

Assistive Technology in the Workplace

Individuals with disabilities may require a variety of supports to successfully participate in work. Assistive Technology (AT) is one type of support that increases independence, quality, and efficiency in the workplace. AT can be used to accomplish important job activities such as communication, computer access, environmental control, cognitive functions, and mobility (Arthanat et al., 2016). Legislation such as Section 508 of the Rehabilitation Act and Title I of the Americans with Disabilities Act encourage the use of AT in the workplace.

What is Assistive Technology?

According to the 21st Century Assistive Technology Act (2022), an AT device is *any item, piece of equipment, or product system, whether acquired commer-*

cially, modified, or customized, that is used to increase, maintain, or improve functional capacities of individuals with disabilities. AT in the workplace may include a wide range of low-tech, mid-tech, and high-tech devices that directly support work-related tasks such as computer access, communication, information processing, reading, and composing, as well as those that provide seating, mobility, and ergonomic adaptations required by the individual to interact optimally with the work environment (Arthanat et al., 2016; Dove, 2012). Stated differently, AT provides a broad spectrum of simple to complex technologies that directly assist individuals with disabilities to gain and maintain meaningful employment. See Table 1 for examples of AT used in the workplace.

Table 1

Examples of AT in the Workplace

Workplace Challenge	Possible AT Solutions
Gabby works at a greenhouse and has difficulty staying on task. She often forgets to do one or more tasks she is required to complete.	Smart phone app with audio that provides periodic reminders to stay on task. Laminated cards with a list of tasks and a check off sheet.
Juan has difficulty telling time. His supervisor is considering firing him because he often returns late from break.	Set a free-standing timer, watch, or smartphone app.
Keshia is a bookkeeper and has low vision. It is difficult for her to see the calculator and computer screens.	Adjust “built in” computer accessibility settings for text-to-speech, font size, and contrast. Large key calculator with voice output. Magnification program or stand-alone magnifier. Augment workstation lighting.
Darius works in a cubicle along with nine other coworkers who also have cubicles in the same area. Noise from other conversations distracts Darius and he loses his place when entering data. As a result of having to start over, his productivity is low, and he makes many errors.	Noise cancelling headphones. Office space away from other coworkers. App that provides relaxing background sounds.

Table 1 (continued)*Examples of AT in the Workplace*

Workplace Challenge	Possible AT Solutions
Candy is training to be a barista in a coffee shop. She has difficulty remembering the recipes for some of the more complex beverages.	Laminated cards with recipes for complex drinks. Recipe manager app on a smartphone.
Tara works as a printing assistant where she is required to trifold letters and stuff, label, and seal envelopes. Due to her dyspraxia (i.e., difficulties with movement and coordination) she has difficulty completing the tasks.	Paper-folding jig to properly trifold the letters. Envelope guide for label placement and stuffing.
Peter is an employee at Walgreens where he is in charge of identifying, counting, and categorizing items and unpacking deliveries. Due to his visual impairment completing these tasks is not possible without assistance.	iPad with Tap-Tap-See app to identify and categorize items.

What the Research Says

AT is an effective form of employment support for individuals with disabilities (Morash-Macneil et al., 2018), and can be particularly useful in increasing independence and overall work participation (Morash-Macneil et al., 2018; Randall et al., 2020). Specifically, there is evidence to suggest AT can effectively supplement or replace assistance typically provided by job coaches. For example, Morse and colleagues (2021) investigated the use of a portable multimedia device to train seven young adults with developmental disabilities to improve independence and reduce reliance on job coaching reminders while undertaking a meal preparation activity in a two-experiment research study. Both studies found that utilizing the iPad application to video model tasks improved and maintained correct skill performance while eliminating the need for prompts provided by job coaches. Similarly, Randall et al. (2020) studied the efficacy of a task analysis program as a tool to assist persons with intellectual disability to complete work-related office activities. Overall, the results revealed that all four individuals experienced significant and substantial

improvements when scanning, copying, and shredding in an office setting. Finally, a study conducted by Gentry and colleagues (2015) investigated the effects of using an Apple iPod Touch as an employment support to increase work performance and decrease job coach dependence for workers with autism. Results from this study found that employees with autism who received the iPod Touch training at the beginning of their job placement depended significantly less on job coaches than the individuals with autism who did not receive the training.

Guidelines for Practice

Incorporating AT interventions early in transition programming may enhance employment skills and possibly boost employability for students with disabilities (Morash-Macneil et al., 2018). Table 2 offers additional guidelines for practice that may assist educators in helping students with disabilities access and utilize AT as a reasonable workplace accommodation.

Table 2*Guidelines for Practice*

Guideline	Rationale
Consider AT if students are having difficulty completing tasks at a worksite.	Prior research shows that AT is an effective tool for increasing independence at the worksite.
When considering the use of AT start with low-tech options first.	Low-tech AT is relatively inexpensive and easier for students to learn to use than high tech AT. Some low-tech devices can be made by hand from existing materials at the home or workplace.
Teach students how to use their AT.	Students may not automatically understand how to use AT. Providing direct instruction and teaching to mastery will enable students to acquire skills needed to be successful.
For students who use AAC, embed instruction and opportunities for use throughout the school day.	Teaching students to use their AAC devices across the day will increase generalization and allow students to become more comfortable with communicating with AAC in the workplace.
Consider whether AT used at school will facilitate independence at the workplace.	When AT successfully facilitates independence in one setting it may facilitate independence in other settings.
Educate employers about AT and how it can support students.	Providing employers with information about AT and its benefits may address potential concerns about hiring people who use AT.
Teach students to use AT when first starting a new job placement.	Teaching students to use AT as they begin a new job may reduce the need for job coach support.

Note. AAC = Augmentative and alternative communication

Additional Resources

Illinois Assistive Technology Program (IATP) iltech.org

A statewide resource on AT for Illinois residents that offers a demonstration center, borrowing program, training, funding resources, and other information.

Job Accommodation Network (JAN) askjan.org/soar.cfm

A searchable database of suggested accommodations by disability, function, and limitations.

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