A number of multimedia programs such as Hyperstudio and IntelliPics have quiz components that were easy to adapt to our students.

We take this assessment data including photos to the students' CSE meetings as traditional testing methods are not available or appropriate. This gives the CSE team a clear picture of how we are meeting the student's needs and they are an active participant in their program.

This linking of accountability with emergent literacy has given validity to the premise that all children can learn.

Selected Web-Based Resources

■ **ABLEDATA** is a federally funded project whose primary mission is to provide information on assistive technology and rehabilitation equipment available from domestic and international sources to consumers, organizations, professionals, and caregivers within the United States. The ABLEDATA database contains information on more than 25,000 assistive technology products (18,000 of which are currently available), from white canes to voice output programs. The database contains detailed descriptions of each product including price and company information. The database also contains information on non-commercial prototypes, customized and one-of-a-kind products, and do-it-yourself designs. *http://www.abledata.com*

■ **The Alliance for Technology Access** is a national network of technology resource centers and technology vendors: 41 community-based technology centers in 27 states and the Virgin Islands, and 60 technology designers and developers. ATA technology resource centers help children and adults with disabilities, parents, teachers, employers, and others to explore computer systems, adaptive devices and software. Centers directly serve over 100,000 people annually and impact the lives of another 300,000 people by working with teachers and other professionals. *http://www.ataccess.or*

■ **Apple Computers** provides real-life examples of classrooms where the use of technology with computers makes a difference in the lives of students with disabilities. Success stories include the categories of: vision, hearing, physical/motor, literacy and learning, language and communication. *http://www.apple.com/education/k12/disability*

■ **CAST (Center for Applied Special Technology)** is an educational, not-for-profit organization that uses technology to expand opportunities for all people, including those with disabilities. Universal Design for Learning (UDL) is a new approach to teaching and learning and the development of curriculum and assessment that draws on current brain research and new media technologies to respond to individual learner differences. In a collaborative agreement with the U.S. Department of Education's Office of Special Programs (OSEP), CAST has established a National Center on Accessing the General Curriculum to provide a vision of how new curricula, teaching practices, and policies can be woven together to create practical approaches for improved access to the general curriculum by students with disabilities. *http://www.cast.org*

■ **Closing the Gap** provides information about technology for special educators. This organization also maintains a searchable database and printable resource of assistive technology products. *http://www.closingthegap.com*.

■ **DREAMMS for Kids, Inc. (Developmental Research for the Effective Advancement of Memory and Motor Skills)** is a non-profit parent and professional service agency, that specializes in Assistive Technology (AT) related research, development, and information dissemination. Founded in 1988 by the parents of a child with Down syndrome, DREAMMS is committed to facilitating the use of computers, assistive and adaptive technologies, and quality instructional technologies for students and youth with special needs in schools, homes, and the community. *http://www.dreamms.org*

■ **LINKUS: The Center to Link Urban Schools with Information and Support on Special Education and Technology** works in close collaboration with two urban districts (Boston Public Schools and Community District 15 in Brooklyn, New York). The LINKUS project is testing, refining, and disseminating a model of effective technical assistance around using technology for students with disabilities. Universal Design for Learning and

research-based professional development form the cornerstone of the LINKUS model. *http://www.edc.org/LINKUS*

▪ **Microsoft** has developed a number of products and adaptations for computers and has been active in assisting individuals with disabilities in computer use. This site features training guides for people with vision impairments, hearing impairments, mobility impairments, and cognitive and language impairments. *http://microsoft.com/enable*

▪ **Project ASSIST: All Students in Supported Inquiry-based Science with Technology** is an EDC project which collaborates with the Cambridge, Massachusetts, Public Schools to help teachers provide access to high-quality science curricula supported by technology to students with disabilities. Elementary classroom teachers, science staff development teachers, special educators, and technology/ media specialists engage in action planning reflection cycles in which they develop science lessons and assess the progress of students with and without disabilities. The project is nationally disseminated through a website and publications. *http://www.edc.org/ARProcess/*

▪ **RESNA (Rehabilitation Engineering and Assistive Technology Society of North America)** is an interdisciplinary association of people with a common interest in technology and disability. Our purpose is to improve the potential of people with disabilities to achieve their goals through the use of technology. We serve that purpose by promoting research, development, education, advocacy, and the provision of technology and by supporting the people engaged in these activities. *http://www.resna.org*

