

Identifying Our Approaches to Language Learning Technologies: Improving Professional Development

The mid- to late 1990s was an exciting time for those concerned with incorporating new technology into their teaching of English as a second or foreign language (ESL/EFL). Commonly referred to as Computer-Assisted Language Learning (CALL), or sometimes with the broader term Technology-Enhanced Language Learning (TELL), the field took huge leaps forward during these years. Up until this point, the many ways of researching and applying CALL were hit or miss and included little reflection about differences in methodology. Correspondingly, the literature on CALL was characterized by *cross talk*—miscommunication among researchers and practitioners without a clear understanding of the source of different assumptions. A few researchers and users of CALL took note of the situation and began to make sense of the cacophony, which helped to push the field forward (Chapelle 1995, 1997; Salaberry 1999). This article focuses on one perhaps

lesser-known approach to using technologies in the classroom that was created during this time and that is especially useful for ESL/EFL teachers to consider. We describe the model, explain its significance, and then provide activity ideas that teacher educators can use when incorporating the model into professional development workshops or in-service trainings.

The expansion of CALL to the classroom

One central way that order was brought to the field of CALL in the 1990s was by a push for technology to be introduced into the language classroom and evaluated according to Second Language Acquisition (SLA) principles that were known to create effective learning environments. These principles improved student language learning by providing opportunities for genuine social interaction, the performance of authentic tasks, and the creative use of language; in addition, teachers focused on the

learning process and learning strategies, appropriate feedback and time to carry out tasks, and support for learner autonomy (Egbert and Hanson-Smith 1999).

Chapelle (1995, 1997) was an early voice leading this charge, while Egbert and Hanson-Smith (1999) authored a text that gave teachers concrete ideas on how to apply SLA techniques in the classroom, such as using email pen-pals to encourage students to interact with others in the target language, and choosing software that allowed students to work at their own individual pace and make choices about the tools that they chose to use or ignore, thus boosting autonomy. The work of Egbert and Hanson-Smith (1999) continues to give ESL/EFL teachers a solid foundation on which to design their lessons. For those of us who design training courses and carry out teacher education in the area of CALL, it provides valuable ideas on how to link technology use in the classroom with sound language learning pedagogy.

However, many of us who organize CALL teacher training courses and workshops notice that pre-service and in-service teachers approach the use of technology with a variety of strong assumptions. Importantly, if these assumptions are not identified and addressed, they impact the way that the teacher trainees interpret the importance of SLA principles when using language technologies. Therefore, there is a critical need to make sense of these initial assumptions when designing professional development courses for pre-service and in-service teachers.

One way to accomplish this is to adopt Warschauer's (1998) framework, which explains the vastly different perspectives with which researchers in language technology approach their work, and provides a needed bridge between varying sets of assumptions. Although Warschauer (1998) was describing researchers' perspectives, the framework easily lends itself to help novice teachers identify their own approaches to instructional technology and to thoughtfully explore and consider other approaches, hopefully leading to a well-informed and productive use of technology in the classroom.

Warschauer's model

Warschauer (1998) suggests that researchers working in the field of language technol-

ogy approach their work from very different positions. These differences have a profound influence on the assumptions that they make and the conclusions they draw. Warschauer identifies the three positions as (1) determinist, (2) instrumental, and (3) critical.

Determinist position

According to Warschauer (1998), a determinist position associates the mere presence of computers with successful language learning. In other words, technology has a "magic" effect on learning, and simply including it will determine a more positive outcome for any activity. Researchers who approach their work from this position are quick to draw positive conclusions about technology's impact and are likely to ignore the many complex and intervening factors surrounding technology use.

Instrumental position

Those who hold the instrumental perspective believe that technology is just a tool that is not capable of bringing about positive learning results in and of itself. Rather, the result depends on how well the technology is incorporated into the lesson, how well it supports the objectives, and how well the computer-based activities are managed. Thus, although technology can be instrumental in bringing about effective language learning, it all depends on the abilities of the teacher to implement CALL in the classroom.

