



# Canada: Requirements for Assistive Technology for Students with Special Needs

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## Background

Assistive technology (AT) is a generic term that includes assistive, adaptive, and rehabilitative devices for people with disabilities and includes the process used in selecting, locating, and using them.

AT promotes greater independence by enabling people to perform tasks that they were formerly unable to accomplish, or had great difficulty accomplishing, by providing enhancements to or changed methods of interacting with the technology needed to accomplish such tasks.

There is a clear and growing need for Assistive Technology (AT) to help address the special needs of students in Canada, as an ever increasing number of impaired students seek to realize their full potential through education.

Canadian provinces in general have well funded and up to date educational programs for students at the elementary, secondary and post-secondary level, which make use of appropriate material, programs, and technology. However, when it comes to special need students there is often a lack of sufficient funding to cover costs beyond basic tuition and textbooks. Therefore, there is a strong and growing interest among special needs students and school administrators to identify new, affordable and effective assistive technologies such as: sign language interpretation software, alternative format course materials, hardware to facilitate physical mobility, etc. to help meet the educational needs of these students.

On December 3, 2007, Statistics Canada released its updated Participation and Activity Limitation Survey (PALS), which highlighted that in 2006 the total number of people with disabilities in Canada reached approximately 4.4 million, representing 14.3 percent of Canada's population. As the number of physical and non-physical impairments increase among the Canadian population, there are concerns that educational institutions across Canada are not well equipped to provide the unique technology solutions required by students with special needs.

It has become quite apparent from several studies that students with disabilities in Canada need technologies that will allow them to prepare and participate in the knowledge-based economy of tomorrow. The availability of such AT in Canada's schools will provide special needs students with increased access to education at all levels and enable them to interact in the class room environment.

## Opportunities for U.S. companies

There is excellent potential for U.S. service providers and developers of AT to help meet the interests and needs of Canada's educational technology and supply market. These needs are particularly acute in helping to address the needs of vision, hearing, mobility, communication and learning impaired children in Canada's educational institutions.

### Mobility

Students with mobility challenges, and especially those with limited hand movement, experience various restrictions depending on their specific case. AT in the form of switch activation and scanning software, controlling devices in a home by spoken commands, speech recognition software, touch pads

and touch screens, onscreen and alternative keyboards, adapted head mouse, foot mouse, joystick, and sip and puff activation technologies.

### Communication

Students with speech disabilities may use low-tech symbol and picture boards, electronic pocket wallets, and high-tech handheld devices equipped with augmentative and alternative communication (AAC) software to facilitate interaction.

### Hearing

Although students with hearing impairments can benefit from the use of interpreters, preferential seating, and visual cues, the remaining population, depending on the severity of their condition, will require listening assistive technology such as hearing aids, personal FM systems, and speech recognition programs to translate an instructor's voice to text and sign language on a computer screen.

### Vision

Text-to-speech software (also known as enhanced voice recognition software), and screen magnification software (or augmentative communication software), or other magnification technology such as closed circuit television (CCTV) for students with low vision conditions. Severely blind students require computer-based screen reading technologies and Braille output technologies to allow access to digital text resources.

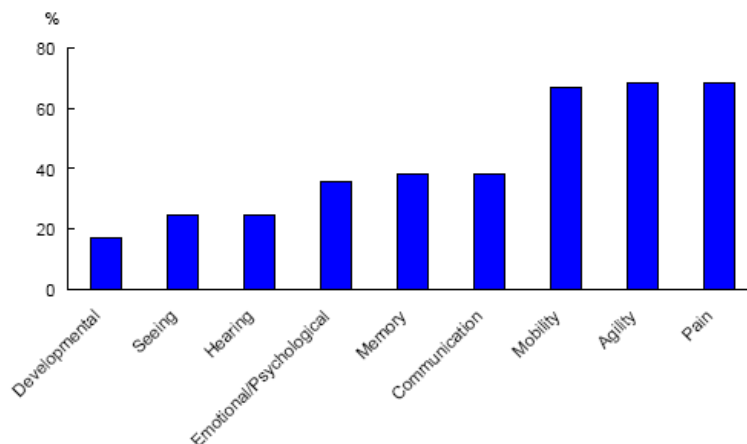
### Learning

Students with learning disabilities and academic skills disorders are strong candidates for AT support. Requirements exist for developmental speech and articulation expressive language software, as well as academic programs to address reading, writing and/or arithmetic disorders.

The requirement for these technologies is based on results of the PALS' survey which also identified the following categories as the most common types of disabilities, among a surveyed population of 48,000 (9,000 children and 39,000 adults):

*(\*) World Health Organization (WHO) defines the term "disability" as the unsuccessful interaction between a person with impairment and an unsupportive environment.*

**Common limitations paired with learning limitations, 2006**



Source: Statistics Canada, Participation and Activity Limitation Survey, 2006.

## Entering the Canadian Market

Following is a list of Assistive Technology events in Canada that may be of interest to U.S. exporters.

### [Louis Braille: From Literacy to Liberty 2009](#)

May 1 - 2, 2009  
Victoria, BC

### [Technovision 2009](#)

October 2, 2009  
Montreal, QC

### [FICCDAT 2011](#)

June 5-8, 2011  
Toronto, ON

The U.S. Commercial Service also offers U.S. exporters with a wide range of cost effective business facilitation services in Canada, including: business matchmaking, agent and distributor searches, and single company promotions, among others.

### For More Information

To obtain a copy of the 2006 Participation and Activity Limitation Survey produced by Statistics Canada, or additional information on upcoming Assistive Technology events in Canada, please contact [Luz.Betancur@mail.doc.gov](mailto:Luz.Betancur@mail.doc.gov) National Sector Coordinator, Education/Training Services, or call 613 688-5216. You can also visit our website at <http://www.buyusa.gov/canada> to discover commercial opportunities in Canada.

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