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Assistive Technology Promoting Independence In Students With Disabilities

Assistive Technology is vital to many individuals with disabilities. Assistive Technology is an umbrella term for any item that helps a disabled person maintain or increase certain capabilities. Types of assistive technology include (but aren't limited to): Communication software, keyboards, mobility devices and more. Assistive technology helps promote independence in students with disabilities. When creating an IEP (Individualized Education Plan) for a student, assistive technology is always considered as a possible tool to help the student reach his or her goal. In addition to the obvious reasons that Academic Technology helps students learn, assistive technology also helps promote independence in students with disabilities. This bridge to independence supports students with disabilities socially, academically, and mentally.

 Historically, assistive technology did not become an important term in lawfully supporting disabilities until 1998. The Assistive Technology Act (Under IDEA- Individuals With Disabilities Education Act) was first passed by Congress and signed by the President as the Technology-Related Assistance Act of 1988. This is the first time congress required federal agencies to make heir electronic and information technology accessible to people with disabilities under Section 508. (Wallace, 2011). The Act is often called the “Tech Act” for short and has been reauthorized in 1994, 1998, and 2004. The most current version of the Act is authorized through 2010. The Assistive Technology Act of 2004 defines an assistive technology device as “any item, piece of equipment, or product system, whether acquired commercially, modified, or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities.” ("Assistive technology act," 2013). The Assistive Technology Act created awareness in America on the utmost importance Assistive Technology has in aiding the lives of disabled individuals The act officially empowers the disabled to have access to Assistive Technologies.

The subject of obtaining Assistive Technology with financial federal support can seem complicated. This is because most of the “labels” and “terms” for disabilities are ambiguous and difficult to confirm. Many disabled individuals happen to have several “disabilities”, and therefore find it difficult to pinpoint which assistive technology is suitable and the most cost effective for their needs. However, it has been proven that “Assistive Technology can be a catalyst in achieving independence to prepare students towards functional life goals” (Frederici & Scherer, 2012). This is why it’s vital for students to build confidence and independence through Assistive Technology.

There are many laws and sub laws to help those with disabilities attain Assistive Technology. Unfortunately, many individuals with disabilities are unaware of the options they have to obtain Assistive Technology. There should be more resources available to those with disabilities in order to become familiar with their options and resources. “Public libraries should be urges to offer a range of information related to Accessible/Assistive Technology, including information about services and funding resources for people with disabilities” (Toms-Baker, McDonald, Davis & Imparato, 1997). Additionally, this information should be provided in many different formats (i.e. voice recording, braille, pictures, etc.).

Assistive Technology can be as simple as a pencil grip, or as complex as a computer-like system that fits specific communication needs. Whether simple or complex, assistive technology helps individuals with disabilities do what most people take for granted. Individuals with disabilities number 43 million and are the country's largest minority (Seelman, 1999). People with disabilities have only recently begun openly advocating for their own interest. “Disabled persons self-advocacy has been driven by so-called new values of empowerment, independent living, and community integration, and they have successfully advocated for civil rights and for independent living” (Seelman, 1999). Independence for the disabled is of the utmost importance at this time in American society (and in the world!).

Improvement of communication is a massive step to promoting independence for students with disabilities. If a student with disabilities is able to communicate their needs (whether is long term needs or short term needs), they are able to self-advocate for their independence. Many communication-related assistive technologies have replaced certain types of Special Education Aides in the classroom. This helps the students speak for themselves and express themselves as individuals. Assistive technology for communication mainly aids students who have difficulty in communicating effectively (i.e., they are unintelligible, have no or very little verbal skills, or have limited language proficiency). Common Assistive Technologies can include: Voice-output devices with levels, Voice output with icon sequencing, Communication software (allows for communication boards and visual displays), Augmentative communication devices (visual display, printed or speech output), Dedicated augmentative communication system, Text-to-voice and voice-to-text software, Talking word processing with writing support, Software that allows communication via pictures and symbols, Head-pointing devices, Electronic and software dictionaries (Purcell, S. L., & Grant, D., 2002). Other communication technologies can be pictures, photographs, objects, Communication boards/books, eye-gaze or eye-pointing systems, word cards or word manipulatives. Any device/object that allows the student to communicate and learn without standard communication is helpful to the student with disabilities related to communication.

Apple™ products are widely used in the special education setting and by many individuals with disabilities. Apple™ is devoted to making their products useful for the disabled. Apple™ products have become prevalent in the assistive technology realm. A recent case study was performed using applications on an iPhone for a student with intellectual disability. Bill is a 20-year-old student with an intellectual disability called apraxia. This causes him to have a limited vocabulary.

The case study focused on using an iPhone to help Bill communicate and thrive in an educational setting. The study used the apps “Proloquo2Go” (an extensive app which allows the student to create their own communication board), pocket informant (an interactive, easy to use, calendar application; it has more flexible options for viewing and navigating your calendar) and Emoji Emoticons (an iPhone keyboard character set composed of tiny icon pictures instead of letters. The pictures can be entered anywhere text can be entered on the iPhone. Text and pictures can be entered together. This was critical in providing a visual calendar for Bill that he could understand without having to read words). Through out the extensive observations, it was concluded that these three apps through the iPhone assisted Bill in meeting his IEP goals (Ford, 2011).

According to the World Health Organization, the number of individuals with disabilities will continue to rise; however, the available funding to meet the needs of this rising number of individuals will become stagnant (World Health Organization). A primary need for individuals with disabilities is Assistive Technology. It’s important that disabled individuals are informed and supported in decisions regarding Assistive Technology. Many forms of Assistive Technology are simple and inexpensive. Hopefully, there will be continuous federal financial support for Assistive Technologies that are costly. Assistive Technology moves mountains when it comes to promoting independence in students and individuals with disabilities. It is predominantly vital to provide appropriate and elaborate Assistive Technologies for *students* with disabilities because school is where students will begin to build life goals and outlooks. If there is strong support in Assistive Technology during K-12 (and continues further if necessary), then individuals with disabilities will be able to express themselves and advocate for themselves like never before.

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