▪ **The Technology and Media Division of the Council for Exceptional Children** website promotes collaboration among educators and others interested in using technology and media to assist individuals with exceptional educational needs and encourages the development of new applications, technologies, and media that can benefit individuals with exceptionalities. TAM holds an annual conference on special education and technology and currently supports a growing network of state and provincial TAM subdivisions. *http://www.tamcec.org*

▪ **The Trace Research & Development Center** is a part of the College of Engineering, University of Wisconsin-Madison. Its mission is to prevent the barriers and capitalize on the opportunities presented by current and emerging information and telecommunication technologies, in order to create a world that is as accessible and usable as possible for as many people as possible. *http://trace.wisc.edu*

▪ **The Wisconsin Assistive Technology Initiative** is a statewide project to make assistive technology devices and services more available to children with disabilities. This site offers a wide range of tools and materials for teachers and schools including a fifteen page student assessment guide. Materials, best practices and assessment tools are featured. *http://www.wati.org*

Selection of certain web sites does not signify endorsement by the New York State Education Department. Each of these web sites is further linked to many other sites featuring information regarding assistive technology.

Lifelong Services Network - About Us

Lifelong Services Network is the gateway to technical assistance, information and referral services for children and adults with disabilities and professional development provided by the Office of Vocational and Educational Services for Individuals with Disabilities (VESID). The Lifelong Services Network and its components can be reached online at
http://www.vesid.nysed.gov/lsn/home.html

The Lifelong Services Team, a unit within VESID's Program Development and Support Services, administers the components of the Network from VESID. The Team is charged with improving outcomes for children, students and adults with disabilities by increasing coordination, communication and cooperation between members of the Network.

Contact with the Network can be made either through the Regional Facilitators representing LSN throughout the State or directly with local network members. The network invites you to contact your local LSN members with questions concerning how they can help you. Network members provide a variety of services for parents, school professionals and parents. Following is a brief listing of services that can be reached through the network via its web page.

Bilingual Special Education Resources Network
http://www.vesid.nysed.gov/lsn/bilingual.htm
Assistance in the education of students who speak a language other than English. (Ages 3-21)

Deaf/Hard Of Hearing/Deafblind
http://www.vesid.nysed.gov/lsn/deaf.htm
Information and services for children and adults. (Ages Birth-Adult)

Early Childhood Direction Centers
http://www.vesid.nysed.gov/lsn/ecdc.htm
Neutral Information and referral for children. (Ages Birth-5)

Independent Living Centers
http://www.vesid.nysed.gov/lsn/ilc.htm
Peer model services and community advocacy for all people with disabilities. (Ages Birth-Adult)

Interagency Partnerships
http://www.vesid.nysed.gov/lsn/interagency.htm
Supporting the established statewide school-community collaborations such as: Partners for Children.

Mediation Services
http://www.vesid.nysed.gov/lsn/mediation.htm
Dispute resolution in special education identification and placement. (Ages 3-Adult)

Our Staff
http://www.vesid.nysed.gov/lsn/staff.htm
Staff at the NY State Education Department Lifelong Services Unit (including phone numbers).

Parent Centers
http://www.vesid.nysed.gov/lsn/parent.htm
Specific assistance to parents with children with disabilities. (Ages Birth-21)

Regional Facilitators
http://www.vesid.nysed.gov/lsn/facilitators.htm
Lifelong Services Network (LSN) regional representatives.

Resource Center for Visually Impaired
http://www.vesid.nysed.gov/lsn/visual.htm
Professional development, library, textbooks and materials. (Ages Birth-21)

Special Education Training and Resource Centers
http://www.vesid.nysed.gov/lsn/setrc.htm
Professional development and assistance for school professionals. (Ages 3-Adult)

Technology Resources for Education (TRE)
http://www.vesid.nysed.gov/lsn/tre.htm
Training, information, and administrative services regarding the provision of assistive technology devices. (Ages Birth-21)

Transition Coordination Sites
http://www.vesid.nysed.gov/lsn/transition.htm
Assistance with preparing youth with disabilities, for living, learning, working and participating successfully in the community as adults. (Ages 14-21)

Assistive Technology Checklist

Writing

Mechanics of Writing
- ☐ Pencil/pen with adaptive grip
- ☐ Adapted paper (e.g. raised line, highlighted lines)
- ☐ Slantboard
- ☐ Typewriter
- ☐ Portable word processor
- ☐ Computer
- ☐ Other:

