

Assistive Technology Provides Supports for Individuals with Intellectual and Developmental Disabilities

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Assistive technology (AT) tools and strategies can be used to support individuals with intellectual and/or developmental disabilities (I/DD) in a variety of daily activities. Typically, such individuals require supports in the following domains: home living, community living, lifelong learning, employment, health and safety, social activities, and protection and advocacy.* Technology can help them complete tasks independently or with less help in these domains. Consider these examples.

Home Living: This domain addresses such activities as preparing and eating food, taking care of clothes, housekeeping and cleaning, dressing, bathing and personal hygiene, and operating home appliances. Examples of AT supports in this domain include:

- Built-up handle eating utensils (e.g., built-up foam handles prevent fingers from closing around the utensil).
- Picture-based cookbooks.
- Computer-aided systems providing pictorial task instruction to assist with housekeeping activities.
- Video instruction and audio prompting to assist with completing household tasks.
- Shower chairs.
- Button fasteners.
- Speech-generating devices.
- Smart phones to use in keeping shopping lists.

There also are apps for iDevices that can support individuals in performing home living tasks. For example, *iDress for Weather* has a customizable closet and personalized temperature settings to reinforce connections between weather and clothing, *My Healthy Smile* provides information about oral health and dental visits, and *Healthy Cook* offers recipes catered to meet individual health needs.

Community Living: This domain focuses on activities such as using transportation, participating in recreation/leisure activities, shopping and purchasing goods and services, interacting with community members, accessing public buildings, etc. Examples of AT include:

- Wheelchair-accessible busses.
- Adapted sports/recreation apparatuses.
- Battery-controlled card shufflers.
- Picture-based email programs.
- Smart homes to facilitate independent living.
- Multimedia instruction and computer cueing systems to guide users to destinations.

Examples of apps that support community living activities include *Model Me Going Places* (helps to navigate challenging locations), *Community Sidekick* (tracks the locations of individuals), and *Work Skills Sampler* (reinforces common words important for independent living).

Lifelong Learning: This domain focuses on interacting with others while making educational decisions, learning functional academics and using learning strategies, acquiring self-determination skills, and using self-management strategies. Examples of AT supports in this domain include:

- Audio books and eText supports for reading and listening comprehension.
- Smart Boards in combination with computer-assisted software (e.g., digital flash cards to improve sight words).
- Personal digital assistants.
- Graphic organizers.
- Screen magnifiers.

Examples of apps that support this domain include *Money Equivalence* (teaches about money equivalents and combinations of coins and bills) and *Autism/DTT Shapes* (teaches basic shapes using a discrete trial training technique).

Employment: This domain addresses activities such as accessing job accommodations; learning and using specific job skills; interacting with co-workers, supervisors and coaches; and completing work-related tasks with acceptable speed and quality. Examples of AT tools that support this domain include:

- Picture prompts.
- Video-assisted job training.
- Vibrating pages for those with visual impairments.

- Eye tracking software to allow expressive communication.
- Video games that teach employment-related social skills.
- Graphic organizers to delineate steps in work-related processes.
- Communication devices that enable individuals to participate in job tasks.
- An example of an app that supports employment is *Quick Cues*, which provides social prompts to help individuals handle new situations and learn new skills.

Health and Safety: This domain emphasizes taking medications, avoiding health and safety hazards, obtaining health care services, ambulating, learning how to access emergency services, maintaining a nutritious diet, staying healthy and fit, and maintaining emotional health. Examples of AT tools that support this domain include:

- Picture-based cookbooks.
- Exercise videos.
- Walkers.
- Cell phones with alarm systems.
- Internet-based nutritional programs.
- Life alert watches.

Examples of apps that support this domain include *Living Safely* (a series of self-directed learning modules for 17 important safety skills) and *Pill O'Clock* (a medication reminder).

Social Activities: This domain focuses on social activities within and outside of the household, making and keeping friends, using appropriate social skills, engaging in volunteer work, and forming loving relationships. Examples of AT tools used in social activities include:



- Computer and video games.
- Educational videos.
- Switches to access special software (e.g., *Super Switch Hitter* by Marblesoft-Simtech).
- Social networks.
- Augmentative communication devices and strategies that enable individuals develop meaningful social relationships.

Examples of apps that support social interactions include *Photo Tell* (a fun way to display photos with audio captions), *AA Visual Schedule* (for creating visual schedules using real photos), and *Memory Fun* (a game to train the memory that can involve multiple players).

Protection and Advocacy: The activities in the protection and advocacy domain include advocating for one's self, managing money and personal finances, avoiding exploitation, exercising legal responsibilities, making choices and decisions, and advocating for others. Examples of AT tools to support protection and advocacy activities include:

- Interactive videos about human rights awareness.
- Online Americans with Disabilities Act training.
- Speech-generating devices.

Examples of apps to support this domain include *My Health, My Choice, My Responsibility* (self-paced learning on different healthy living topics including self-advocating at the doctor's office) and *iPrompts* (provides such tools as visual supports such as picture schedules).

These are just a sampling of the many technology tools that are available to support individuals with I/DD. To learn more about the role of technology in supporting such individuals in the school, workplace, and community, refer to a recent special issue of the *Journal of Special Education Technology*, titled *Assistive Technology for Students with Intellectual and Developmental Disabilities*, edited by Brian Bryant and published by the Technology and Media Division (TAM) of the Council for Exceptional Children. It presents a variety of perspectives and research findings on promising technologies for supporting the needs of individuals with I/DD. The issue is available as an eBook, and in print while supplies last. Visit the TAM website at [redacted] (or TAM's online store at [redacted]) to learn more.

**The Supports Intensity Scale often is used to measure the support needed in these areas. (Thompson, J. R., Bryant, B., Campbell, E. M., Craig, E. M., Hughes, C., Rotholz, D., & Wehmeyer, M. (2004). Supports Intensity Scale: User manual. Washington, DC: American Association on Mental Retardation.)*

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