

Technology in the Foreign Language Classroom

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Although there are many ways to address the relationship between technology and its use in the foreign language classroom, this paper will restrict its analysis to a definition of the two modes of communicative technologies: synchronous and asynchronous programs. A discussion of perception and usefulness primarily within the context of asynchronous technologies will help to summarize the research in this area. The advantages and disadvantages of these technologies will also be discussed. The current research in technology and language explores such topics as effective integration (Liu, Chen, Sun, Wible, & Kuo, 2010), models or programs in their variations, online interaction as a level playing field for students with different learning styles (Bryant, 2006), the development of new technologies, teacher and student perceptions of technology (Chen, 2008; Stepp-Greany, 2002), as well as a number of other topics. The usefulness of technology is measured according to its impact on student affect, ease of use, and availability to teacher and student (Liu et al., 2010; Tekinarlan, 2008).

It is clear that the research, as in many areas within the field of second language acquisition, would benefit greatly from some unifying consensus and clear direction for future research. The particular problem facing research in second language acquisition and technology is the ever-evolving nature of technology and the quick rate at which it undergoes change. With that in mind, the programs such as blogs, wikis, threaded discussion, chat, and others, are discussed with the acknowledgement that new developments in technology will soon give way to newer and more advanced computer mediated communication (CMC) programs.

Before discussing the theories of technology integration, there must first be some explanation about some of the more popular media of electronic communication. Blogs, for example, are constructed in a manner that allows multiple users to respond to a common question while seeing each others' responses. Wikis allow for a group of users not only to add comments but also attach, arrange, and edit more in-depth aspects of a website-based community. Finally, threaded discussions could be thought of as precursors to blogs, in the sense that they are similar in format. However, threaded discussions usually lack visual supplements such as pictures, videos, or background image components, and are instead restricted to plain text contributions. In order to maintain a focus throughout this discussion of technology in the foreign language classroom, a series of questions will serve as a guideline for the reader:

1. How are synchronous and asynchronous learning currently defined within the realm of foreign language education?
2. How do students and teachers perceive technology and its integration into the foreign language classroom?
3. What factors can alter the perception held by students and teachers?
4. What are the advantages and disadvantages of technology as currently discussed in its integration to the foreign language classroom?

Synchronous and Asynchronous Learning

Both synchronous and asynchronous learning involve online components that allow a group of users to interact with one another. The main difference between the two has to do with the immediacy of response. If the time between one electronic submission and another is

delayed, then the communication would be classified as asynchronous. If the communication is more simultaneous, however, then the communication would fall under the category of synchronous. The difference then is that synchronous communication is very similar to real time face-to-face interaction but is accomplished through electronic programs that allow for a more immediate response (Alvarez-Torrez, 2001; Biesenbach-Lucas, 2004).

Synchronous learning. Some synchronous programs include online chatting, both text and graphic-based, as well as video conferencing through programs such as Skype and Google video chat (Alvarez-Torrez, 2001). Alvarez-Torrez describes the synchronous communication as “real-time communication via a local or global network” (p. 313). Proponents of synchronous learning programs emphasize its close resemblance to face-to-face communication in that some communicative techniques, such as turn taking, interruption of discourse, and negotiation of meaning, are often present, even through the use of online technologies. If synchronous learning is just an extension of face-to-face communication, the question might be asked whether the integration of synchronous online learning is superfluous to an already sufficient system of communication. This question and others will be addressed in detail under the section of usefulness of communicative technologies.

Asynchronous learning. In comparison to synchronous learning, asynchronous learning is online communication between two or more participants that occurs within a delayed time frame. The communication is interactive but participants’ contributions are separated by time. It is precisely this delayed response that allows for such advantages as reflection and self and peer revision (Biesenbach-Lucas, 2004). With the advent of Web 2.0 applications, the discussion of technology integration has turned from synchronous to asynchronous communication models. Although chat and video conferencing are still used, programs such as blogs, wikis, and threaded discussions are quickly becoming the dominant programs of communication (Elgort, Smith, & Toland, 2008). One caveat mentioned by Elgort et al. (2008) is that these asynchronous applications may be seen as “social software” and adds that care must be taken to “emphasize the academic nature of student contributions” (p. 207).

