



THE LANGUAGE OF LEARNING

Using assistive technologies to support English Language Learners.

It's a cool, late fall morning in Minneapolis. A bronze-skinned boy with dark eyes is led into Ms. Jones' third-grade classroom. Twenty-six pairs of eyes study him as the principal and teacher talk in hushed voices. Ms. Jones turns to the class and in her authoritative voice announces, "Class, this is Samit. He is from Pakistan. He will be joining our class. He doesn't speak English, but we'll help him out, right?"

Scenarios similar to this fictional one are repeated tens of thousands of times per school year in the U.S. There are now nearly five million English Language Learners (ELLs) in U.S. schools, a 95 percent increase since 1991. However, the steps taken to accommodate and support ELLs like Samit vary a great deal.

In schools lacking resources, equipment, and experience with ELLs whose primary language is unusual for that school, a student like Samit represents a huge challenge for schools to provide appropriate materials and support. He might end up in a class many grade levels below his cognitive/academic level, or working with a tutor whose familiarity with his primary language is minimal. Some ELLs even find themselves in special-education classes—in some locations and categories, ELLs are overrepresented in special-ed classes compared to English-speaking students. Not surprisingly, children who find themselves in such situations often flounder linguistically, academically, developmentally, and emotionally.

Fortunately, Samit is lucky. Because this Minneapolis school and others like it in large cities across the country have a long track record of serving the needs of ELLs, testing in his native language is easily available. Translators are also available to help Samit's family learn about the personnel, policies, and services of the school. In fact, over the years, staff and faculty at this school have gained knowledge and experience that will make Samit's integration into the everyday workings of the school smooth and comfortable for him. But there's more to this story. It may take a village, but today, technologies are the village's infrastructure.

The first matter of business is for the faculty and staff of Samit's new school to refresh their knowledge about his home culture. Having had students from Pakistan in past years, the school's principal had already added a number of links on the school's protected intranet site for faculty and staff, including:

- links to Web sites about Pakistani culture and the Pashtu language;
 - a link to a free Pashtu-English-Pashtu online translation service; and
 - links to local sites about the Pakistani community.
- Upon Samit's arrival, the principal e-mailed faculty

and staff and reminded them to review the information contained in these links prior to the next faculty/staff study group. Faculty and staff were encouraged to use the internal listserv to share information about Samit and his home culture.

Then the principal asked the school secretary to find archived copies of school forms and policies in English and Pashtu (she had used an online translation service the year before for another Pakistani student) and send them to Samit's family along with contacts for translation and other community services.

Meanwhile, Samit has learned to say, "Hi, my name

is Samit” and “Nice to meet you” in English by using these phrases meaningfully and productively 27 times with his new classmates. His teacher has had his classmates write their names on cards they have placed on their desks. Samit tries hard to remember these names, as he can’t read them yet, and his classmates are quick to help him. His teacher will e-mail him the class list (a picture accompanying each student’s name) so that he can review all of these names later at home.

Samit’s English for Speakers of Other Languages (ESOL) teacher will also e-mail him links to Web sites where he can match sounds with letters, words, pictures, and numbers—and begin to develop sound-symbol correspondence for the English alphabet and numbers. An additional link will take him to interactive stories in English. The audio narration and animated illustrations will help Samit make connections between the text, audio, and pictures, and thereby comprehend the language of the story.

At the end of the school day, Samit exchanges IM addresses with three new classmates. He will attempt to chat using an online dictionary with additional help from Sarina, his older sister. Sarina, who studied English in school back in Pakistan, is taking two classes through a virtual high-school program as part of her junior-year curriculum. Her ESOL teacher recommended she take these courses in an asynchronous online format her first semester. The challenging academic content is easier to process in text form than the aural version she would get through class lectures. Sarina’s ESOL teacher has also shown her how to utilize a number of resources as she works with the online course content: electronic dictionaries, encyclopedias, multiple content URLs, keypals, and her online classmates and instructors. Sarina also uses a portable electronic “talking” dictionary, which allows her to hear how words she sees and uses on the screen are pronounced. She replays the word and repeats it out loud until she is satisfied with the result.

Throughout their school years, both children will use numerous technology resources to support their learning of the English language. The technologies serve them well in making the needed connections between form and meaning using combined text, images, and audio. Technology also provides venues for practicing the sociocultural intricacies of the target language through communicating online with adults and peers. Finally, along with their native English-speaking peers, Samit and Sarina will use technology to learn the academic skills and content they need to succeed in U.S. schools.

ASSISTIVE TECHNOLOGY OR JUST TECHNOLOGY?

As we see with Samit and Sarina, technologies can be used and used well to support English Language Learners. Technologies are bringing them better informed teachers and staff, communicative lifelines



Photo: Getty Images

“There are now nearly five million English Language Learners (ELLs) in U.S. schools, a 95 percent increase since 1991. However, the steps taken to accommodate and support ELLs vary a great deal.”

with peers, and access to informational and instructional resources through which linguistic and academic learning opportunities are available on demand.

As with instructional technology in general, the focus of Computer Assisted Language Learning (CALL) has expanded from patient taskmaster to multifaceted learning assistant. It includes multiple forms of self, pair, and whole-class study options through assisted reading, assisted listening, vocabulary practice, and pronunciation practice. There are seemingly infinite telecommunications resources available with

which learners can practice and make sense of new languages and new cultures. For example, the majority of sites in the MERLOT World Languages collection use real-time audio and video segments to teach various languages, including ESL/EFL.

