Computers Can Help Young Children

Parents of young children with disabilities are discovering that computers and carefully selected software often can help their children develop a wide range of skills. PACER Center can help families determine which computer technology may bring their child benefits such as improved self-esteem, a longer attention span, inclusion among family and other children, and skills needed to succeed in school.

Through its Simon Technology Center, PACER provides extensive help with technology to children and families. It offers individual consultations, a software and device lending library, and workshops. In addition, the Kids Included through Technology are Enriched (KITE) Project works with young children. It is a federally funded program that is part of the Simon Technology Center.

Children as young as two-and-a-half to three years of age may be able to use a computer. The degree to which a child can use the computer and other technology independently varies greatly. The point is, computers and technology can help children with disabilities learn through repetition by interacting with engaging software in a nonjudgmental environment.

PACER KITE staff members said they have seen computers stimulate young children’s development in five areas:

1. Social interaction
2. Motor skills
3. Learning
4. Communication
5. Self-expression

“We look at technology, such as computers, as a tool to expand options to help young children develop skills,” explained Tenley Pettyjohn, a KITE instructor. “Computer technology is not a cure-all, nor is it intended to replace successful traditional early childhood education and activities.”

To obtain access to the advantages provided by computers, young children with disabilities may need equipment adaptations. The following are descriptions of devices commonly used to help young computer users who have disabilities:

**Touch screens**

Touch screens are helpful for children who cannot use a mouse or trackball or for children who have difficulty switching their attention from the keyboard or mouse to the monitor. Instead of moving the mouse or cursor on the monitor to the desired spot, the child touches the spot on the touch screen.

**Alternative keyboards**

Alternative keyboards can help children who have difficulty using regular keyboards. Some alternative keyboards 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 of the keyboards to assist children who have visual impairments.

**Trackballs**

A trackball can be visualized as an upside down mouse. It consists of a rolling ball mounted on a stationary frame and allows a child to point to something on a computer screen. Trackballs provide an alternative for a child who may be unable to manipulate a mouse. The child moves the trackball with his or her finger, toe, or other means. Some children with disabilities cannot grip a mouse, but they can move the trackball. A trackball’s larger size adds to ease of control for children.
Switches

Switches can be helpful to children with physical disabilities who cannot operate the computer by other means. Adaptive software and hardware are available to link the switch to nearly all commercial software programs.

Software

Software programs for the computer can be a wonderful tool in helping 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 was introduced to PACER’s KITE Project and used a children’s dictionary on CD-Rom to expand his English vocabulary. The dictionary provided the child with illustrations, photos, and word games that helped him bridge the gap between his native language and English.

Children who do not have the same level of skills as their peers sometimes are uncomfortable in social situations and find that computer software offers 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 software focuses on early learning skills, such as recognizing numbers, letters, colors, and shapes, and even recording a child’s own voice. Other software containing stories with words and pictures can be used by children who may be unable to hold a printed book or turn its pages.

“Software needs to be appropriate to a child’s learning level and interests,” said Pettyjohn. “It also needs to support 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 appointments to bring young children to the center for a free, informal technology consultation with PACER staff. Staff said consultations are generally most effective for children three years old or older, although children as young as two years have been accepted for consultations.

2. Families and professionals working with young children can join PACER’s Simon Technology Center Library to preview educational software and devices before purchasing them. The software and adaptive equipment can be used at home or at school for four-week periods. Interested parents and professionals should contact PACER for an application or visit http://www.pacer.org/stc/atfinder for a listing of available assistive technology items. Library hours are Tuesday, 3 to 6 p.m.; Thursday, 3 to 6:30 p.m.; and Saturday, 10 a.m. to 4 p.m. It is not necessary to make an appointment to use the lending library during the hours it is open.

Maya Finds Success in Technology

Bill and Sue Easter began borrowing software from PACER Center’s Software 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. Maya’s therapist uses the same software the Easters borrow from PACER.

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

Using the computer has also added to Maya’s sense of independence. She now knows her way around a computer, and the process has given her a sense of power, said her father.