Uses of synchronous and asynchronous programs. Given the unique qualities of each kind of technology integration, it is beneficial to note some of the contexts in which each would be more appropriate. The more seasoned of the technologies include the synchronous formats of online chat and video conferencing. These programs are more appropriate in contexts where the participants are not only separated by space but perhaps where a face-to-face meeting to coordinate collaborative efforts is not feasible. This idea in particular has led to the exploration of key pals as substitutes to the more traditional pen-pal approach. The asynchronous platforms such as blogs, wikis, and threaded discussions are more commonly used and arguably better suited for extra-classroom collaboration among a group of students who also have the opportunity to meet together in a classroom (Biesenbach-Lucas, 2004). Not only are there situations in which synchronous learning programs are favored over asynchronous programs, but the different technologies within the umbrella category of asynchronous learning also have unique properties that are appropriate for specific contexts.

With regard to threaded discussions, Weasenforth, Biesenbach-Lucas, and Meloni (2002) state that “the asynchronous nature of the threaded discussions allows extension of discussion time, which would not be possible if only physical classroom time were available” (p. 74-75). Elgort et al. (2008) distinguish wikis from threaded discussions by explaining that whereas threaded discussions serve as linear discussion forums around an isolated topic, wikis work as non-linear collaborative and cooperative platforms where students interact in a community of

contributions. Addressing the particular strengths of blogs, Bryant (2006) observes that they are commonly used as electronic journals, allowing students to contribute asynchronously. Identifying these similarities between blogs and journals may indicate that blogs, more than the other asynchronous platforms, are better fit to measure student affect because they allow for student reflection.

Perceptions of Students and Teachers

Although electronic media are found in an abundant variety, one indication that is largely determinant of their effective integration is that of student and teacher perception. Perception is a broad term that includes the subcomponent ideas of perceived usefulness, perceived difficulty, as well as intimidation of new and apparently complex technologies. It is important to first discuss some of the research findings dealing with the effective integration of technology as it relates to student perception and then transition into some of the factors that are linked to teacher perception.

Student perception. With regard to usefulness and effective integration of technology, Davis (1986) explains that the ease of use and usefulness of a technology affect users' intention to use it. The research conducted by Liu et al. (2010) goes on to outline that factors such as user interface, visual attractiveness, and ease of navigation all contribute to students' perceived usefulness of technology. Furthermore, Biesenbach-Lucas (2004) links what students perceive as useful to the relation between the online component and its application in the classroom. If the online work or correspondence is not followed up in class, students will begin to perceive it as simply a useless supplement to more important matters of the classroom.

Davis (1986, 1989, 1993) also makes a distinction between perceived usefulness and perceived ease of use (as cited in Liu et al., 2010). He goes on to explain that perceived usefulness refers to the students' perception about how a certain technological task will enhance their knowledge of a subject, and that perceived ease of use refers to the students' level of difficulty or frustration as they interact with the interface of a program. Combined research has shown that perception of a technology in all its contexts is highly correlated with students' willingness to adopt the new formats of communication.

Another component of perceived usefulness has to do with students' previous experience and familiarity with the incorporated technologies (Song, Singleton, Hill, & Koh, 2004, as cited in Liu et al., 2010). Research shows that the more familiar a student is with a certain type of technology, the easier the adaptation of the platform will be for that student. This occurrence is quickly becoming commonplace as students are constantly exposed to trending technologies and their many social uses. Because students are being introduced to technology earlier and with more frequency, they are often found to be more comfortable with technology than their teachers. As students begin to grow up in a world permeated by technology, teachers are becoming overwhelmed at finding themselves at an inferior level. Prensky (2001) refers to this particular phenomenon using the terms "digital natives" and "digital immigrants," where the native is the student and the immigrant is the teacher (as cited in Shrum & Glisan, 2010, p. 449-450). This presents yet another complication for training and preparing teachers to not only use the technology effectively but serve as a competent resource for students when questions or difficulties arise.