Alternate Computer Access
- ☐ Keyboard w/ Easy Access or Access DOS
- ☐ Word Prediction, abbreviation/expansion to reduce† keystrokes
- ☐ Keyguard
- ☐ Arm Support (e.g. Ergo Rest)
- ☐ Track ball/track pad/ joystick w/ onscreen keyboard
- ☐ Alternate keyboard (e.g. IntelliKeys, Disc. Board, TASH)
- ☐ Mouth stick/head pointer w/ standard/alternate keyboard
- ☐ Head Mouse/Head Master/Tracker w/ onscreen keyboard
- ☐ Switch with Morse Code
- ☐ Switch with scanning
- ☐ Voice recognition software
- ☐ Other:

Composing Written Material
- ☐ Word cards/word book/word wall
- ☐ Pocket dictionary/thesaurus
- ☐ Electronic/talking electronic dictionary/thesaurus/ spell checker (e.g. Franklin Bookman)
- ☐ Word processor w/ spell checker/grammar checker
- ☐ Word processor w/ word prediction (e.g. Co:Writer) to facilitate spelling and sentence construction
- ☐ Talking word processor for multisensory typing
- ☐ Multimedia software for expression of ideas (assignments)
- ☐ Voice recognition software
- ☐ Other:

Communication
- ☐ Communication board/book with pictures/objects/ letters/words
- ☐ Eye gaze board/frame
- ☐ Simple voice output device (e.g. BigMack, Cheap Talk, Voice in a Box, MicroVoice, talking picture frame, Hawk)
- ☐ Voice output device w/ levels (e.g. 6 Level Voice in a Box, Macaw, Digivox)
- ☐ Voice output device w/ icon sequencing (e.g. AlphaTalker Liberator, Chatbox)
- ☐ Voice output device w/ dynamic display (e.g. Dynavox, Speaking Dynamically w/ laptop computer/Freestyle)
- ☐ Device w/ speech synthesis for typing (e.g. Cannon Communicator, Link, Write:Out Loud w/ laptop computer)
- ☐ Other:

Reading, Studying, and Math

Reading
- ☐ Changes in text size, spacing, color, background color
- ☐ Book adapted for page turning (e.g. page fluffers, 3-ring binder)
- ☐ Use of pictures with text (e.g. Picture It, Writing with Symbols)
- ☐ Talking electronic device to pronounce challenging words (e.g. Franklin Bookman, American Heritage Dictionary)
- ☐ Scanner w/OCR and talking word processor
- ☐ Electronic books
- ☐ Other:

Learning/Studying
- ☐ Print or picture schedule
- ☐ Low tech aids to find materials (i.e., index tabs, color coded folders)
- ☐ Highlight text (e.g. markers, highlight tape, ruler, etc.)
- ☐ Voice output reminders for assignments, steps of task, etc.
- ☐ Software for manipulation of objects/concept development (e.g. Blocks in Motion, Toy Store) may use alternate input device, e.g. switch, touch window
- ☐ Software for organization of ideas and studying (e.g. Inspiration, Claris Works Outline, PowerPoint, etc.)
- ☐ Recorded material (books on tape, taped lectures with number coded index, etc.)
- ☐ Other:

Math
- ☐ Abacus/ Math Line
- ☐ Calculator /calculator with print out
- ☐ Talking calculator
- ☐ Calculator w/ large keys and/or large LCD print out
- ☐ On screen calculator
- ☐ Software with cueing for math computation (may use adapted input methods)
- ☐ Tactile/voice output measuring devices (e.g. clock, ruler)
- ☐ Other:

Recreation & Leisure

☐ Adapted toys and games (e.g. toy with adaptive handle)
☐ Use of battery interrupter and switch to operate a toy
☐ Adaptive sporting equipment (e.g. lighted/bell ball, velcro† mitt)
☐ Universal cuff to hold crayons, markers, paint brush
☐ Modified utensils (e.g. rollers, stampers, scissors)
☐ Ergo Rest to support arm for drawing/painting
☐ Drawing/graphic program on computer† (e.g. Kid Pix, Blocks in Motion)
☐ Playing games on the computer
☐ Music software on the computer
☐ Other:

Activities of Daily Living (ADLs)

☐ Adaptive eating devices (e.g. foam handle on utensil)
☐ Adaptive drinking devices (e.g. cup with cut out rim)
☐ Adaptive dressing equipment (e.g. button hook, reacher)
☐ Other:

