Assistive Technology

Robin Pegg, MEd, COTA/L, ATP

williamssyndrome
ASSOCIATION

Assistive technology devices are identified in IDEA 2004 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 the functional capabilities of children with disabilities."

An assistive technology service is: "Any service that directly assists a child with a disability in the selection, acquisition, and use of an assistive technology device." (See back page for more info.)

Assistive Technology & IDEA

The Individuals with Disabilities Education Act (IDEA) is a federal law, with state education agency oversight, that supports the provision of public education for all children—regardless of the nature or severity of their disability. Part B of IDEA mandates the education of children, 3-21 years old, who have a disability that interferes with their educational performance and their ability to benefit from their educational program.

- Children with disabilities are entitled to a free, appropriate public education in the least restrictive environment. The school must have data to support changing placement to a more restrictive environment.

AT consultants should work collaboratively with a student's IEP team throughout the screening, evaluation, program planning, and intervention process.

Areas of Concern for Students with WS

"Individuals with WS frequently struggle with fine motor and visual perceptual/visual spatial deficits. These deficits can significantly impact their ability to be successful in a typical print-based school environment. The implementation of assistive technology supports can greatly enhance the student's ability to function independently and be fully engaged in their life and learning experiences.

Due to the significant handwriting difficulties, technology is often the great mediator between what the individual with Williams syndrome would actually like to write and what they are capable of getting on the paper due to the "mechanical" problems they encounter when trying to write.

Obtaining Services

The Individualized Education Program (IEP) process involves planning and decision making by the IEP team including parents/caregivers, students, and therapists (if indicated). The components of the process are:
Problem Identification → Referral → Evaluation → Eligibility → Individual Plan (goals) → Services (when/where)

1. Problem identification - identify the areas in which the student is not able to meet the environmental demands or the demands of the curriculum.

2. Referral - The team identifies the resources needed to meet the need including related service frequency and duration, location, and specific criteria.
- AT is indicated as a support when necessary to access and participate in education and the educational environment.

3. Evaluation/Eligibility/Individual Plan - The evaluator (it is recommended that the evaluator be RESNA certified, and/or have graduated from a college program for assistive technology) will complete an evaluation if appropriate and write a suggested plan of supports.

4. Services - Services are generally consultative and are supportive to the teacher and other service providers as they implement the recommended accommodations and/or modifications.

*Hospital-based and private therapeutic sessions (outside of school) can address areas of concern not covered in the school-based sessions.

Assistive Technology

AT at every age

will be utilized to help the individual access curriculums and/or complete tasks in the most independent means available to him/her.

Assistive technology should not have goals related to its use. It is designed to be a support to the individual's ability to do something else - the curriculum, self care skills, communication, or another goal area.

It should, however, be documented as a necessity in the Individual Education Plan (IEP); the Present Level statement (PLAAFP*); and on the Supplementary Aides & Services page -

- Do not list specific devices. (if you do, you are locked into that device and won't be able to try other things) Instead, list the needed features of suppoort: word prediction, word banks, auditory support, one-button mouse, drag & drop etc.

*PLAAFP - description of skill deficit and/or areas which require accommodation.

THE BOX: the "Needs Assistive Technolgy" Box should almost ALWAYS be checked for students with WS.

AT for pre-school children

AT can be used to:

encourage use of the keyboard and the mouse (typically, a one-button mouse is most appropriate).

encourage children to begin to "write" using the keyboard just as they would with pencil and paper.

AT may consist of:

using a tablet to
- practice cause and effect
- begin to engage in learning activities through dragging and dropping items

PLAAFP Example:

- student struggles with hand-writing, it is often illegible and laborious.
- Student is unable to print small enough to complete work-sheets in a legible fashion.
- *Due to these difficulties student is unable to keep pace with his peers when completing classwork. Student is adept at using a word processor with word prediction.*

Both high tech, and low tech supports can be very helpful.

AT for School Age Children

AT can be used to:

increase development through a variety of tools/strategies.

access and progress in the curriculum. Supports may include use of technology for writing, digital accommodations for worksheets and assignments, and supports for math skill development.

Support OT with ideas for accommodations for self-care and independence.