Teacher perception. Defining the relationship between teacher perception and the integration of online technologies, Chen (2007) explains that "teacher training, classroom

pedagogy, and perceived capability have direct effect on Internet use” (p. 545). She later elaborates on the reasons that influence teachers’ decisions to integrate technology into their classrooms. Some of these reasons include the teacher’s attitude towards technology in general as well as institutional support (Chen, 2007). These concerns are quite realistic and may be remedied to a certain degree by well-implemented and meaningful teacher training. The problem, as Jayachandran (2009) points out, is that current teacher training programs fall short of preparing teachers to teach effectively with technology. It is clear from the research that teacher perception is a critical factor in the decision about whether technology is used in the classroom or not. It can also be concluded from the research that higher quality teacher training programs in the area of technology use are sorely needed in the field of foreign language education.

To summarize the discussion on perception, it is necessary to reiterate some of the key factors at play in the integration of technology into the classroom. Students will be more willing to engage in technological platforms if they perceive the task to be relevant to the course content and perceive the technology to be easy to use. The task must also match up with the learning objectives of the course so that the students do not feel they are wasting their time with tasks unrelated to the core content of the course (Liu et al., 2010). From the perspective of the teachers, proper training and preparation seem to be most important in determining whether or not teachers will use technology in their classrooms. Furthermore, as mentioned by Jayachandran (2009), teacher training programs need to be of a better quality in order to effectively prepare teachers for the task of integrating technology into their curricula. Other factors such as whether or not the technologies incorporated increase or decrease the teacher’s workload and the overwhelming effect of the constant development of new technologies also play important roles in teacher perception of technology.

Usefulness of Technology in the Foreign Language Classroom

Considering all the discussion about what kinds of technologies are used in foreign language classrooms and how student and teacher perceptions can affect the effective integration of such technologies, the questions must be asked: “So what?” What does all of this mean, if at the end of the road, technology does not provide any benefit to current methodologies or remedy for any shortcomings in the field of language? Therefore, the discussion will now turn first to the disadvantages and then to the advantages of technology use in the classroom. After all, as the idea of Occam’s razor suggests, all things being equal, the simplest and most straightforward process should be implemented. Although the research is mixed, there are certainly some clear indications that technology is not a quick-fix solution to compensate for poor teaching. Still, on the other side, there are some very convincing arguments that some benefits do belong to the integration of technology and should be considered by any educator in the field before dismissal.

Disadvantages of technology. Questioning the use of technology is a theme frequently found in the research. Alvarez-Torrez (2001) poses such a question, asking “Why would I want my students to use synchronous CMC when they could easily do these and other activities of this nature orally?” (p. 314). Many researchers echo this principle by questioning the ability of technology to fulfill global language goals in the curriculum as well as in the National Standards. Other questions include the role of technology and its effectiveness in assessment, and again, whether or not it even enhances the existing methodologies in language teaching (Chen, 2008). These questions for the most part play a role in the current research regarding technology in the classroom and have served on more than one occasion as points of departure for the exploration

of this subject. Apart from this series of questions, some disadvantages are readily recognized by researchers and have a more concrete acceptance among language professionals.

One overwhelmingly evident caveat in the field of technology and foreign language is the process by which a technology is implemented in the classroom. Blogs, wikis, threaded discussions, chats, and key-pals will have no positive outcome if the implementation of such educational tools is done poorly. These platforms must be instituted with care and attention so that students understand clearly their roles as participants. Weasenforth (2002) underscores this observation, stating that “unless the technology is tightly integrated with the remainder of the course, and unless this integration is carefully structured and monitored by the instructor it is not likely to bring about the desired effect of targeting important constructivist principles” (p. 76).

