Technology Can Help Young Children Succeed

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Parents of young children with disabilities are discovering that carefully selected computer software and mobile apps can provide many benefits such as improved self-esteem, a longer attention span, and inclusion among family and other children that help their children succeed at home and in school.

PACER's Simon Technology Center (STC) can help families determine which technologies may provide the most benefits to their children. The STC offers individual consultations, a technology loan program, workshops, and two programs designed for young leaners: The Kids Included Through Technology are Enriched (KITE) Project, and the Technology to Improve Kids' Educational Success (TIKES) program.

Even very young children may be able to use and benefit from technology. Computers and tablets can help children with disabilities learn through repetition by interacting with engaging software in a nonjudgmental environment. The degree to which a child can independently use the computer and other technology varies greatly.

STC early childhood project staff said they have seen computers and tablets stimulate young children's development in five key areas: social interaction, motor skills, learning, communication, and self-expression.

"We look at technology, such as computers and tablets, as tools to expand options to help young children develop skills and participate in activities and routines," explained Bridget Gilormini, STC Director. "Technology is not a cure-all, nor is it intended to replace successful traditional early childhood education and activities."

Thoughtfully selected software and equipment modifications may be needed for young children to access the advantages provided by interacting with tablets and computers. The following are descriptions of devices commonly used to help young children with disabilities:

Touch screen tablets and computers

Touch screens provide young children a simple way to interact with digital software and boost various skills. With the use of motivating software and apps, touch screens can build important skills such as cause and effect that will aid in understanding and achieving daily tasks. Touch screens can also help children build fine motor skills, such as using only one finger to select something on the screen. The simple nature of interacting with touch screens helps a child access skills he or she might otherwise struggle with in more complicated environments.

Alternative keyboards

Children who have difficulty using regular keyboards can benefit from alternative keyboards, which may have oversized keys and high contrast colors that make them easy to see and touch. Overlays with raised or textured areas can be made for some keyboards to help children who have visual impairments.

Trackballs

A trackball can be visualized as an upside down mouse, and consists of a rolling ball mounted on a stationary frame that allows a child to point to something on a computer screen. Trackballs provide an alternative for children with disabilities who cannot grip or manipulate a mouse, but can roll the trackball with their finger, toe, or other means. A trackball's larger size adds to ease of control for children.

Switches

Switches open up a world of technology for children with physical disabilities who otherwise may not be able to operate a computer or tablet. With adaptive software and hardware in place, switches can execute a variety of commands such as typing a letter, pressing a button, and more. When used correctly, switches unlock all of the features and benefits of these technologies.

Software and apps

Apps and software programs can be wonderful tools to help children with and without disabilities learn a variety of skills, including building a larger vocabulary. For example, a child who was learning English as a second language used a children's dictionary software program to expand his English vocabulary. The dictionary provided the child with illustrations, photos, and word games that helped him

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bridge the gap between his native language and English.

Children who do not have the same level of skills as their peers are sometimes uncomfortable in social situations and find that apps and software offer a safe, nonjudgmental environment in which to learn. Parents and teachers of a young child with spina bifida, for example, used PACER services to find software that would encourage the child, who uses a wheelchair, to interact socially with peers. The selected software met the child's interests and motivated him to teach his peers at preschool how to use it.

Some programs focus on early learning skills, such as recognizing numbers, letters, colors, and shapes, and can even record a child's own voice. Others contain stories with words and pictures that can be used by children who may be unable to hold a printed book or turn its pages. It's important that software is appropriate to a child's learning level and interests, and supports the developmental and learning goals the teacher and family have for the child.

PACER's Simon Technology Center helps parents and professionals find equipment and software that will meet children's individual needs in two ways:

1. Parents can make an appointment to bring young children to the center for a free, informal technology consultation with PACER staff.

2. Families and professionals working with young children can join the STC Library to preview educational software, apps, and appropriate technology before purchasing these items. The software and adaptive equipment can be used at home or at school for four weeks. Interested parents and professionals should contact PACER for an application or visit www.pacer.org/stc/atfinder for a listing of available assistive technology items. Library hours are Tuesday from noon to 7 p.m., and select Saturdays from 10 a.m. to 4 p.m. See the library webpage for Saturday dates. Appointments are not needed to use the lending library during regular hours.

Maya Finds Success in Technology

Bill and Sue Easter began borrowing software from PACER's assistive technology lending library for their daughter Maya, who has an auditory processing disorder, autistic tendencies, and attention deficit hyperactivity disorder. The Easters said they found the software to be enormously helpful in following up with what Maya is learning from her speech therapist, who uses the same software.

The Easter family learned about PACER through Early Childhood Special Education at Maya's school when Maya was 3. The software Maya uses is interactive and is primarily directed toward reading comprehension, phonics, and sequencing (understanding events in a particular order). Bill said the software also helps Maya learn through repetition, and using different programs has taught her how to be more flexible.

Using the computer has also added to Maya's sense of independence. Her father says she now knows her way around a computer quite well, and the process has given her a sense of power.

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