It's all in the hands: Signing simplified

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Sign (or signed) languages are principally used among members of what linguists call the "culturally deaf" communities. They rely on hand signs, facial expressions, body positions, motions and other physical signs in order to communicate. Read more in this Special Report. Credit: Photodisc

From video games to cell phone apps, making sign language easier to learn.

Put on the gloves. Turn on the camera and...action!

Nine-year-old Thomas Nelson is playing a video game called "CopyCat," which is a unique and fun way to learn sign language. Thomas was 2 years old when doctors determined he was profoundly deaf. His mother, Cheryl Nelson, says he couldn't hear the sound of a honking horn from an oncoming truck.

"My first thought when I found out he was deaf was I was never going to hear my son tell me that he loved me," recalls Nelson.

Six years later, Thomas not only signs "I love you" to his mother, she signs back. Nelson is in the minority in her ability to sign with ease. American Sign Language (ASL) is not an easy language to learn. It's equivalent to an English speaker learning Japanese. Studies show as many as 75 percent of hearing parents of deaf children never become fluent signers.

"So that means only 25 percent of the kids are really getting good sign language at home," notes computer scientist and Georgia Tech professor Thad Starner. "They're so behind in learning the language that they're not really learning the lessons in school."

Alarmed by these statistics and with support from the National Science Foundation (NSF) and the Department of Education Institute of Education Sciences, Starner began to develop interactive tools, such as "CopyCat," to make sign language easier to learn for both the deaf and the hearing communities.

For example, Starner and his team are developing a cell phone app called "SmartSign" to help hearing people, such as Nelson, who get stuck on a word. So, let's say she doesn't know how to sign the word "careless." She picks up her cell phone and says "careless" into the speaker and up pops a person signing "careless." It takes seconds to do.

"It gives you the sign," exclaims Nelson. "Wow! That's a huge help. We carry our cell phone everywhere."

There's even a fun quiz that helps parents practice signing almost anywhere. Starner's colleague, Jeff Wilson, is reviewing and practicing sign language while he waits for the bus. "You speak the word you want, it uses voice recognition and it'll just bring up the video right for you," he says.

And, even though his son, Wyatt, can hear, Wilson started teaching him simple signs months before Wyatt could talk.

"Whenever we gave Wyatt a bottle of milk, we would do the America Sign Language sign for milk. Eventually, he would start doing it without any prompting. You don't have them crying. They tell you what they want," explains Wilson. So instead of crying for his bottle, Wyatt knows the sign. Wilson says it makes for less cranky kids when they can communicate their needs.

"CopyCat" is being developed primarily for classrooms. A child like Thomas will put on special gloves with motion sensors and sit in front of a large computer screen. The screen is divided. In one section, there is a person signing a phrase for the child to emulate. A camera tracks the child's hand movements and when Thomas signs correctly, he earns points and moves to the next level. The center of the screen is where the animated action takes place.

"So 'CopyCat' is an educational game where children have to help Iris the cat find where evil monsters have stolen something. Iris is a blue-eyed white cat. Blue-eyed white cats are mostly deaf. Iris is the mascot of the game," explains Starner.

"We've tested 'CopyCat' in three different schools and each time, we're seeing significant results in just two weeks," continues Starner. "The children actually were able to improve their ability to understand sign, be able to generate sign and to repeat sign phrases. This is very exciting. It's a great way to learn."

Starner's team is also developing an English-to-American Sign Language dictionary. And, they're even adding sign language to classic cartoons, such as "The Three Bears," and more recent children's animated literature, such as "Danny and the Dinosaur," to enhance language and

literacy development in a fun, enjoyable manner.

More information: For more information about "SmartSign," "CopyCat" and other ASL tools and resources, go to the Center for Accessible Technology in Sign (CATS)

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