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## Assistive Technology at Work

By: National Center for Technology Innovation and Center for Implementing Technology in Education (2006)

Although an immediate transition into an institution of higher learning is ideal for some students who relied on assistive technology in high school, many make the decision to enter the workforce after graduation. It is estimated that about 85 percent of students with learning disabilities (LD) transition directly from school to work.<sup>1</sup> Furthermore, statistics addressing employment among people with disabilities indicate that the workplace consists of approximately 18.6 million people with disabilities, ranging in age from 16 to 64. This represents about 56% of all people with disabilities in this age category.<sup>2</sup> Given the vast number people with disabilities in the workplace, the potential for assistive technology (AT) to increase productivity is great.

This Info Brief addresses assistive technology on the job by outlining employers' and employees' responsibilities related to AT, identifying appropriate AT, exploring various types of solutions in the workplace, and providing a list of further resources.

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### Providing assistive technology in the workplace: Who is responsible?

Under the Individuals with Disabilities Education Improvement Act (IDEA, 2004), local education agencies are responsible for providing AT to students with disabilities who could benefit from such accommodations. Once students finish school, the school district has the right to expect any AT devices that it lent to be returned. However, in some circumstances, an arrangement can be made between a school system and an exiting student so that the student can keep the equipment. For example, if the AT is outdated by the district's standards, or if it has been customized specifically for an individual, the district may agree to sell the equipment at fair market rate. Even though this will require the student or an outside agency to spend money, the equipment can usually be acquired at a much lower price than if purchased new.

Although IDEA covers AT in the K-12 environment, legislation guiding accommodations in the workplace are not as prescriptive. The 1990 Americans with Disabilities Act (ADA) requires employers with 15 or more employees to provide "reasonable accommodations" to help employees that self-identify as having a disability perform the essential functions of their job so long as providing the accommodation does not pose an "undue hardship" to the employer. An undue hardship may relate to the expense or challenges involved with implementing the device into the existing infrastructure at work. It is the responsibility of the individual to disclose his or her disability to an employer and request accommodations. The process of identifying specific accommodations should be a negotiation between employee and employer. Employers are not required to provide the exact accommodation requested by the employee. An employee may suggest an accommodation, and the employer may suggest an alternative recommendation, which the employee must consider. The employer has the right to request "medical" documentation and refuse letters from educational specialists. If the employee does not provide such documentation, the employer is not required to provide an accommodation. If necessary, individuals with disabilities should contact the Human Resources office in their workplace to initiate a request for accommodations under the ADA. For additional information on ADA and the workplace, see **The Americans with Disabilities Act**.

Finding employment may seem like a job in itself. However, state vocational rehabilitation (VR) services help adults and youth with disabilities find and succeed in employment. Many high schools' special education coordinators include VR services in transition planning for students with Individualized Education Plans. Local VR offices work within the community to evaluate client needs, make matches with employers, and offer support for success. If AT is required for success at a particular job, the device and training may be funded through the VR office. The VR case manager can serve as a liaison with the employer to arrange and integrate the AT and employee needs into the workplace. See the link below to find a state VR office.

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### Identifying assistive technology needs: Creating a good fit

Adults with LD have provided many insights into successful employment strategies in books such as *Exceeding Expectations* and *Meeting the Challenge*. These and other books about adults with LD (see full list below), emphasize the need to find an environment and set of job duties that match their interests, work habits, and personality in order to succeed in a workplace. For individuals with disabilities, understanding what they need in order to be productive and being creative and honest about their strengths and limitations is the key. Adults with LD and ADHD often need to try out several positions before they find and create a good fit. AT may be part of a creative approach to helping employees succeed.

The Job Accommodation Network (JAN) is a free consulting service designed to increase the employability of people with disabilities by providing individualized worksite accommodation solutions. It offers the following step-by-step process for identifying AT appropriate for your job: (1) define the situation; (2) explore resources; (3) choose the AT; (4) implement AT accommodation(s); and (5) monitor accommodations. The full process as described by JAN, which includes checklists and self-report questionnaires, can be found **here on the JAN website**. The original document on which JAN text is based can be found **here on the U.S. Equal Employment Opportunity Commission website**. JAN counselors are available for telephone consultations for individuals with disabilities who would like personalized guidance on employability issues, including identifying and securing appropriate accommodations at 1-800-526-7234.

## Assistive technology solutions: What is available?

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People often think about highly sophisticated and expensive devices that are designed to meet specific needs associated with a disability when discussing AT. However, AT can also be found in less complicated devices that are moderately priced, such as talking calculators. AT can even be found in existing technology, such as the spell checker feature of a word processor. The following list highlights various AT devices, some that are portable and some that enhance a personal workstation.