Two more disadvantages are evident in the research. These include the temptation of plagiarism for the students and the temptation for the teacher to rely solely on technology for instruction. These disadvantages are not as commonly addressed in the research but stand out as crucial points of consideration. Techinarslan (2008), in a study conducted with Turkish students and the use of a classroom blog, found that a large portion of the participants had simply copied and pasted content found on the Internet into their blog responses. The ease with which students are able to copy and paste is an undeniable disadvantage that, if not accounted for, can not only hinder language learning, but add another complication to the challenging task of language acquisition. Research regarding the temptation for teachers to use technology as a crutch is even less frequent. The only conclusion with regard to this disadvantage is that it must be, to at least some degree, a valid concern for language programs looking to employ high quality language educators. There is much room in the research for analysis of this particular disadvantage of technology as it is used as a classroom teaching methodology.

Advantages of technology.

Having discussed the disadvantages and concerns in the research there are also several advantages to the implementation of technology as a medium for communication. First, let us return to the question posed in the introduction of this paper; “Why use technology, if equal outcomes can be achieved without its implementation?” The research indicates some unique advantages of technology as it pertains to classroom communication and interaction. Three type categories of advantages include an equal platform for all student voices, increased collaborative efforts, and culturally laden advantages.

There is one advantage that stands out above the rest, and that is the idea of the “level playing field.” Numerous researchers agree that asynchronous technologies open up the floor to all students, including those who habitually fade into the background of the classroom. Elgort et al. (2008) explain that wikis in particular allow the typically reserved student an equal voice in participation. Biesenbach-Lucas (2004) shares this same affirmation but relates the equalization of the playing field to the electronic media of email and discussion boards. This prolonged processing time allowed by technologies also promotes critical thinking skills and reflection (Biesenbach-Lucas, 2004). Alvarez-Torrez (2001) summarizes this advantage, stating that in a text-based electronic medium, the teacher and learners become equal participants in the flow of conversation. No one dominates the floor or becomes solely responsible for managing the interaction. The absence of visual and social cues in the electronic medium determines this role shift. Physical and spatial classroom arrangements disappear, and the classroom transforms into a screen in which everybody has an equal voice. (p. 314)

Multiple researchers also mention the benefit of lower anxiety and a higher willingness to participate when communication is done through asynchronous methods (Alvarez-Torrez, 2001; Campbell, 2007). The level playing field created by asynchronous programs allows students of all communication styles the opportunity to use the target language in an environment free from social pressure.

Another advantage of technology integration falls under the more general term of collaborative advantages. Biesenbach-Lucas (2004) explains that asynchronous technologies are ideal for increasing collaboration among students. The research shows that students who use asynchronous technologies will engage frequently in collaborative tasks both inside and outside the classroom. Elgort et al. (2008) also state that by eliminating the stressors of face-to-face communication, asynchronous technologies can alleviate some of the stress that is often experienced in working with groups. As mentioned earlier, wikis seem to be the leading platform for collaborative efforts because they allow for a simultaneous non-linear collaboration. This participation can also be tracked by the teacher who then is able to measure not only the quality of contributions but also the quantity.

A final note about advantages includes the idea of technology integration and its ability to facilitate cultural learning in the classroom. Alvarez-Torrez (2001) elaborates on the fact that online communication technologies such as email and other asynchronous platforms allow students to transcend the spatial and time constraints of communication by contacting global learners who are often members of the target culture. Other research also indicates that cultural benefits are not limited to the facilitation of intercultural interaction but are found in the technologies themselves. The design features of an online program, both logistical and aesthetic, often carry with them statements about the program's administrating culture. Just as disadvantages of technology integration are found in abundance, so are the advantages. The task and responsibility of language professionals, as always, is to weigh the results and implement those processes that show most potential.

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