Mobility

☐ Walker
☐ Grab rails
☐ Manual wheelchair
☐ Powered mobility toy (e.g. Cooper Car, GoBot)
☐ Powered wheelchair w/ joystick, head switch or sip/puff control
☐ Other:

Environmental Control

☐ Light switch extension
☐ Use of Powerlink and switch to turn on electrical appliances (e.g. radio, fan, blender, etc.)
☐ Radio/ Ultra sound/ remote controlled appliances
☐ Other:

Positioning & Seating

☐ Non-slip surface on chair to prevent slipping (e.g. Dycem)
☐ Bolster, rolled towel, blocks for feet
☐ Adapted/alternate chair, side lyer, stander
☐ Custom fitted wheelchair or insert
☐ Other:

Vision

☐ Eye glasses
☐ Magnifier
☐ Large print books
☐ CCTV (closed circuit television)
☐ Screen magnifier (mounted over screen)
☐ Screen Magnification Sftwr. (e.g. CloseView, Zoom Text)
☐ Screen color contrast (e.g. CloseView)
☐ Screen reader (e.g. OutSpoken), text reader
☐ Braille translation software
☐ Braille printer
☐ Enlarged or Braille/tactile labels for keyboard
☐ Alternate keyboard with enlarged keys
☐ Braille Keyboard and Note taker (e.g. Braille N Speak)
☐ Other:

Hearing

☐ Pen and paper
☐ Computer/portable word processor
☐ TTY for phone access w/ or w/o relay
☐ Signaling Device (e.g. vibrating pager)
☐ Closed Captioning
☐ Real time captioning
☐ Computer aided notetaking
☐ Screen Flash for alert signals on computer
☐ Personal amplification system
☐ Hearing Aid
☐ FM system
☐ Loop system
☐ Infrared system
☐ Phone amplifier
☐ Other:

Comments:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Adapted from the Wisconsin Assistive Technology Initiative, http://www.wati.org

Assistive Technology Assessment Procedure Guide for School Districts/Birth-3 Programs

(Sample from Wisconsin Assistive Technology Initiative)

School District: _____

School: _____

Student:_____

Grade:_____

Team/members:_____

_____

_____

_____

Before the Meeting:

Step 1: Team Members Gather Information. Review existing information regarding child's abilities, difficulties, environment, and tasks. If there is missing information, you will need to gather the information by completing formal tests (e.g. Bruininks-Oseretsky, Peabody, etc.), completing informal tests, and/or observing the child in various settings. The WATI Student Information Guide and Environmental Observation Guide are used to assist with gathering information. Complete forms are available at *http://www.wati.org*

Step 2: Schedule Meeting. Schedule the meeting with team. Team includes: Parents, student (if appropriate), service providers (e.g.. Spec. Ed. Teach., Gen. Ed. Teach., SLP, OT, PT, Admin.), and others.

At the Meeting:

Step 3: Team Completes Problem Identification Portion of AT Planning Guide. Choose someone to write all topics where everyone participating can see them. The emphasis in Problem Identification is identifying tasks the child needs to be able to do and the relationship of the child's abilities/difficulties and environment to the child's performance of the tasks.

Note: Team should move quickly through listing "Student's Abilities/Difficulties related to tasks" (5-10 min). Team should move quickly through "Environmental Considerations" (5-10 min.), listing key aspects of the environment in which the child functions and the child's location and positioning within the environment. Identifying the Tasks the child needs to be able to do is important because the Team cannot generate AT Solutions until the Tasks have been identified.

Step 4: Choose Tasks for Solution Generation. Identify 1 (or possibly 2) critical tasks for which the team will generate solutions.

Step 5: Solution Generation. Brainstorm all possible solutions
Note: The specificity of the solutions will vary depending on the knowledge and experience of the team members; some teams may generate names of specific devices with features that

continued

will meet the child's needs, other teams may simply talk about features that are important, e.g. "needs voice output", "needs to be portable", "needs few (or many) messages", "needs input method other than hands", etc. Teams may want to use specific resources to assist with Solution Generation. These resources include; the AT Checklist , the ASNAT manual, the Tool Box in Computer Resources for People with Disabilities, AAC match or Needs First software, Trace Resource Book, Closing the Gap Directory, and/or WATI consultant.

Step 6: Solution Selection. Discuss the solutions listed, thinking about which are most effective for the student. It may help to identify solutions which can be implemented 1) immediately, 2) in the next few months, and 3) in the future. At this point list names of specific devices, hardware, software, etc. If the team does not know the names of devices, etc., use resources noted in Step 5.

