

### 3

# Using Technology for Foreign Language Instruction: Creative Innovations, Research, and Applications

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Throughout our collective 65 years as foreign language teachers and as members of a number of foreign language professional organizations, we have often gotten the impression that many foreign language teachers equate classroom success with quiet, serious, book-centered learning. However, an equal proportion of our colleagues believe the opposite is true, that is, they support interactive, engaged, student-centered, and most importantly, fun classroom lessons. Indeed, we all learned in our initial education methods courses that student motivation is a key factor in engaging students in learning. However, have you ever thought about the concept of fun as a teaching principle? What about a task type that underpins and facilitates fun as an ongoing motivational tool? We are talking about the use of technology as a classroom resource that has very sound theoretical justification in second language acquisition research, constructivism, cooperative learning, and sociocultural theory.

Unfortunately, in many classrooms, foreign language teachers view technology and its use as something that is tinkered with on a Friday afternoon or used as a reward when class conduct has been good. In this chapter, we want to reconceptualize the nature of technology and its place in the foreign language classroom. In effect, technology needs to be relocated as the fundamental basis for all of the things we do in the foreign-language classroom. The follow-

ing sections discuss past and present issues concerning technology-enhanced education, what we can glean from research on computer-assisted language learning (CALL), what innovations in technology are beginning to emerge in education circles, and how these may influence what we do in our foreign language classrooms. First, however, let's look at the research before we cross the bridge into practice.

## **Historical Developments of CALL**

By the early 1960s, universities had begun creating local area networks that allowed computers on campus to communicate with one another, affording a rapid exchange of information. Soon thereafter, educators became interested in using these networks for the purposes of language learning and teaching. In fact, Collett (1980) was one of the first to use his university mainframe computer to post grammar activities for his language students. Almost a decade later, Dunkel (1987) called for the use of computer-aided instruction as a more holistic, meaningful way to teach languages, in keeping with Canale and Swain's (1980) notion of communicative competence.

Since the early 1990s, research on computer-mediated communication (CMC) has examined how electronic media could be employed to enhance language learning (Beauvois, 1992; Chun, 1994; Chun & Plass, 2000; Kelm, 1992; Kern, 1992; Kern & Warschauer, 2000). Much of this research concluded that the use of an asynchronous discussion board (Beauvois, 1992; Chun, 1994; Kelm, 1992; Kern, 1992) promotes greater student participation, more requests for clarification and negotiation of meaning, and the use of more discourse structures. Other affective factors, such as lower anxiety (Kelm, 1992), increased motivation (Kern, 1995), and advantages for at-risk students (Beauvois, 1992) were also found in the use of synchronous chat. Similar studies pointed to the creation of a level playing field for students who are less likely to participate in a face-to-face classroom (Chun, 1994). In addition, some researchers (Chun, 1994; Kern, 1995; Sullivan & Pratt, 1996) began to question how language teaching and the role of the teacher are affected by the use of technology in the classroom.

To this end, researchers with more experience using technology in the foreign language classroom have begun to uncover other aspects of CMC that have a distinct impact on language teaching. Research shows that just using technology is not enough. There are certain conditions, such as appropriate time allowance and immediate feedback, that need to be met for technology to enhance language learning (Egbert & Hanson-Smith, 1999). Likewise, for learning benefits to be evident, teaching should combine media and interactivity (Pusack & Otto, 1997), that is, technology must be integrated into and woven throughout the curriculum, not merely added to existing classroom practices (Reigeluth, 1999). Most recently, research has examined the effects of negotiation of meaning (Fidalgo-Eick, 2001) and corrective feedback in synchronous CMC (Castañeda, 2005; Iwasaki & Oliver, 2003; Morris, 2002; Pelletieri, 2000) on the language learning process. Furthermore, it has been noted that technology can be used in two ways — either as a teacher or and as a tool (Levy, 1997). However, from an interactionist perspective of language learning, researchers view the computer as both a teacher and a tool and have demonstrated how computers can be used to provide input and

opportunities for output, as well as feedback for learners (Ortega, 1997; Sotillo, 2000; Warschauer & Healey, 1998).

Now let's look at the implications of what we know from research on foreign language pedagogy.

## The Impact of Technology on Classroom Practices

### Authentic Materials in Foreign Language Classrooms

For decades, foreign language teaching and learning has been synonymous with drill-and-practice or drill-and-kill. In traditional foreign language classrooms, students were required to repeat and memorize information from artificially created language materials. Foreign language teachers who were actually interested in using authentic materials had to purchase them from overseas and wait for delivery through the postal service or bring them back from personal trips. In the 1970s, computer technologies were created and implemented for language teaching by way of computer laboratories. However, the use of these computer labs was still focused on rote memorization and drill-and-kill grammar exercises. It was not until the 1990s that we witnessed the burgeoning development of the Internet, which yielded unprecedented and exciting applications of computer technologies to foreign language teaching and learning. With unlimited and fast access to authentic materials from the target culture through the Internet, foreign language teachers are now able to create meaningful tasks and communicative settings in which learners have an authentic goal and audience. For example, to plan a weekend holiday in the Loire Valley, a student could visit the Web site of a French travel agency to obtain information about hotels, tours, transportation, and so forth. In addition, the Internet technologies (e.g., e-mail, online forums, and chat rooms) provide more opportunities for learners to have authentic conversations with native speakers in the target culture (Warschauer & Kern, 2000), which enables language learning in a true cultural context. Direct access to the target language and culture also extends foreign language learning beyond the traditional classroom, where the teacher is the only knowledge transmitter. Students are now able to independently practice the foreign language in a real and meaningful environment.