Typical Accommodations for school age students:
- word prediction
- screen readers
- label maker/stickers
- drop & drag
- auditory support
- key vs. combination lock
- PDF Editing
- Digitally accessible work-sheets and study guides
- tools to help with self-care

AT for Teenagers

AT can be used for:

Teenagers are often already dialed in to technology. At this time, a focus needs to be placed on safety with the technology and the development of 21st century skills (http://www.p21.org), independence and employability.

AT should continue to support access and progress in the school curriculum.

Supplemental Aides & Services Example:
- Access to word processor with word prediction
- Ability to produce assignments in a digital fashion
- Use of PDF editor
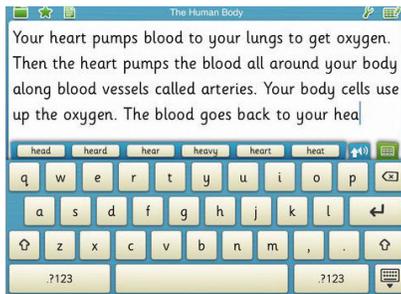
Word prediction increases typing speed and decreases frustration - note the word possibilities for ending the sentence listed under the paragraph.


AT for Adults

AT can be used to:

support adults as they move into post-secondary options, jobs, and other life interests.

provide intervention to support independence and a self-determined life.

aid individuals in maintaining independence and their quality of life.

provide accommodations/modifications/tools/tips/strategies which may make the difference between an individual needing assistance and being able to do something on his or her own.

help individuals stay connected to others, thereby reducing social isolation.
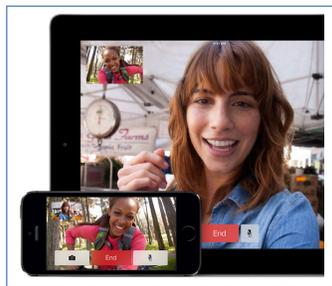
Resources

"Rehabilitation Engineering Society of North America www.resna.org (Certifying body for Assistive Technology Professionals (ATP))

Assistive Technology Industry Association www.atia.org

Center for Applied Special Technologies www.cast.org

Closing the Gap www.closingthegap.com

The Family Center on Technology & Disability www.fctd.info

Common Evaluation Tools

TVPS-3: Test of Visual Perceptual Skills 3rd Edition

COMPASS: Computer Use - keybaording/mouse skill assessment

OBSERVATION and ANALYSIS following SETT Framework by Joy Zabala, Ed.D.

Assistive Technology services:
The term includes -
evaluation of the needs of a child with a disability, including a functional evaluation of the child in the child's customary environment; Purchasing, leasing, or otherwise providing for the acquisition of assistive technology devices by children with disabilities; selecting, designing, fitting, customizing, adapting, applying, retaining, repairing, or replacing assistive technology devices; Coordinating and use of other therapies, interventions, or services with assistive technology devices, such as those associated with existing education and rehabilitation plans and programs; Training or technical assistance for a child with a disability or, if appropriate, that child's family; and training or technical assistance for professionals (including individuals or rehabilitation services), employers, or other individuals who provide services to employ, or are otherwise substantially involved in the major life functions of individuals with disabilities.

A word about "objectives"

Most children with Williams syndrome will benefit from therapeutic interventions as young children, and some will continue to benefit from some therapies throughout their education.

Just as it is important for therapists to learn about Williams syndrome in order to establish the most valuable goals and realistic ogjectives, it is important for parents to understand the elements of a good objective so that they can be sure their children will get the most benefit from therapeutic intervention.

Regardless of which therapy a child is receiving, a good objective will follow the same format. Each objective must address 4 key elements:

Audience:	Who the objective is for
Behavior:	What behavior is the objective addressing
Condition:	Under what circumstances (condition) will the result come about? What will contribute to the change? By when should the results be evident?
Degree:	What determines successful completion of the goal - 8/10 times, 4/5 days etc.

The best objectives are related to the classroom curriculum, or the child's role as a student, and ALL objectives must be measureable. Objectives such as "the child will listen to the speaker 80% of the time, or "the child will attend to a specified task for "X" minutes are not good goals. Why? There is no clear way offered to measure "attending" or "listening". A better goal for attending might state: "The child will answer 3 or 4 questions correctly, 80% of the time after listening to a classroom presentation.

For more information on IEPs and Goals and objectives go to:
www.wrightslaw.com/advoc/articles/plan_iep_goals.pf.html