

Achieving Learning Success Through Technology

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People are often faced with the difficult decision of figuring out how to deal with identified attention and learning issues. While the assessment process is intended to provide clarity and direction for the client, sometimes people are likely to just give up due to feeling overwhelmed with the myriad of suggestions offered or because no particularly useful or novel strategies have been provided. In reality, there are many effective choices available to clients trying to deal with these issues [such as AD/HD, Learning Disabilities (LD), and fine-motor delays]. It is advisable though that they begin with a maximum of two or three new interventions at a time. For this reason, the topic discussed here focuses on the benefits of using one of these suggestions. Namely, adaptive or assistive technology as an accommodation by way of a brief introduction to the concept.

The ideal scenario involves providing the client (student, employee, etc.) with a comprehensive Psychoeducational Assessment to identify any specific challenges (i.e. attention, learning, behaviour or social-emotional) and to determine their profile of strengths and needs. This process assists the clinician in providing detailed recommendations about how to implement appropriate interventions, strategies and accommodations. Such frequent first-line interventions involve medical management of symptoms (i.e. for AD/HD), individual/family/group counselling or coaching, behaviour management, parenting support, academic remediation, and school, home or work accommodations. These strategies are effective when properly applied and tailored to an individual's specific profile or when supplemented by appropriate use of technology.

In terms of background information, an accommodation is a different way to do a task. It uses a person's strengths to work around their areas of need. While some might have difficulty understanding this concept, accommodations are not a way of cheating, but rather a way of making things fair. Remember that "fair is not equal". If a person has a physical injury, it is not unfair for that person to have a cane or wheelchair while others have to walk. Accommodations do not mean that others do the work for you. You are doing the work for yourself, only in a way that might be different from how others do the same task. Sometimes, accommodations are the only way to complete a task. When learning a skill is not the goal, or when disabilities make learning that skill too stressful or difficult, the implementation of accommodations should be encouraged. Accommodations allow a person to learn or work better and more efficiently. The key though is to match the accommodations to the circumstances and to one's needs (i.e. LD) and abilities.

Specific examples of accommodations might include something as simple as using one's fingers for math, carbonless copy paper, books on disc, or the help of adaptive or assistive technology. This technology is any device or form of technology that increases the independence of an individual with a disability, be it physical, emotional or learning-based. This device can be any item, piece of equipment, or product system that can be used to increase, maintain, or improve the functional capacity of individuals. This technology has now become readily available and includes a wide variety of computer hardware and software programs or solutions. The primary uses are to:

- ✓ assist an individual in becoming more independent or productive - in classroom, workplace or leisure settings;
- ✓ reduce or eliminate anxiety;
- ✓ reduce the reliance on others;
- ✓ increase a sense of self-esteem;
- ✓ lead to educational or vocational success;

- ✓ provide the user with the same choices that are readily available to those without disabilities; and
- ✓ to help regain a sense of control over one's life.

Assistive devices are used to work around and by-pass areas of need, which is the *compensatory approach*. Assistive technology helps the learner perform a specific task. This is referred to as the *remedial approach* whereby technology is used in combination with instruction. In many instances, the *multimedia approach* can also be quite beneficial in which material is presented in more than one way (i.e. text, audio, graphics, photographic or video images). This helps to access a variety of the learner's strengths when processing information and increases their chances for retention and focus.

Hardware solutions that may prove helpful include desktop computers or mobile systems such as notebook or tablet computers and handheld units. These are complemented by the accompanying software that allows an individual to plan and organize their schedules and complete various work or academic-related tasks (i.e. writing/spelling, math, and reading activities). Some of these products are as simple as tape recorders (now available as digital models), old-style calculators, and scanners. Others include optical character recognition (OCR) systems such as "reading pens" or hand-held wands that can read and store information, or act as a thesaurus, dictionary or translator; electronic spell-checkers/dictionaries; and electronic organizers (now available with phone, fax, and e-mail functions, along with data storage and retrieval, and sometimes even a camera).

Exciting new advances are also being made on the software front. Previously valued programs such as word processors that include basic spell and grammar-check functions along with a thesaurus and dictionary, are being expanded and often include organizational software and proofreading software. Newer developments include voice output/text-to-speech or speech synthesis/screen review systems and screen magnification software to assist with reading; word prediction software and speech-to-text/voice input (speech or voice recognition) systems to facilitate writing; word completion and abbreviation expansion programs for spelling; and hand-held talking/speech synthesis calculators for math-related tasks. A few of the more common programs that include some of these functions are textHELP Read & Write, Kurzweil, WordQ, WYNN, Dragon Naturally Speaking, AlphaSmart, Franklin Master Speller, and Inspiration or Kidspiration. Other software solutions include computerized cognitive skills training software that can develop and improve attention/listening, visual-motor, and conceptual reasoning skills, memory, mental processing speed, numerical reasoning, phonemic awareness, and self-control. Effective programs in this area are designed to help stimulate the growth of new connections between brain cells. Such software is distributed by Brain Train, among others. One should also be aware that when specific disabilities are properly assessed and identified, funding is often available through private insurance, governmental agencies/departments, and community agencies so that these technology solutions can be obtained.

Naturally, as assistive technology will generally be new for the user, professional training and consultation should be sought. Individuals and companies that specialize in this area will be able to provide advice, in advance, regarding potential funding sources, computer system configuration, and set-up. In addition, some will be able to provide comprehensive individual or small group training and ongoing consultation to assist the learner in becoming familiar with the functions and operation of their new system. An example of one such company that can provide a complete technology solution is VoicePC (www.VoicePC.ca). This final stage is of utmost importance because having assistive technology is not effective unless the user is able to make good use of such technology. This will enable the individual to be more efficient and productive, and to feel more confident in the completion of tasks which were previously a challenge, by seamlessly implementing these solutions into their daily routines.

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