### Cooperative Learning in Foreign Language Classrooms

Cooperative learning is an instructional strategy that allows small, interactive groups of students to work collaboratively on meaningful tasks. When undertaking cooperative learning activities, students must rely on and help each other to accomplish certain tasks or achieve a common goal. This best (classroom) practice has gained considerable attention, particularly

in the area of language learning. Both interactionist (Long, 1987) and sociocultural (Donato, 1989; Lantolf, 1994) researchers agree that collaboration and communication among learners help language learning to occur. For example, collaboration between a higher-level student and a lower-level student might allow scaffolding to take place. The interaction or collaboration between two learners helps mediate the development of the novice learner's language skills to an extent that would not be possible without expert help (Donato, 1989). Not only that, the higher-level student's knowledge and skills also are developed.

To that end, many researchers (e.g., Chun & Plass, 2000; Kern & Warschauer, 2000) have discovered that networking technologies provide an ideal medium for communication and can be used in foreign language classrooms to undertake cooperative learning activities. Examples include a foreign language group investigation project using instant messaging as the means of communication among all group members (Jin, 2004) or a cooperative jigsaw activity that uses chat rooms or e-mail exchanges, or perhaps pairs or small groups that collaborate by sharing one computer to participate in online discussions or electronic publishing.

## **Student-Centered Learning**

The key to student-centered learning is the idea of *equity in education*, the belief that all students must be afforded a fair and equal opportunity to participate. In student-centered learning environments, classroom topics are relevant to students lives, needs, and interests, and students are actively engaged in creating, understanding, and connecting with knowledge (McCombs & Whistler, 1997). In student-centered classrooms, teachers share control, and students are allowed to explore, experiment, and discover on their own (Nunan, 1988). In this setting, computer technologies provide more venues for all students to be equally and actively engaged in language learning activities. For example, in a technology-enhanced foreign language classroom, the teacher is no longer the only information source. Equipped with Internet technologies, students have access to multiple sources of information in a variety of media. They are encouraged to explore, compare and contrast, and ultimately develop knowledge about the target language and culture. Additionally, online communication (e.g., discussion boards and chat rooms) enables multiple venues in which students can practice using the target language. For example, a well-designed electronic discussion board creates a less stressful setting, particularly for those who are shy in the regular classroom. In such a stress-free environment, students are more active and the teacher is less dominating, which ensures the equal participation of all students.

Through technology use, students are afforded more opportunities for reflective thinking about language learning and use. For example, when a learner composes an e-mail or elaborates a posting on a discussion board, there is time to consider both the meaning and the form of the language. As a result of this reflection, the learner is able to more appropriately apply learning strategies (Ulitsky, 2000). As students develop the ability to reflect on how they learn, they are able to expand and improve their learning capabilities (Oxford, 2000). Therefore, the systematic nature of the particular technology used in the classroom affords learners an opportunity to reflect and grow, both intellectually and metacognitively.

## **Learner Autonomy and Motivation**

Learner autonomy is encouraged by allowing students to work independently, thereby engaging their full potential (Egbert & Hanson-Smith, 1999). Technology-enhanced settings such as discussion boards offer a protected, teacher-structured environment in which each student can stretch his or her potential and learn to take risks in a nonjudgmental context (Padr & Waxman, 1996). Within these disciplined environments, students feel supported and able to take the necessary risks in their learning, thus resulting in successful learning (Egbert, 2001). For example, a learner can take control of his or her language by referring to a dictionary or rewriting the message until he or she deems it satisfactory for posting. In addition, active learning, which puts the responsibility of organizing what is to be learned into the hands of the learners themselves, lends itself to a more diverse range of learning styles. An excellent example of autonomous, active learning is the International Tandem Network. Through this extensive e-mail network, language learners connect with native speakers of the target language to build pen pal relationships that not only foster autonomous learning but also cultivate literacy skills and cross-cultural understanding (<http://www.slf.ruhr-un:-bochum.de/etandem/etindex-en.html>).