All of these forms of technology serve to assist Samit's schooling in a foreign land, but are they truly "assistive" in the sense of a linguistic prosthesis? The answer is yes and no. Without the translation, testing, instructional, and affective support made possible by these technologies, Samit's education would be severely compromised. Assistive technology is defined as "any item, piece of

equipment, or product system ... that is used to increase, maintain, or improve the functional capabilities of an individual with a disability." Certainly these technologies improve Samit's opportunities to learn, yet he clearly does not have a disability.

In fact, the technologies that can be used to improve Samit's opportunities to learn along with his English-speaking peers are not exceptional at all. They are assistive in that they support learning in multiple ways for ELLs, just as they support learning for all. The trick is to make such tools more widely known to teachers and learners, and to guide them in using the tools effectively. In 2004, both Samit and Sarina are benefiting from the effective use of technologies that many of us take for granted as part of everyday life. Imagine how that might improve as broadband Internet access, handheld computing, and other technologies become more widely available. For example, automated transcription software with algorithms for adding word glossaries and cross-references are already available and will only get better. How might that combine with other technologies and teaching strategies to support ELLs? Let's take an imaginary look at Samit's life eight years from now.

THE YEAR 2012

Samit is now a junior in high school and, like all the other students, now carries his PDA everywhere he goes and makes extensive use of it in all facets of his daily activities. During classes, Samit, along with both

his native and non-native English-speaking peers, set their PDAs to do real-time recording and automated transcription of what goes on in their classes. Instructors have adapted the structure of their classes to concentrate the limited class time they have on lively, constructive, interactive activities.

The learning activities are recorded and students review these later according to the particular assignment. Classroom activities that become digital curricula might consist of anything from dramatic performances to debates on economic policies. For homework, learners study the captioned video with links, explanations, synonyms, and translations available as needed. For non-native speakers, the stresses of not understanding rapid-fire interaction in the target language are alleviated and access to the intricacies of meaning are provided.

These digital materials are optimal for language learning, for they consist of authentic, motivating



LANGUAGE LEARNERS GLOSSARY . . .

CALL: Computer Assisted Language Learning

The practice and study of language learning with and through computer use.

EFL: English as a Foreign Language

Foreign or world languages are those taught in countries where they are not spoken as a native language.

ELL: English Language Learner

Term most often used to describe K–12 children learning English as a second language.

ESL: English as a Second Language

Second-language learning means learning the language of one's immediate surroundings that is not one's native language.

ESOL: English for Speakers of Other Languages

The professional educator field of teaching English. Term most often used in K–12.

TEFL: Teaching English as a Foreign Language

Teaching English outside of English-speaking countries.

TESOL: Teaching English to Speakers of Other Languages

The field of teaching English to non-native speakers.

instances of the target language in use, with many tailored options to support comprehension and language learning. On Samit's PDA screen, customized English-language agents guide his comprehension and extend his learning: an intelligent, personal guide continually gathers data about the status of his language acquisition and provides seamless prompting, brief remedial activities, and instructional sessions tailored to his immediate needs, drawn from a database and filtered by his individualized progress tracking. Samit's guide is tasked to perform contrastive analyses (English-Pashtu) and error analysis (the likely source of performance or comprehension errors). These resources are in his pocket throughout the school day to coach productive learning. In short, Samit's PDA serves his instructional and informational needs and also serves as a linguistic prosthesis, a private tutor, and an English-language acquisition accelerator.

Although such advances may seem wondrous and desirable from our current vantage point, technology for effective language learning is never a stand-alone proposition. If it were, all of us who have ever purchased a Berlitz package would be speaking foreign languages fluently! It is ultimately through well-orchestrated interaction with native speakers, instructional materials, and content-rich resources that both English-language learning and learning in the subject areas are realized. That orchestration comes from well-trained teaching professionals.

We need to retain perspective on the wholly social aspect of human language in general and on the complex process of learning another language in particular. It is the *people* in Samit's school life—his teachers, school staff, and classmates—who mediate between the machine and his learning. Both the language and the academic content Samit learns are socially mediated. Indeed, the uses to which Samit and the people in his life put technologies for the benefit of learning are chiefly *social* uses, such as:

- staff and teachers at his school sharing information about him, his language, and his culture;
- his interaction with his peers in face-to-face contexts that carry over into telecommunications venues;

- the language practice that he engages in being continually guided and reinforced by his ESOL teacher. And the social benefits extend both ways. In addition to supporting Samit's schooling academically and

affectively, the faculty and staff at Samit's school have expanded their own horizons for understanding the world by getting to know Samit, his family, and his culture. The life experiences of the mainstream, English-speaking children are also enriched by knowing Samit, learning about the Pashtu language and Pakistani culture, and forming new friendships.

It is certainly in the service of the social that new technology applications will augment English-language learning—indeed *all* language learning—in the future. It is the social aspects of language that make possible the kind of human-to-human

exchanges that comprise the most critical elements of lifelong learning itself as society becomes more global: cross-cultural understanding, cultural and economic exchange, and global communication. ● ● ●

“These digital materials are optimal for language learning, for they consist of authentic, motivating instances of the target language in use, with many tailored options to support comprehension and language learning.”

R E S O U R C E S

Center for Applied Linguistics.
www.cal.org

English, Baby! www.englishbaby.com

Language Advocacy Project.
albany.edu/lap

MERLOT: Multimedia Educational Resource for Learning and Online Teaching. www.merlot.org

National Clearinghouse for English Language Acquisition & Language Instruction Educational Programs.
www.ncela.gwu.edu

TESOL: Teachers of English to Speakers of Other Languages. www.tesol.org

WorldLingo. www.worldlingo.com