Step 7: Implementation Plan. Develop Implementation Plan (including trials with equipment) – being sure to assign names and dates and Follow Up Plan.

Reminder: Steps 3-7 occur in a meeting with all topics written where all participants can see them because decision making is a process which involves service providers who work with a child in his/her customary environment and the child's parents. Use a flip chart, board or overhead during the meeting and ensure that someone transfers the information to paper for the child's file or future reference.

After the Meeting:

Step 8: Implement

Step 9: Follow Up on Planned Date

Date Completed:

Wisconsin Assistive Technology Initiative
Assistive Technology Consideration Guide

Student: _____

School: _____

1. What task is it that we want this student to do, that s/ he is unable to do at a level that reflects his/ her skills/ abilities (writing, reading, communicating, seeing, hearing)? Document by checking each relevant task below. Please leave blank any tasks which are not relevant to the student's IEP.

2. Is the student currently able to complete tasks with special strategies or accommodations? If yes, describe in column A for each checked task.

3. Is there available assistive technology (either devices, tools, hardware, or software) that could be used to address this task? (If none are known, review WATI's AT Checklist) If any assistive technology tools are currently being used (or were tried in the past), describe in column B.

4. Would the use of assistive technology help the student perform this skill more easily or efficiently, in the least restrictive environment, or perform successfully with less personal assistance? If yes, complete column C.

Tasks:	A. If currently completes task with special strategies/accommodations, describe.	B. If currently completes task with assistive technology tools, describe.	C. Describe new or additional assistive technology to be tried.
Mechanics of Writing			
Computer Access			
Composing Written Material			
Communication			
Reading			
Learning/Studying			

Tasks:	A. If currently completes task with special strategies/accommodations, describe.	B. If currently completes task with assistive technology tools, describe.	C. Describe new or additional assistive technology to be tried.
Math			
Recreation and Leisure			
Activities of Daily Living (ADLs)			
Mobility			
Environmental Control			
Positioning and Seating			
Vision			
Hearing			

5. Are there assistive technology services (more specific evaluation of need for assistive technology, adapting or modifying the assistive technology, technical assistance on its operation or use, or training of student, staff, or family) that this student needs? If yes, describe what will be provided, the initiation and duration.

_____

_____

Persons Present:_____Date:_____

The TRAID Project's BUYER BE AWARE –
Buying Assistive Technology Devices

The TRAID Project serves individuals with disabilities and their families and has regional technology centers throughout the state. Following is an article for consumers which provides information that could be useful to teachers, Committees on Special Education and school districts as assistive technology decisions are made.

"Assistive Technology" can mean many different things to many people. Assistive technology is any item, product or piece of equipment used by persons with disabilities to maintain or improve their abilities. Assistive technology ranges from high tech products, such as complex computerized systems or specialized wheelchairs, to low-tech items, such as oversized door handles or button hoods. This brochure will help guide you through the sometimes difficult maze you can face when buying an unfamiliar product, raise questions you'll want answered before you buy and provide resources for additional help.

DOING YOUR HOMEWORK
When shopping for an assistive device, you should use common sense and ask the same questions you would when purchasing any other product.

DO
- Be an informed consumer
- Check out vendors' service reputations
- Try out the product, if possible, before buying
- Compare warranties
- Avoid impulse buying
- Shop around

MAKING A SELECTION
The first – perhaps most important – step you should take before buying an assistive technology device is deciding which product will BEST meet your needs. This can be a lot tougher than it sounds. For example, you may think you want an assistive device that enables you to "walk" or "talk," when what you really want is to be mobile or to be able to communicate. The distinction can be subtle, but important. If you are looking on behalf of someone else, find out what that person really needs, rather than relying on what you think they need.

SOME QUESTIONS TO CONSIDER
- Does it meet your needs?
- Will it work in the environment that you need it for?
- Does it fit in your car or van for easy transport?
- If you become more skillful or you grow, will it still accommodate your needs?

FINDING A VENDOR
There are people and organizations that can assist in matching the user's abilities, how and where the product will be used and current choices to meet those objectives. These organizations work with you to identify the correct product or products and assist in finding the vendors or stores that sell and service that product. Compile your list of vendors or stores and check their reputations by contacting the area better business bureau, independent living

center, vendor associations or other applicable professional or consumer watchdog organizations. Then, narrow your search further by calling the places that most interest you.