Critical position

The critical position regarding technology and language learning indicates that a learning environment is its own ecosystem and that any addition to the ecosystem—such as instructional technology—brings about a slightly or radically different learning environment. These subtle or obvious changes are often sociocultural; there may be shifts in power, identity, or communication patterns, or changes in relationships between individuals and groups. For example, a teacher may notice that when students hold a class meeting through an online discussion board (rather than face-to-face), there are changes in power, identity, and relationships. Quieter students may lead or even dominate the online discussion, and students with stronger reading-writing proficiency have the advantage in a

text-based environment, in contrast to the advantage in face-to-face settings for those with stronger listening-speaking skills.

Application of Warschauer's model to professional development

Warschauer (1998) dismisses the determinist approach, recognizes the value of the instrumental approach, and encourages researchers to adopt a critical view of technology. However, the utility of Warschauer's model is how it organizes the numerous disparate voices and brings clarity to the many different perspectives that ESL/EFL teacher educators encounter in their CALL workshops or in-service sessions. A variation on this model helps teacher educators to identify their own and others' positions and respond by making informed decisions regarding appropriate activities for professional development. This variation is based on one minor adaptation that associates the determinist position with two extreme assumptions potentially held by teachers who are entering the field of ESL/EFL. In other words, ESL/EFL teachers may be predisposed to believe that the mere presence of technology will bring about not only positive results in their classrooms, but also negative results. Therefore, a teacher who takes up the determinist position may be (1) a technophile (a lover of technology, certain that it will fix any instructional problems), or (2) a technophobe (a hater of technology, certain that it will destroy instruction). In addition, a teacher may hold the (3) instrumental position (viewing technology as a neutral tool, certain that its success or failure is entirely dependent on the instructional choices that are made), or a (4) critical position (viewing technology as capable of impacting classrooms in deep, subtle, and unpredictable ways, certain that sociocultural elements should be considered when using and evaluating technology use).

Why do these positions matter? Because, ideally, ESL/EFL teachers are familiar with and knowledgeable about relevant language technologies, are willing to consider incorporating them into instruction, and are capable of posing a full range of questions about the impact of technology on language acquisition and sociocultural factors. Therefore, we have three objectives when conducting profes-

sional development activities for ESL/EFL teachers in the area of CALL:

1. To present positive experiences with spotlighted technologies (both familiar and novel) to foster imagination and innovation in using them to teach language
2. To provide rich experiences and knowledge of SLA principle-driven uses of technologies to teach language
3. To foster critical consideration of both obvious and subtle sociocultural impacts of technology on learners, teachers, and the community

A teacher starting from one of the four positions (technophile, technophobe, instrumental, and critical) has a very different path to these three objectives than a teacher approaching from a different position. Therefore, an essential first step is to have teachers clearly identify their assumptions about technology and teaching, which we do by administering the eight-question survey in Figure 1.

After teachers complete the survey, we explain the model and show how the survey responses correspond with the four assumptions about CALL: technophobe (1 and 2); technophile (3 and 4); instrumentalist (5 and 6); and critical (7 and 8). We then discuss the teachers' responses and prepare to deliver the appropriate whole group and individual activities for professional development.

1. Those who are technophiles benefit from observing and discussing cases where the use of technology does not bring about English learning or has a negative impact on learning or on sociocultural interactions.
2. Those who approach technology from a technophobe position require activities that revolve around growing comfortable with technology, learning to use it in authentic contexts, and experiencing the positive impact that technology can have on English learning—impacts that can outweigh the challenges.
3. Those who view technology from an instrumental position have the benefit of assuming that instructional factors matter; the central area of focus for them is experiencing and learning

Instructions: Please circle the statements that best describe your beliefs about the use of technology for language learning.

