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Assertive Technology in Special Education

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Assistive technology is technology used by individuals with disabilities in order to perform functions that might otherwise be difficult or impossible. Assistive technology includes the use of software and is a required consideration for special education students. Many teacher preparation programs do not include a component of software evaluation and its use with special education students for managing information and determining student needs. Assistive technology can include mobility devices such as walkers and wheelchairs, as well as hardware, software, and peripherals that assist people with disabilities in accessing computers or other information technologies. This article explores the concept of assistive technology and its importance. Also deals about the tools for assistive technology.

Assistive Technology

The definition of assistive technology applied to education is extremely broad, encompassing "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 individuals with disabilities." This definition also expands the consideration of potential educational applications with its focus on devices "used to increase, maintain, or improve the functional capabilities of persons with disabilities.

Roles of Technology for Students with Disabilities

- Maximize independence in academic and employment tasks.
- Participate in classroom discussion.
- Gain access to peers, mentors, and role models.
- Self-advocate.
- Gain access to the full range of educational options.
- Participate in experiences not otherwise possible.
- Succeed in work-based learning experiences.
- Secure high levels of independent learning.

Teaching Approaches for Special Needs

1. Direct Instruction

Children with special needs require explicit lessons. They shouldn't have to guess or struggle alone to figure out spelling patterns.

2. Incremental Lessons

Children with special needs require incremental, sequential lessons that begin with the most basic spelling skills. The lessons in the *All about Spelling* program carry the student gradually from one concept or skill to the next, with each step building upon skills the student has already mastered.

3. Multisensory Activities

Spelling is a visual skill, but learning well involves all our senses. We need to see, hear, and touch to truly absorb and master new skills. Visual learners like to see what they are learning. Auditory learners prefer to hear oral instructions and then discuss what they have learned to solidify the material. Hands-on learners absorb knowledge best when they can touch and manipulate objects.

4. Phonogram Instruction

Spelling properly involves the knowledge of spelling rules and phonograms, and neglecting to teach the phonograms only short changes your spelling student. *All About Spelling* teaches the basic phonograms based on the Orton-Gillingham approach to teaching spelling. This approach has consistently proven to be the best method for mastering the spelling of the vast majority of English words.

5. Spelling Rules

There is pattern and logic to the English language, with few exceptions to the rules. Teaching the rules governing the majority of words helps make exceptions clear and easy to learn.

6. Continual Review

Everyone needs to remember what they've learned, and continual review provides long-term benefits to all students, no matter what their learning needs might be. Help children remember concepts through continual review of previously learned rules and words, even basic ones. Continual review permanently ingrains instruction into children's brains—and it only takes two minutes of review per day to make that happen.

7. Dictation Exercises

Once a child has learned to write and spell basic words, dictating phrases or sentences promotes better spelling in practical situations. Although it's common for children to spell words correctly during spelling lessons, it's equally common for students to misspell those same words when they encounter them outside of lesson time. The dictation exercises in *All about Spelling* give students the opportunity to use and practice their new knowledge.

Technological tools for Special Children

Communication Boards: Helpful for children with autism or those with delays, these boards augment communication. The child points to a picture or symbol located on

the board and in return it speaks the word or phrase. Some boards are pre-programmed while others allow a specific message to be recorded.

Screen Readers: Screen readers read aloud the information on a computer screen. Some will read materials from books and papers that have been scanned. This special education technology increases your child's access to printed material, textbooks and reading for pleasure.

Music CD's: There are so many musical CD's out there today that can assist with learning. Months of the year, days of the week, counting, the alphabet, states and capitals are only a few of the topics that can be found set to music.

Books on Tape: These are helpful for children with visual impairments or reading disabilities like dyslexia. Books on tape assist students who have difficulty reading or seeing printed materials. Some textbook companies also produce audiotapes.

Squeeze Balls: A simple toy filled with either clear water or a squeezable foam material. These can provide a child with tactile stimulation without being noisy or disruptive.

Magnetic Calendars: The use of a weekly and monthly calendar both at home and at school can provide a child with important information regarding upcoming events and activities. The calendar provides a visual cue to things like bath night, swim lessons and family dinner night.

Phones and Doorbells: A child with a hearing impairment will probably need to use amplification in daily life. The phone and doorbell can be hooked up so that a light flashes in addition to sound. Special alarm clocks also flash light. Some can be connected to the bed so the bed vibrates when the alarm goes off.

Calculators and Spell Checkers: These devices are an easy way for an older child to receive modifications and assistance with assignments.

Watches: This simple technology can be purchased with an easy set alarm. This can be helpful to an older child with ADD/ADHD or Syndrome to help them remember certain events.

Talking Watches: A great watch for the blind, visually impaired or for the older child who cannot master telling time. This special education technology looks like a regular watch but a button is pushed and the time is said aloud.

Conclusion

To be a technologically competent special educator, teachers have the skills to select developmentally appropriate software, to understand and delineate the related benefits of the software, and to align software skills with curriculum. "As educators, we try to increase or add new academic, social, and daily living skills and knowledge to the functional capability of all children. This is a basic goal as we prepare children to take their

place in society. Teachers must understand how software may provide opportunities for the student with disabilities to control environments, to stimulate imagination, to interact with others, and to use open-ended exploration to facilitate development of higher order skills (Weber & Forgan, 2002; Forgan, Schoon, Singler, & Weber, 1999; Weber & Schoon, 2001).

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