

# Information and Communication Technologies (ICTs): Then and Now

By

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*For people without disabilities, technology makes things easier. For people with disabilities, technology makes things possible.<sup>2</sup>*

Take, for example, the 1980's precursor to the Adaptech Research Network... I and a student with a visual impairment are working on a research paper. Our main technology is the typewriter. But... we heard of exciting innovations! Alas, a day and hundreds of windings and dollar signs (control characters) later we realize that word processing software for people who are blind is not yet ready for prime time. Back to the typewriter! But not for long.

By the 1990s, a major challenge is price. But American legislation resulted in more and more general use ICTs incorporating access features. Primitive, yes, but definitely the beginning of universal design in this realm as people with different disabilities used mainstream ICTs as adaptive aids. For example, most people use spell checkers. For people with some learning disabilities this is adaptive technology that helps compensate for the disability. Dictation software, developed for professionals, was now used as adaptive technology by people with neuromuscular impairments. Screen reading and word prediction technologies, intended for individuals with disabilities, crossed over into the mainstream and were increasingly available on mobile devices. People with disabilities also used ICTs in idiosyncratic, creative ways, further clouding distinctions between general use and adaptive computer technologies.

It's the 2000s, and prices have started falling. The main problem now is "interoperability." Adaptive ICTs often did not work with general use software; or with each other. But this phase, too, is now more or less behind us and, with the

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<sup>2</sup> Adapted from Mary Pat Radabaugh, IBM Disability Support, Center for Persons with Disabilities

development of tablet computers and smart phones, distinctions between general use and adaptive ICTs continues to blur. We all surf the web and listen to mp3 audiobooks. Retailers' shelves are stocked with exotic trackballs, mice and touchpads, many under \$25. The premier dictation software now costs around \$100. Schedulers and alarms on iPhones keep people with cognitive impairments on time. Ditto for the rest of us.

Look in the Adaptech Research Network office in 2011. You see everyone sitting in front of a computer. "So what," you say, no? No. For what you would quickly realize is that one team member's screen is black. She does not turn it on since she uses screen reading software. Another person types away with one hand on a tiny keyboard. Under her workstation resides a foot mouse. A third team member listens to music on her computer as she works. But the audio cable is attached to her digital hearing aid. Someone tries to use dictation software but gives up as a team member screams, "Oh, it's so cool! It's so cool!" as she evaluates accessibility of iPhone and iPad apps. Another team member is testing a "free or inexpensive" (under \$200) wand scanner to see if it can read to people with learning disabilities in a library (see Downloads at <http://www.adaptech.org>). Not a typewriter in sight!

Are things perfect in the land of adaptive and adaptable ICTs? By no means. Has the disability community benefited from changes in the past 30 years? Absolutely!



Adaptech Research Network student with refreshable braille keyboard.