1. I am nervous about the idea of using technology for language teaching.
2. The fear that the technology might not work during class would definitely prevent me from using computers in the classroom.
3. It is likely that the latest technologies are capable of fixing most problems in the language learning classroom.
4. Teaching that incorporates educational technology will always be superior to teaching without technology.
5. Teachers who plan well for technology use are easily able to control the effects of technology on learning.
6. It is easy to predict the impact of technology on learning, classrooms, teachers, and learners.
7. I believe that the use of technology in the classroom could bring about unintended consequences for which I had not planned.
8. The most significant impacts of technology in my classroom might be changes in students' identities, their relationships to others, and the power dynamic among individuals.

Figure 1: Technology and language learning survey

about significant impacts on sociocultural factors in addition to or in combination with language development.

4. Those who have adopted a critical view of CALL benefit from fostering further critical consideration of the impact of technologies on second language acquisition and sociocultural factors.

Below we describe suggested professional development activities to help teachers enhance their approaches to teaching with technology. Although these activities are described as elements in a formal professional development setting, teachers can easily adapt them for independent professional development after identifying their own initial assumptions about the use of technology in the classroom.

Activity ideas for the technophile position

These activities are especially important for those who identify themselves as technophiles, and include methods to encourage teachers to let go of the assumption that technology will automatically lead to improved language learning outcomes in the classroom. The activities will also foster a deeper under-

standing of the crucial role that teachers have in designing instruction that incorporates technology.

Comparing lessons that incorporate technology

Some teachers do not recognize that there are endless choices that they can make in using technology in class, and that these instructional choices have a significant impact on the success or failure of a language learning lesson. This activity provides an opportunity for teachers to become aware of both instructional choices and their outcomes.

To begin, assign everyone in the professional development course the same English language item (e.g., the past perfect, negation, idiomatic expressions) and the same technology—one that they have been introduced to and to which they have access (e.g., a concordancer for textual analysis—see Salsbury and Crummer 2008). Then, ask the teachers to independently create a short lesson to teach the language item using the technology. Teachers should create a detailed lesson plan to hand out to the other course participants. Provide an opportunity for the participants to experience (not just talk about) the lessons the

class members have created, exchange lesson plans, and discuss the differences in choices—including an evaluative discussion of which instructional factors made some technology uses more effective. It is likely that the participants will discover a wide range of choices of differing quality, including individual vs. collaborative use of the technology, use of the technology as a tutorial vs. a creative tool, and teacher-led vs. student-led uses.

Technology challenge

This activity helps teachers boost their awareness of the individual characteristics of technologies and their suitability or unsuitability for use in teaching the many skills and sub-skills across a language.

First create a list of technologies that teachers have had experience with, using either a survey or the results from a whole group discussion. Optimally, create a list that contains the same number of technologies as there are participants in the course. Ask each teacher to choose a technology on the list for this activity—especially one that he or she personally feels is likely to be helpful to language teachers. Explain that there will be a series of challenges, and that for each one, an unworthy technology will be “voted off the island” (a popular concept currently in vogue in the United States whereby the group votes on the merits of something and decides to keep it or discard it).

Next, create several challenges for the activity: a mixture of teaching items (e.g., vocabulary related to a holiday) and instructional issues (e.g., motivating students who simply want to think about soccer). For each challenge, announce what the teachers have to teach or accomplish with the technology they have chosen and give them 5 to 10 minutes to create a plan. When the time ends, have all participants share their plans and discuss which technologies best lend themselves to supporting the task and which technologies fail to do so. Participants vote for the technology to be voted off the island for that challenge. However, this technology is brought back for the next challenge round, underscoring the idea that although it may not lend itself to one task, it may work well for another. After the final challenge, end by discussing the overall characteristics of the technologies that were selected by the teacher trainees.

Principle-based reading

There are several books available that provide teachers with a close look at the impact of instructional choices when incorporating technology, including texts by Egbert (2005) and Chapelle and Jamieson (2008). These texts are appropriate for both independent and group reading as well as for learning at a distance through online postings.

Activity ideas for the technophobe position

The following activity ideas are especially important for those who identify themselves as technophobes, and will increase the teachers’ comfort level with using technology to impart effective language lessons.