Today students live in a world in which they are bombarded by multimedia messages that can facilitate their maneuvering through everyday life. Many students are naturally attracted to and motivated by activities that involve technology, especially in the educational arena. However, technology itself does not promote active learning, nor does technology use that is structured to mirror the teacher-fronted approach to language teaching and learning. Learners feel motivated when up-to-date and authentic materials are used to support learning (Dlaska, 2002) and when they have teachers who incorporate aspects of technology to scaffold their learning through the use of contextual cues such as images, icons, and audio and video elements (Chatel, 2002). For example, multimedia presentations delivered through the World Wide Web and online simulation programs provide easy-to-use and low-cost authentic information that students can explore and experience from their own individual perspective.

## **Risks and Rewards of CALL**

The use of technology in the classroom can increase motivation, decrease anxiety, foster more student-centered activities, and provide students with authentic materials and audiances. Also, it can promote greater language production and a higher level of language sophistication, as well as enhance critical-thinking skills according to particular cultural contexts. However, even with all these benefits, the integration of technology into the foreign language classroom presents some challenges and possible pitfalls that teachers should be aware of. In the following sections, we interpret the results of the research for you.

## Challenges of Technology Use in Foreign Language Classrooms

At the most basic level are technical difficulties, which frustrate teachers more than anything else. This could be as simple as a burned-out bulb or incompatible components in the computer projector or the cable to the laptop. More problematic situations might include broken links to desired Web sites or a server that is temporarily down. Without precaution, students can be easily upset or frustrated by these inconveniences. Though these situations might raise a teacher's level of frustration, as they say, don't throw out the technology with the bathwater. To reduce such avoidable frustrations, it is always a good idea to check the technology *before* you walk into your classroom!

There are also limitations that teachers should be familiar with. For example, because e-mail is asynchronous, an immediate answer or response is not expected. Synchronous communication tools, on the other hand, place more demand on students' language proficiency. Other considerations might include the quality of the software used. For example, the free software available on the Internet for videoconferencing often appears jumpy and pixilated online. However, it has been evidenced that students may be more receptive to seeing someone face while talking to him or her than just hearing a voice, no matter the clarity of the picture.

In keeping with students' needs, students should be trained in the use of these technologies before they are expected to carry out an assignment using them. Not only should students be trained in the use of a new program, they also should be advised of any rules surrounding its use. For example, when initiating a discussion board in class, the first step would be to have students introduce themselves and respond to at least one posting by one of their peers. This procedure should first be explained and then modeled to the class. If this type of training is not provided, students may experience stress that distances them from the technologies being used. When used properly, however, the benefits of technology seem to far outweigh the risks.

Another challenge that may concern foreign language teachers is classroom control. In a traditional classroom, the teacher is the center of teaching and learning. Thus, it is easy for the teacher to know where students are and how much progress students need to achieve. However, both the teacher and students may feel lost in a poorly designed technology-enhanced classroom. For example, students may visit irrelevant Web sites when they are asked to search for important information about the target culture. Without necessary constraints and explicit rules, the teacher may have no control over which Web sites students access and what is achieved by the end of class. Therefore, to ensure the optimal use of technologies in a foreign language classroom, a pedagogically sound teaching plan is necessary. Both the teacher and students should be aware of the class objectives and general procedures for carrying out online activities.

## **Best Practices for Using Technology in Foreign Language Classrooms**

In order to bridge theoretical and practical considerations, it is important for language teachers to be able to apply research findings to their everyday practice. This section sets forth specific suggestions for integrating technology into curriculum development and teaching materials. In addition, it offers ideas for the appropriate development and use of teaching materials, as well as practical classroom applications. These *do's* of technology use will provide a strong basis for language teachers to integrate technology into the classroom.

### **Know Your Students**

To successfully integrate technology into daily classroom learning, begin by getting to know your students' skill levels. A most serviceable manner in which to do this is by conducting a needs assessment of their computer skills. Teachers can construct a short survey or adapt one found online (see <http://www.mccsc.edu/survey.html>). The results of the needs assessment will facilitate the development of appropriate lessons that address both the students technology skills and language learning abilities. However, it is important to note that we cannot expect students to learn both technology and a foreign language at the same time. Teachers should be prepared to monitor students work on classroom-based tasks and support students use of technology.

### **Choosing Materials**

When developing original materials, create tasks that fit students' learning potential and fit appropriately with the technology (Chapelle, 2001). For example, for students who are Internet savvy, assigning a WebQuest on a topic they are familiar with can motivate them to use the language they are learning to complete a task that is based on authentic materials (Egbert & Hanson-Smith, 1999; Egbert, Paulus, & Nakamichi, 2002; Warschauer & Healey, 1998). This type of purposeful and contextualized material allows students to apply their knowledge of the world to their language learning tasks. For novice language learners, choosing technology that supports text with images such as photos, graphs, or charts is highly advisable. Additionally, teachers can create materials that support and advance students development of electronic literacies. For example, using the Internet to research as well as write a report provides multiple sources of information that motivate students to learn more about the topic.

