

Assistive Technology: What Every Educator Needs to Know



This reference guide is designed to help educators better understand the value of Assistive Technology (AT) in increasing all students' access to the general education curriculum and improving the teaching/learning process for students with special needs. Descriptions of some of the most useful AT hardware, software applications and tools are provided in this guide, with a focus on meeting the needs of students with mild to moderate disabilities.

What is Assistive Technology?

The US federal government has operationally defined Assistive Technology (AT) as:

"... any item, piece of equipment, or product, whether acquired commercially, off the shelf, modified, or customized, that is used to increase, maintain, or improve, the functional capabilities of individuals with disabilities." (Public Law 101-407)

Furthermore, an AT service is defined as:

"... any service that directly assists an individual with a disability in the selection, acquisition, or use of an assistive technology device." (Public Law 105-394)

These definitions are helpful for broader discussions of Assistive Technology, including here in Australia.

Universal Design for Learning (UDL)

Assistive Technology supports the theory of Universal Design for Learning (UDL) by enabling teachers to design classroom instruction that incorporates three critical features:

- Multiple means of representation (providing students with a variety of ways to acquire information and knowledge);
- Multiple means of expression (providing alternative ways for students to demonstrate what they know);
- Multiple means of engagement (delivering instruction in a variety of ways, thereby increasing the likelihood of motivating students and stimulating their interest in the lesson).

All AT hardware devices and software programs can be used to address one or more of these UDL principles.

Who Benefits from Assistive Technology?

Although most people benefit from the use of computer technology in their everyday lives, until recently many of the technology tools that are so useful to average people were not accessible to individuals with special learning needs. Today, as a result of major advances in the field of AT, students with a wide range of special needs, including those with neuromotor, cognitive, visual, developmental, emotional/behavioural and learning disabilities, autism and language delays, can take advantage of a plethora of technological tools. To maximise opportunities for learning, educators need to be knowledgeable about the various AT applications available, as well as ways to increase students' access to the most appropriate tools.

With the increased inclusion of students with disabilities into general education classrooms, it is essential for Child Study Teams, IEP teams, RTI teams and other similar problem-solving teams to consider which AT assessments and services may best support these students in their specific instructional programs.

Low-Tech Options

Although this reference guide focuses on mid- to high-tech tools, educators evaluating a student's need for AT should not overlook ways in which "low-tech" options can be utilised. Low-tech options should be considered first because they are easy to implement and require little training. In many cases, low-tech options are already available in the classroom and often do not require a large financial expenditure. They are also an efficient way to introduce AT to a student. Some excellent and popular low-tech items include pencil grips, highlighting tape and tape recorders.