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Using Assistive Technology with Students with Exceptional Learning Needs: When Does an Aid Become a Crutch?

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Issues in Technology Column

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Running Head: Assistive Technology

Using Assistive Technology with Students with Exceptional Learning Needs:

When Does an Aid Become a Crutch?

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Assistive technology (AT) for students with disabilities increases options for assisting students with a variety of exceptional learning needs. It allows them to accomplish educational goals which they could not accomplish otherwise in the same amount of time or in the same manner.

Recent legislation has impacted the use of assistive technology. The 1997 Amendments to the Individuals with Disabilities Education Act (IDEA) clarified the definition of assistive technology devices and services in order to better fulfill earlier IDEA regulations that assistive technology be included in special education services. Assistive technology was defined as "any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of a child with a disability." Assistive technology services were defined as "any service that directly assists a child with a disability in the selection, acquisition, or use of an assistive technology device" (Families and Advocates Partnership for Education**,** 2001, pp. 1-2). The 1997 Amendments required that AT devices and services be considered for every child when developing his or her Individualized Education Program (IEP).

The broad definitions above and their application to all students with IEPs have opened the doors to extensive use of AT. Edyburn (2003) reported that the law applied to 3.8 million students. But what does it mean for a student to benefit from assistive technology? What is its appropriate use? We need to closely examine whether AT assists students in developing their own abilities to increase their independence, or whether the AT completes tasks for the students and thus increases their dependence.

Several exemplary projects have followed the letter and spirit of the law and developed products and/or programs that assist those with disabilities gain skills and independence. For example, Boone and Higgins (2003) described several digital text options that allow the user to interact with the text and employ literacy strategies, such as defining unknown words with a dictionary, underlining, and graphically organizing content.

Gardner, Wissick, Schweder, and Canter (2003) described two types of technology used to enhance the teaching of thematic units in order to assist students with disabilities in applying knowledge and skills across the curriculum. Productivity tools (e.g. spreadsheets, charts, database applications) and presentation and multimedia tools (e.g. PowerPoint) do not dilute the unit's content. Rather, they provide students with more time in order to be able to cover as much content in as much depth as their non-disabled peers, thus increasing their learning and ability to generalize across content areas.

Trollinger and Slavkin (2002) described the benefits of e-mail for a student with Down Syndrome whose IEP goals included improving social skills. Since written and verbal expression were limited for this student, using e-mail as a form of AT supported skills she was not able to perform otherwise, such as writing longhand and verbal expression. AT helped her achieve her IEP goals of social interaction, writing, reading, spelling, and even math.

Innovative AT helps students with disabilities interact with curricular content to develop independent knowledge and skills. Its use requires that teachers be sensitive to subtle differences in purpose. Consider two different applications of the same

technology, FM amplifiers. The instructor wears an FM transmitter that transmits amplified speech sounds to a student wearing a receiver. The same device, depending on its circumstance of use, can be beneficial or hindering. In one circumstance, a student who is deaf or hard-of-hearing might use the FM amplifier because he is not capable of hearing the speech sounds, and this AT provides him access to the curriculum in an inclusive environment. In a second circumstance, a student with central auditory processing disorder (CAPD) uses the FM amplifier because she has difficulty filtering out competing background noise, and this AT allows her to focus only on the teacher's voice. This can be problematic, particularly if an IEP goal of the student is to improve her auditory processing skills. Continued use of the FM amplifier increases the student's dependence on the device and decreases her ability to perform the skill on her own.

Another example of possible misapplication of AT was described in Rieth et al. (2003), who described AT that anchored instruction by focusing on an event or problem and using video for nonreaders or struggling readers to create a rich context and facilitate shared experience. After the video, the students used their own knowledge to solve realistic problems. Teachers asked higher level critical thinking questions to facilitate students in active participation in learning communities where they critically examined and evaluated multiple solutions to problems. As long as AT of this type is used in addition to reading practice for the improvement of reading skills, it is a successful way for these students to build higher order thought processes while they become strong readers. Used in place of reading practice and instruction, the same type of AT potentially becomes a crutch, preventing the development of higher reading skills.

The Council for Exceptional Children lists ten standards for the accreditation of special education teacher preparation programs. Standard 4: Instructional Strategies states:

> Special educators possess a repertoire of evidence-based instructional strategies to individualize instruction for individuals with exceptional learning needs. Special educators select, adapt, and use these instructional strategies to promote challenging learning results in general and special curricula and to appropriately modify learning environments for individuals with exceptional learning needs. They enhance the learning of critical thinking, problem solving, and performance skills of individuals with exceptional learning needs, and increase their self-awareness, self-management, self-control, self-reliance, and self-esteem. Moreover, special educators emphasize the development, maintenance, and generalization of knowledge and skills across environments, settings, and the lifespan (Council for Exceptional Children, 2004).

Let this goal not be superceded by using technology simply for the sake of using technology. Let us look closely at individuals' IEP goals and evaluate whether a specific AT device will actually facilitate achievement of those goals. With so many options available to us today, we need to ask not merely if we *can* provide AT to perform a task, but also whether we *should*.

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