### **Students Working With Technology**

One of the biggest challenges of integrating technology with classroom tasks is the shift in the role of the teacher (Chun, 1994; Kern, 1995; Sullivan & Pratt, 1996). Technology-enhanced classrooms have been found to promote discovery learning, learner autonomy, and learner-centeredness. One avenue toward activating these skills is for teachers to allow students to work collaboratively in pairs or small groups in which they can engage in interactive problem-solving or cooperative projects.

## Language Use

Creating an authentic language context by modeling and encouraging the use of the target language while working with technology in a classroom setting has been found to be complicated because technology use implies more autonomous learning or self-directed learning. However, research findings indicate that students tend to use the target language more if the teacher models and supports language use.

## Technologies on the Horizon and Their Potential Impact

Technology changes at such a quick pace that at times it takes our breath away — no sooner have we bought a new laptop than it has been superceded by a newer, faster, brighter edition. In this section, we would like to introduce you to a number of emerging technologies that have yet to leave their mark on the way we conceive of pedagogy in our foreign language classrooms. We have chosen the following technologies for their latent prospect in facilitating foreign language learning. Ultimately, it is *you* who will choose to tinker with these new technology toys and include them in your classroom practices.

### Mobile Learning: Cell Phones, PDAs, and iPods

Mobile learning is the ability to take the learning medium with you anytime and anywhere in order to improve or master a particular skill. In the area of foreign language learning, mobile materials can be constructed by teachers and reused in different classes to maximize resources. Clearly, the Internet is the means of distribution for these materials, and the most common way of connecting to the Internet is with a personal computer. However, new technologies are allowing us to connect to the Web from a variety of places. These new Web-enabled technologies include cell phones, personal digital assistants (PDAs), and iPods. These devices and their potential for mobile learning are particularly appealing and advantageous to today's teachers and students because most educators and older learners maintain busy schedules that are replete with work and school activities.

Fortunately, many schools and universities are now equipped with wireless access points. These wireless networks permit anyone with a wireless-equipped device to connect to the Internet. Once connected, students can browse Web sites, listen to streaming audio, watch streaming video, download podcasts, or communicate with others through instant messaging services or chat programs.

The current Web-enabled cell phones and PDAs are precursors of technology that promises to be even more compact and powerful. Despite their minute size, there has been substantial growth in the storage capacity, intuitiveness, and usefulness of these appliances. Therefore, it can be said that the future of mobile learning, which will allow students to experience new levels of interactivity and engagement by accessing the Web anywhere, is embodied in

these devices. In the following sections, we address specific technologies that we feel are of particular interest to foreign language educators.

## Podcasts

The term *podcast* is a combination of two words: *pod* is from iPod, the portable audio player made by Apple that plays audio files, and *cast* comes from roadcast, to make something widely known, as in a program that is transmitted to a large audience. Podcasts are audio recordings that range in quality from very polished and professional to quirky and homemade. The creation of podcasts is relatively easy using free software that can be downloaded from the Internet. However, it is important to note that although podcasting is a technology that was started by Apple enthusiasts, you do not have to own an iPod or Apple computer to listen to or create a podcast. Anyone with a computer and an Internet connection can participate in podcasting. The simplest way to listen to podcast serializations is to download iTunes, which is free, and then, through iTunes, search for your podcast.

## Podcasts and Interactivity

Though some critics have posited that podcasts are limited in their usefulness in the classroom because of their lack of interactivity, they have only seen them used in traditional ways. The original purpose of podcasts was passive listening to audio files. However, podcasts today are highly interactive and actively engage students in their own learning. To illustrate the interactivity of a podcast used in foreign language learning, consider the following example:

A teacher creates and posts a podcast in French that the students are asked to download and listen to. The podcast process begins by asking students to listen to a short story about a young man who has just arrived in the Ivory Coast; however, the story quickly changes once the scene has been set and the characters established. The student is confronted with choices to make and must interact with the technology to finish the story. For example, the listener must decide by what means the young man will get to his hotel. In the story, a stranger offers him a ride to his hotel, or he has the option to take a taxi. At this point, if the student chooses the taxi option, he or she is directed to listen to another podcast that continues the story from the taxi ride. If the student decides that the young man should accept the stranger offer, he or she will be directed to listen to a different podcast that continues the story based on that decision. This interactivity continues throughout the podcast, with a variety of options and paths offered to the learner.



Research regarding both synchronous and asynchronous communication among students in foreign language classes and students in the target culture has shown that such communications hastens the development of language acquisition (Belz, 2002). Moreover, students who communicate electronically generally produce a greater quantity of language that is more

complex than their spoken language (Kern, 1995). Beauvois (1992) and Kelm (1992) both posit that this is because students have some level of anonymity in a networked computerized environment. Though constructing a podcast does not offer the same type of anonymity as text-based communication, the ability to edit contributes to students' feelings of comfort while using the language. Podcasts can be used in the same fashion to produce the same results. For example, students can communicate with peers in another country by creating their own podcasts. In turn, their counterparts can respond by creating a new podcast.