### Portable solutions

- Portable Spell Checkers–

check spelling on the go; many also have a dictionary and thesaurus, and some read text aloud

- Reading Pens–

scan and read aloud single words or lines of text from a page, also equipped with a dictionary

- Talking Calculators–

use as a standard calculator with the addition of reading the numbers and functions aloud

- Portable Word Processors–

draft documents or take notes with the support of spell check and other editing capabilities, some quite lightweight

- Digital Recorders–

document impromptu spoken instructions or other audio, download the audio file to a computer or other mp3 player

- Color Coded Jump Drives–

transport data from one computer to another, personalize a color-coding system to keep track of various sets of information

- Personal Digital Assistants (PDA's) and Cell Phones–

These devices have a range of features such as alarms, calendars, calculators, and some even have global positioning systems. Combination PDA-Cell Phones are available, eliminating the need to carry two

separate devices. Initial assistance may be required when programming a PDA or cell phone to meet personal needs; users should ask sales representatives or tech support (from the vendor or in their place of employment) to help customize the features and for demonstrations of how to use them.

For additional information on portable solutions, see **On The Go: What Consumer Products Can Do For You (If You Know Where to Look!)**.

## Workstation Solutions

- Text-to-Speech Software–  
read electronic text, highlight words as they are being read, proofread your own writing
- Word Prediction Software–  
get assistance in spelling and typing with a list of predicted words after a few letters have been typed
- Speech Recognition–  
convert dictation to text if you experience difficulty typing or writing
- Spell and Grammar Check–  
try various ways to use the spell and grammar check on the word processor; if it is distracting while writing, turn it off until the document is in draft
- Information Management and Communication Software–  
organize e-mail messages, schedules, tasks, notes, and contact information, receive alerts for meetings and timelines
- Google Desktop–  
search email and computer drives for files and folders
- Headphones–  
manage distractions and concentration with soft music or white noise played through headphones
- Computer Accessibility Features–  
customize your computer to fit your learning needs. Adjust the contrast and enlarge print and graphics on the screen; adjust contrast and background color schemes; adjust keystroke and mouse controls with "StickyKeys" and "MouseKeys" settings; create macros that automatically fill in commonly typed information (address, signature block, etc.).

For additional information on workstation solutions, see **Options: Turn Them On For Learning**.

## Making assistive technology work

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It is the responsibility of an employee to initiate the process of identifying appropriate AT and to self-identify the disability to an employer when requesting AT as an accommodation on the job. Although many people with LD can facilitate this process independently, those with severe impairments may need to enlist the assistance of a job coach, VR case manager, or Human Resources specialist. Regardless of one's type or extent of disability, meaningful and fulfilling employment opportunities are available. Appropriate AT may contribute to success on the job.

## Additional information

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The Web sites listed below provide useful information for people with disabilities in the workplace. Many include information about AT, and some are specific to individuals with LD:

### **Assistive technology**

- **ABLEDATA**

Provides objective information about AT products and rehabilitation equipment available from domestic and international sources.

- **The Alliance for Technology Access**

A national network of community-based resource centers, developers, vendors, and associates that is dedicated to providing information and support services to individuals with disabilities, and increasing their use of standard, assistive, and information technologies.

- **The ReadingMatrix by NCTI**

Helps users identify software containing features to support reading, especially helpful for struggling readers and those with various forms of reading disabilities.

- **State Assistive Technology Projects**

Provides a list of projects that can provide technical assistance on AT, consultation, product demonstrations, equipment borrowing, and low-interest loans for individuals with disabilities.

### **Employment and Transition Resources**

- **National Secondary Transition Technical Assistance Center**

A national technical assistance and dissemination center funded by the U.S. Department of Education's Office of Special Education Programs ( **OSEP**). The Center aims to assist states to build capacity to support and improve transition planning, services, and outcomes for youth with disabilities.

- **Job Accommodation Network**

A free consulting service designed to increase the employability of people with disabilities by providing individualized worksite accommodations solutions, providing technical assistance regarding the ADA and other disability related legislation, and educating callers about self-employment options.

- **SwabLearning.Org**

A nonprofit organization dedicated to providing reliable, parent-friendly information from experts and parents. SwabLearning.org provides four articles addressing issues of importance to young adults in the workplace by Paul J. Gerber, Ph.D., a professor in the Department of Special Education and Disability Policy at Virginia Commonwealth University . These articles are entitled:

- **Self-disclosure of Learning Disabilities in the Beyond-School Years**
- **Finding the "Best Fit" for Young People with LD in the Workplace**
- **Transition to Work: Helping Teens Prepare for Typical Employer Questions**
- **Starting Out Right: Transition to Employment for Young People with LD**

- **U.S. Dept of Labor– Office of Disability Employment Policy**

Provides national leadership by developing and influencing disability-related employment policy and

practice affecting the employment of people with disabilities.

- **Vocational Rehabilitation State Offices**>

Links to vocational rehabilitation offices throughout the United States and territories.

## References

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## Endnotes

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1. Starting out right: Transition to employment for young people with LD,  
<http://www.schwablearning.org/articles.asp?r=979>, retrieved October 25, 2006.
2. U.S. Census Bureau, Disability Status 2000: Census 2000 Brief (March 2002),  
<http://www.census.gov/prod/2003pubs/c2kbr-17.pdf>.

A "Tech Works" brief from the **National Center for Technology Innovation** (NCTI) and the **Center for Implementing Technology in Education** (CITEd).

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<http://ldonline.org/article/11908?theme=print>

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