TECHNOLOGIES FOR STUDENTS WITH DISABILITIES

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Introduction

Computers and other technologies are powerful tools supporting students with disabilities. Students with visual impairments access written text through auditory output devices or print magnification devices, students with learning disabilities who have difficulty organizing thoughts use software as a visual organization tool, students with physical disabilities write papers using adaptive equipment attached to a computer or voice recognition software, students who cannot use their voice speak using an alternative communication device.
Historical Evolution of Technologies for Students with Disabilities

Technology has a long history of assisting persons with disabilities; dating as far back as Alexander Graham Bell in the early 1800s, when he worked on devices for people with hearing impairments, beginning with the phonoautograph, a device to “see speech.” If you consider the medical advances that have been made for people with disabilities, technology is traceable as far back as the 1500s, when Ambrose Pare began manufacturing metal limbs and corrective devices for people with physical disabilities. Currently, technology provides access to curriculum and activities that in the past were not accessible to students with disabilities. As cited by the National Council on Disability (1993), Radabaugh so aptly stated, “for Americans technology makes things easier; for Americans with disabilities, technology makes things possible.”

With the passing of Public Law 19-142 in 1975 and recent enactments of that law with the Individuals with Disabilities Education Act (IDEA), there has been an even greater focus on supporting students with disabilities in the general education curriculum and activities. It must be stressed that the use of technology by students with disabilities is not unique to special education classrooms. Technology is of possible benefit whenever there is a mismatch between the demands of the environment and the skills and abilities of the student. For example, students need to demonstrate understanding and the learning that takes place in the classroom; however, not all students are able to talk. A mismatch between the environment and the student exists. However, using technology, students communicate using an augmentative communication device, effectively removing the barrier.

When discussing students with disabilities, it is helpful to understand the distinction between a disability and a handicap. A disability is defined by what a person “has” or is living with, for example, a student may have a learning disability, or a student may be blind. A handicap is the result of the interaction between the student and the environment. Handicaps are barriers imposed by what is in (or not in) the environment. For example, if a student is blind (the disability) and in an environment that offers text only through visual reading, the student is also handicapped. If that same student is in an environment that provides the text on audiotape or in
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