## Pros and Cons of Podcasting

There are several advantages to the use of podcasts in educational settings. First, most students already have some understanding of the technology used to listen to podcasts. That is, they are familiar with the downloading process because many have downloaded music and video from the Internet to their personal computers. Additionally, instead of a portable compact disc player or cassette player, many students own and carry MP3 players with them on a daily basis. Portability is another distinct advantage of learning through podcasts. For example, a student who has missed a class would be able to listen to the classroom discussion at their convenience, which could also act as an adjunct to the classroom interaction. Finally, although the file type that Apple sometimes uses in iTunes is compatible only with iPods, this does not mean the only way to listen to a podcast is to have an iPod. Apple files (.acc) can easily be converted to play on any MP3 player with the appropriate file conversion software.

An unfortunate attribute of podcasts is their size. These files are sometimes an hour or more in length, creating files that can be quite large. Another disadvantage of podcasts is the potential for poor production quality, in that some podcasts have shown evidence of using faulty equipment and abrupt editing. At the present time, making a podcast is not necessarily intuitive for the user. We hope that this will change in the near future.

## Blogs

The term *blog* is short for *weblog*, a term coined by Jorn Barger in 1997 to describe Web sites that are updated continuously. Other derivatives of this term include *blogosphere*, which describes a dynamic network of blogs (Blood, 2000) and *blogger*, which is the author of the weblog. Though there is no agreement as to a single definition of a blog, Ward (2004) offers a working definition that describes the general concept: A blog is a Web site that is updated regularly and organized chronologically, with the most current entry listed first. It can be compared to a type of interactive public journal. A blog is similar to an e-mail message in that any reader can reply to it, yet it is different because it is published to the Internet. Often, readers' replies contain a Web address that links to additional information. Also, a blog is less intrusive than e-mails because the reader chooses to visit the blogger site instead of receiving a myriad of e-mails. It is similar to an online forum. Moreover, old postings are archived and can be accessed by readers.

Generally, blogs chronicle an individual experience in some aspect of their life. For example, several blogs detail the differences between the writer's home country and the United

States. These blogs explain the sacrifices and adaptations that their authors have made during their time away from their home. One of the most well-known bloggers is Salam Pax, an Iraqi who published a blog that described his lived experiences during his country's invasion and the following occupation. This famous blogger brought the notion of blogging into the spotlight and highlighted the fact that anyone with a computer and Internet connection can publish their thoughts.

## **Blogs and Writing**

There are well-documented findings that students are more motivated to produce written work and strive for better quality when they are provided with an authentic audience (Grabe & Kaplan, 1996; Mendon & Johnson, 1994; Mittan, 1989; Tsui & Ng, 2000; Warschauer, 1998). A distinct advantage of student-created blogs is increased motivation and desire to produce quality work. Furthermore, writing for Web publication ensures a multicultural audience that may interact with students by offering comments and suggestions concerning the content of the messages. This quasi-peer revision promotes student reflection and engenders a feeling of ownership of the blog.

Just as journal writing is an iterative process, the upkeep of a blog requires the same revisions and modifications that illustrate the process of writing as ongoing. Blogging requires the author to continually publish, that is, there is constant revising and reflecting to create a finished product. It becomes a collection of student work that can be assessed holistically, much like a portfolio.

Research has shown that students are less likely to have anxiety when they are communicating in a computer-mediated environment (Bradley & Lomicka, 2000; Doughty & Long, 2003; Warschauer 1998). They also tend to produce more complex and sophisticated language in such an environment (Beauvois, 1992; Chun & Plass, 1995; Kelm, 1992). Additionally, the anonymity of publishing on the Internet provides a low-risk distribution medium that provides learners with a platform on which they can experiment with the language and increase their level of confidence.

## **Blogs and Reading**

As previous research has shown, access to the Internet provides both students and teachers with a multitude of authentic language materials. This virtual environment includes online newspapers, menus, shopping sites, videos, and blogs. Reading blogs written by others who share the same interests can be particularly appealing to students. The dynamic reading that a blog offers is much more meaningful than the static reading found in traditional print media, as it cognitively engages students when the public discussion concerns their own personal experiences (Crawford, Marx, & Krajcik, 1999). Moreover, this type of reading serves the important purpose of introducing the language learner to the target society and helps build a community of learners (Preece, 2000).

Reading blogs can also develop critical-thinking skills. The ability to critically evaluate electronically published information is paramount to the successful use of the Web, and teach-

ers should ensure that students know how to distinguish reputable materials from questionable ones (Warschauer, 1998). In other words, teachers should remind students of the potential fallibility of information presented on the Web and equip students with the tools to critically analyze these materials.

## Blog Activities

Reading blogs gives students an opportunity to correspond with native speakers and experiment with the language. Reading and responding to a blog is an interactive endeavor for students, as they become engaged in reading others' replies to their posted comments and actively follow hyperlinks to explore sites related to the topic they are reading about.