ASK

- How long has the store been in business and how many of these products has it sold?
- Is the product in stock or, if it needs to be special ordered, how long will that take?
- How much does it cost?
- Is the store accessible?
- Is an appointment necessary so that someone familiar with the product can demonstrate it?
- Can someone demonstrate the product in the home?

MEETING WITH THE VENDOR/OR AT THE STORE

Once at the vendor or store, look over the product carefully. Have a knowledgeable, patient salesperson demonstrate the product and then use it yourself. The person using the device should be the person who tests the device. Ask if it is durable? Will it be easy to move or assemble? Are the knobs, switches, straps, etc. accessible and easy to use for you or the person who will be using them? Are there extra features that will make the product more versatile, reliable and user-friendly or are they features that are not really needed? Are adaptations or additional parts necessary to accommodate the device? Was the salesperson easy to talk to and knowledgeable? Did he or she apply pressure to buy right away or become impatient with questions? Were the answers vague or misleading?

KNOWING ABOUT WARRANTIES AND TRAINING

- What do both the manufacturer's and store's warranties cover and for how long?
- Are extended warranties available and what do they cost? Will the product be serviced at your home? If not, where can the device be serviced and will a loaner be provided?

DON'T FORGET

- To read the warranty and sales contract agreements thoroughly before signing, checking for limitations or conditions of coverage and hidden costs.
- Is there training available and how much, if anything, will it cost? Can third-party funding cover training? What are the refund and exchange policies? Can you trade in the product or upgrade it?

PAYING FOR THE DEVICE

You will need to know what type of payment is accepted by the vendor. Do they accept third-party payments (i.e., Medicaid, Medicare, private insurance)? If not, can other funding be arranged? Third-party payers usually choose the vendor or store and then purchase the item on your behalf. If you make the purchase instead, you may not be reimbursed by the third-party payer.

The TRAID Project has developed a series of brochures on funding for assistive technology devices. These brochures are available on request.

If you need information or assistance, contact:
> NYS Office of Advocate for Persons with Disabilities
> TRAID Project
> 1 Empire State Plaza, Suite 1001 Albany, New York 12223
> Toll-free phone: 800-522-4369 (voice and TTY)
> Or e-mail to: *traid@nysnet.net*

Teacher Resources Related to Instruction of Students with Disabilities

Access to Courses and Tests

The Board of Regents and the New York State Education Department have made a strong commitment to ensure students with disabilities are included in the total school program, meet high standards and are integrated with their non-disabled peers. Students with diverse learning needs may require accommodations, program modifications or adaptations of instructional methods and materials to maximize their learning and/or adjust for their learning capabilities.

In order for students with disabilities to be prepared to take the new Regents examinations they must be taught the same content areas and participate in classroom, school and state-wide testing as do all other students. Students must also receive the appropriate special education supports, supplementary aids and services and testing accommodations they need in order to be successful in achieving and demonstrating their knowledge of the general education curriculum.

Safety Net for Students with Disabilities

The Board of Regents ensures a safety net for students with disabilities during the phase-in period of requiring all students to take and pass five Regents examinations in order to graduate. During the phase-in period, students receiving special education services and entering 9th grade between September 1996 and September 2000 will take each Regents exam required for their entering class. Students who fail a Regents exam required for their class will be allowed to take the Regents Competency Test (RCT) in that subject and receive a local diploma. The student may take the RCT before or after the Regents examination. For some students, an Individualized Education Program (IEP) diploma is available based on satisfactory completion of the goals and objectives on the student's IEP.

Resource Materials

Deciding What to Teach and How to Teach It: Connecting Students Through Curriculum and Instruction, Castagnera, E., Fisher, D., Rodifer, K., and Sax, C. Peak Parent Center, Colorado Springs, Colorado, 1998. (phone - 800 - 284-0251) www.peakparent.org

Adapting Curriculum and Instruction in Inclusive Classrooms: A Teacher's Desk Reference, 2nd Edition, The Center for School & Community Integration, Institute for the Study of Developmental Disabilities, Bloomington, Indiana, 1999 (phone - 812-855-6508)

Web sites with additional information regarding students with disabilities:

Special Education Training and Resource Centers (SETRC):
   www.vesid.nysed.gov/lsn/setrc.htm

Effective Practices:
   http://web.nysed.gov/vesid/sped/effective/effecmain.html

Resources on the inclusion of students with disabilities into general education classrooms:
   http://systemschange.syr.edu

Assistive Technology:
   http://go.to/trecenter