Blogs can also be used in conjunction with other technologies. For example, students might be asked to complete a WebQuest and then post their findings to a blog; other classmates might respond to the blog and offer suggestions or comments, prompting the author to reflection on his or her original writing. Students can also work together to create a blog that is pertinent to a current class activity. This type of extension reinforces new material and expands previous knowledge.

Additionally, blogs are an excellent way to showcase and assess student-created materials, as is done with electronic portfolios. There are many free sites on which students can post their writing and read what others have posted. Examples include <http://www.blogger.com>, <http://www.spaces.msn.com>, and <http://www.blogdrive.com>. These sites have additional features that allow bloggers to upload photos, add interactivity, and provide easy navigation for readers to view the newest blog installment.

Not only can students use a weblog as a reflective tool, but also teachers can use this reflective tool. For example, an educator could start a blog about a new unit introduced in class, post a collection of activities or tasks that worked well or ones that did not, or perhaps exchange experiences and advice with other teachers. Given the technological nature of blogging, it is no surprise that there are numerous examples of blogs that detail teachers experiences using computers and other technologies in the classroom.

We refer you to a wonderful chapter written by Tekiner and Cresswell, which appears in the online extension of this book. Called *Blogs for Language Teachers*, it can be found at <http://utweb.ut.edu/Faculty/terben/CALL.html>.

## Wikis

A *wiki* is a collaborative, open-editing Internet tool that was developed by Ward Cunningham in 1994. This tool allows users to co-create and co-edit Web site content using any Web browser (Leuf & Cunningham, 2001). Since its debut in the early 1990s, the wiki has gained significant popularity as a way to facilitate computer-supported collaborative learning, usually in a writing application. An excellent example of wiki technology can be found at <http://wikipedia.org>.

Participation in a wiki generally takes one of two forms. The first is a document mode, in which all contributors can create documents. In this mode, each participant can anonymously edit or replace documents that others have posted, thereby transforming the document as multiple and changing authors comment and create newer iterations of the same documents. The resulting piece is compiled and published to represent the shared knowledge or beliefs of all the contributors (Leuf & Cunningham, 2001). The second wiki mode is known as a thread mode. In this style of wiki, contributors are expected to sign their posted messages, and others respond with their own signed commentary while leaving the original message unedited. To that end, the thread mode can be thought of as a conversation or discussion among participants, whereas the document mode reflects more of a final thesis or dissertation from the contributors (Leuf & Cunningham, 2001).

What is most important to foreign language teachers who have an interest in collaborative learning through writing is that wikis can use multiple languages, so people around the world can contribute to wiki sites in their own languages. In fact, using wikis for second language writing activities has become increasingly popular as a motivating medium for students. Traditional writing assignments require learners to individually compose and edit their own drafts, but in wiki writing, multiple rather than individual authors are encouraged to compose, rewrite, and openly edit multiple texts at any time. In the wiki medium, the authorship and ownership of the text are shifted from a single person to the whole class, blurring the distinction between the author, the reviewer, the audience, and the evaluator. The use of wikis in a classroom setting promotes peer interaction and augments the sharing and construction of knowledge and expertise among a group of learners. This knowledge sharing and co-construction consequently empowers students and leads to learning autonomy (Myers, 1991).

To establish a wiki site for your own writing class, you can apply for a free account through a wiki hosting site, such as <http://www.seedwiki.com>, or visit [http://en.wikipedia.org/wiki/List\\_of\\_wiki\\_farms](http://en.wikipedia.org/wiki/List_of_wiki_farms) to search for more free wiki hosting services. Once you have set up an account, you will be directed to create a name and description for your wiki site and define its major features, such as language, topic, posting protocols, and so forth. After you have created a wiki site, you can invite your students into the wonderful world of writing with wikis!

Again, we refer you to a great chapter replete with classroom activities written by Jane Harvey. It can be found at <http://utweb.ut.edu/Faculty/terben/CALL.html>.

## **Simulation Gaming**

Marc Prensky, a world-renowned writer in the field of digital gaming, has characterized the schoolchildren of today as the digital generation. This idea is based on the key premise that these learners have changed in some fundamentally important ways. That is, the bulk of the students in schools today born after 1990 are, in a very real intellectual sense, not the same as the students of the past (Prensky, 2001).

Prensky (2001) explains that the students of today have grown up with computers, PlayStations, and Game Boys. With radical changes and innovations in technology such the pocket calculator, the laptop computers, digital cameras and videos, the compact disc, the

wireless telephone, the Internet, the MP3 player, and so on, children recreational experiences in the last 20 years have shifted dramatically. Today youth, in elementary school through college, travel with their own personal Game Boys, Handycams, cell phones, portable CD and MP3 players, pagers, laptops, and Internet connections. Statistics show that, each day, the average teenager in America watches more than three hours of television, spends a half hour on the Internet, and plays an hour and a half of video games. Altogether, these students watch more than 20,000 hours of television, play more than 10,000 hours of video games, see hundreds of movies in theaters and on video, and are exposed to more than 400,000 television commercials, adding up to tens of millions of images. Clearly, these kids are the digital generation (Prensky, 2001).

For foreign language teachers, one of the biggest problems in language learning whether it takes place in a classroom, online, or from a distance is keeping students motivated to stick with the learning process. Why is motivation so hard to maintain? For one, all learning requires effort. What motives do our foreign language students have for learning the Spanish, French, German, or Latin material presented to or required of them? There are, of course, students who learn for the sake and joy of learning. Unfortunately, we see this only rarely. Realistically, students' motives for foreign language learning are a mixture of intrinsic goals and extrinsic rewards, combined with psychological factors such as fear and the need to please. If strong enough, these motives can keep the students on the right path.

How effective will these forms of motivation be in the future? In the world of education, providing motivation is one of the teacher's traditional roles. However, Prensky (2001) says that computer and video games are so engaging and education is often so *unengaging* not because that is the natural state of things or the nature of the beast. The reason computer games are so captivating is that the primary objective of game designers is to keep the user engaged. They need to keep that player coming back, day after day, for 30, 60, even 100 or more hours, so that the person feels as if he or she has gotten some value for his or her money (and, in the case of online games, keeps paying). That is their measure of success.

Previous research that has investigated the nature and use of games and play has identified two common elements in the notion of play. The first is that playful activities elicit involvement. The second is that they also provide pleasure. Starbuck and Webster (1991) have discovered some common characteristics among people who play:

- ◆ People play at work to seek competence, stimulation, challenge, or reinforcement.
- ◆ People who perform very playful tasks enjoy what they are doing. When they judge those activities as appropriate, they switch to them readily and try to continue doing them.
- ◆ They tend to concentrate more and increase their persistence.
- ◆ They become less aware of the passage of time and are reluctant to change activities.

- ◆ They become so absorbed that they may neglect other things, such as long-term goals, nonplayful tasks, and social relations.
- ◆ Their learning is enhanced because the pleasure and involvement of playful activities induces them to expend time and effort.
- ◆ Through different forms of play, they broaden their behavioral repertoire incrementally, discover or invent radically new behaviors, and polish their existing skills through repetitive practice.
- ◆ Playful tasks foster creativity. If the playful tasks are new ones, they will put a great deal of effort into learning them and exploring them, usually trying to control their own learning.

The Horizon Report, a collaborative effort between the New Media Consortium and the Educause Learning Initiative, is an annual “think-tank,” research-oriented effort that seeks to identify and describe emerging technologies likely to have a large impact on teaching, learning or creative expression within educational contexts. In its 2006 report, four major trends were identified that were perceived to reflect significant changes in attitudes toward technology and communication in education circles. These trends were (a) the widespread acceptance of dynamic knowledge creation and social computing tools and processes; (b) the recognition of mobile and personal technology as a delivery platform for services of all kinds; (c) the expectation by educational consumers to receive individualized services, tools, and experiences, as well as more open access to media, knowledge, and information; and (d) the acknowledgement that collaboration across the range of educational activities is critical, including intra- and interinstitutional activities of any size or scope. Within the above trends, the 2006 report (p. 5) details six technologies that are making significant inroads into classrooms across the United States.

- ◆ *Social Computing* is fast replacing face-to-face meetings with virtual collaborative tools;
- ◆ *Personal Broadcasting* has its genesis in text-based messaging. Blogger.com enables video and audio broadcasting (vlogging) of MP3 files that can link with iTunes for serialization;
- ◆ *Phones & PDAs in Pockets* is an on-demand means to access educational content;
- ◆ *Augmented Reality and Enhanced Visualization* allow large data sets to be represented in 3D;
- ◆ *Context-Aware Environments* give rise to intelligent rooms that respond to voice commands; and
- ◆ *Educational Gaming* has prompted renewed research interest into engagement theory, the effect of using games in practice and the structure of cooperation in game play.

What does all of this have to do with foreign language learning? Everything! To return to what we said in the introduction to this chapter fun and games promote motivation. Currently, there is ample research to suggest that games and more recently, digital games provide learners with a unique set of stimuli that promote learning in many different areas, such as cognitive, social, and physical dimensions. Fortunately, we have now entered a time during which teachers are able to use their own templates to create their own unique and fun digital games specifically for foreign language learners. For more information on the use of games in the foreign language classroom, visit any of the Web sites listed at the end of this chapter: for a resource on how particular games promote specific learning activities and skills-based learning in students, see Erben's (2006) thorough (though not yet exhaustive) chart in Appendix B of this chapter. These materials should help you get in the game and start playing!

## **Conclusion**

A wide variety of technologies are pervasive in our daily life. As we have seen, researchers and practitioners have recognized that technologies provide great potential for foreign language teaching and learning. In this chapter, we have only scratched the surface of the many activities that can be enhanced by the integration of these technologies and how and when they can be used in particular classroom settings. As with any new pedagogical method or technique, cautions on practical the use of technology, in general, are also provided to help prevent potential drawbacks inherent in these technologies. We expect you now have a broader exposure to the multitude of technologies available and will attempt to actively integrate some of the technologies introduced here, as well as develop and share your own creative and un innovations and applications of technology use in the foreign language classroom.

## APPENDIX A

### WEB SITES FOR CREATING GAMES<sup>1</sup>

- ◆ Puzzles: <http://www.quia.com>, <http://www.puzzlemaker.com>, <http://web.uvic.ca/hrd/hotpot/>
- ◆ Language games from Link to Learning: <http://www.linktolearning.com/language.htm>
- ◆ Quest Atlantis (three-dimensional multiuser environment for teaching and learning): <http://atlantis.crlt.indiana.edu/start/>
- ◆ Education Arcade (consortium of game designers that promotes educational uses of gaming): <http://www.educationarcade.org/>
- ◆ Gaming to Learn workshop (sponsored by Mexcia X): [http://mediax.stanford.edu/news/sep05\\_03.html](http://mediax.stanford.edu/news/sep05_03.html)
- ◆ Serious Games Initiative: <http://www.seriousgames.org/>
- ◆ Serious Games Wiki: <http://www.coe.ilstu.edu/rpriegle/eaf228/>
- ◆ EAF 228 education course (structured to appear like a video game, by Rod Riegler): <http://www.coe.ilstu.edu/rpriegle/eaf228/>
- ◆ Social Impact Games: <http://www.socialimpactgames.com/>
- ◆ Serious Games Summit: <http://www.seriousgamessummit.com/>
- ◆ ELLS Project (joint American and Chinese language learning project using gaming): <http://www.seriousgamessummit.com/>
- ◆ Simulation and gaming issues in language learning: <http://sag.sagepub.com/content/v0133/issue2/>
- ◆ Simulation as a language learning tactic: [http://www.languages.dk/methods/documents/Simulation\\_Manual.pdf](http://www.languages.dk/methods/documents/Simulation_Manual.pdf)
- ◆ ICONS experimental Web-based simulation project: <http://www.icons.umd.edu/>
- ◆ MMOG Research links to papers by Constance Steinkuehler on multiplayer online games: <https://mywebspaces.wisc.edu/steinkuehler/web/mmogresearch.html>

1 Adapted from Godwin-Jones (2005).

## APPENDIX B

What comes automatically to mind when one thinks of the notion of “game” is something akin to a board-game such as monopoly or a virtual-game such as played on a Playstation or a Gameboy. However, there is more to game play than one may first assume and perceiving games as something akin to an online activity or a board game may be a very constraining and narrow perspective. Programs in game design are emerging in universities across the United States. They typically draw on the fields of psychology, cognitive science, computer science, education, and instructional design. The complexity of this new discipline is reflected in the array of gaming types that are currently being investigated for their educational potential. These include simulation games that mimic real-world processes, virtual environments that offer visually rich theme-independent settings, social-cooperative games that enable multi-player role-playing and alternative reality games that involve game play over time and space, often taking weeks or months to complete.

<b>Board Games</b>	<b># of Players</b>	<b>Functions That Can Be Practiced</b>	<b>Language That Can Be Practiced</b>
Monopoly	3–6	Asking, making requests, buying/selling	Numbers, directions, city establishments
Battleship	2	Asking	Numbers, letters
Snakes & Ladders	2–6	Expressing opinions	Numbers
Guess Who	2	Expressing opinions, asking	Adjectives, body parts
Twister	2–4	Giving commands, rejecting and accepting advice	Body parts
Operation	2	Rejecting and accepting advice	Body parts
Clue	2–8	Expressing opinions	Family names, adjectives, household objects
Yahtzee/Boggle	2–6	Letters, guessing	Vocabulary expansion
Scrabble	2–4	Letters, guessing	Vocabulary expansion
Payday/Life	2–6	Expressing compliments	Professions, accounting, money, hobbies, education
Jeopardy		Asking	Interrogatives, word order
Sorry	2–4	Expressing opinions, asking	Time
Trivial Pursuit	2–6	Asking	Any topic, reading
Uno	2–4	Expressing	Numbers
Concentration	2–3	Expressing	Any topic

Digital Games	Gaming Type	Functions That Can Be Practiced	Nature of Language Practice
Second Life	Simulation	Judging, analyzing, explaining, expressing	Synchronous interaction, pragmatics, sociolinguistics
Sims	Simulation		
Operator's Side	Virtual environment	Expressing processes, describing	Synchronous interaction, pragmatics, sociolinguistics
ActiveWorlds.com	Virtual environment		
ThinkingWorlds	Virtual environment		
Environmental Detectives	Alternative reality	Asking, accepting, refusing	Written and spoken discourse
Seaman	Alternative reality		
Games2train	Social-cooperative	All possible functions can be practiced depending on how the "gaming environment" is set up	Reading, writing, listening speaking, culture, and grammar
Cybertrain	Social-cooperative		

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