Technology petting zoo

This activity requires different technologies to be accessible in a computer lab or other room and arranged in separate stations. The authors prefer to include a combination of several types of technologies that we find useful for language instruction, including:

- **Resources.** Provide a place for teachers and students to access content such as dictionaries and synonym finders. For example, at a computer station with audio, you may download a resource website such as Teachers’ TV (www.teachers.tv), a large collection of videos about a wide range of academic areas across the curriculum.
- **Creation tools.** Provide a way for students to produce documents, presentations, or other products with appropriate programs. For example, at a computer station with audio capability, download Prezi (<http://prezi.com>), a creation tool website that allows teachers and students to co-create presentations in a non-linear manner using multimedia.
- **Widgets.** Create a station where students can work with special applications, such as a computer containing the Oneword widget (<http://oneword.com>), an application that provides users with a one-word writing prompt in English and 60 seconds of writing time.

- **Hardware.** These consist of tools you can pick up and handle that can be used in instruction, such as mini voice recorders and digital cameras.

An important consideration, and one that benefits teacher trainees and their prospective students, is to investigate mainstream technologies and to not limit yourself to technologies developed specifically for language learning. In addition, it is essential to create clear directions for each technology station so that teachers know how to operate the technology and can thoughtfully consider how they would use it in their classrooms. If possible, have an assistant nearby who is familiar with the technologies and can provide additional help. Encourage teachers to visit each station and work alone or with a partner. If they work in pairs, each partner should take turns handling and operating the technology. Provide as much time to explore as teachers like and an opportunity afterwards for them to reflect on any strategies they came up with or on the increased comfort level that they experienced. (See Appendix 1 for examples of sample activities using resources, creation tools, and widgets.)

Exploring emerging technologies

Each issue of *Language Learning and Technology* (available online at <http://llt.msu.edu/>) has a column titled “Emerging Technologies.” Ask teachers to browse current and past columns describing the technologies that have made their way into language instruction. After they read the articles, teachers as a group discuss and reach a consensus about the technologies they would like to explore. Alternatively, individual teachers can choose the technology that most interests them (and to which they have access) and present the technology to the group, emphasizing the technology’s potential to enhance language learning opportunities. For example, a teacher may choose Godwin-Jones’ (2003) online coverage of blogging, read some sample blogs written by others, and then report to the whole class on how blogging might influence their students’ writing and reading experiences. The class can then consider starting blogs of their own through a free service such as Blogger (www.blogger.com) or Edublogs (<http://theedublogger.com>).

Personal language learning podcasts

To begin, ask teachers to identify their personal interests—topics that they simply enjoy learning and communicating about. Then, ask each of them to search for audio podcasts on the topic in English (this can be done through a Google podcast search). A current favorite of the authors is *The World in Words* audio podcast series (www.theworld.org/rss/twiw.xml), which provides interesting news stories that relate to language, language learning, and sociolinguistics. Ask teachers to listen to 5 to 10 podcasts over a week or more while keeping a journal in which they record their language development in grammar, vocabulary, or knowledge of language functions. Provide an opportunity for teachers to discuss their experiences and fill out a self-evaluation survey to document the impact that the technology has had on their English language development. If teachers discover podcast series that have assisted them with language learning, suggest that they subscribe to continue the learning (which will “push” each newly released podcast into their technological repertoire).

Activity ideas for teachers to foster the critical position

The following activities encourage teachers to consider the sociocultural contexts and impacts of technology on language learning. These are extremely significant for those who identify with the instrumental position, but will prove useful for all teachers as they develop a critical perspective about CALL in the classroom.

Engaging reading

For many teachers, the consideration of sociocultural contexts is a challenging task. Two very engaging texts assist teachers to see classrooms as ecosystems that are impacted in significant ways by the introduction of technologies. Both Postman (1993) and McLuhan (1994) are extremely enlightening on this point. For example, McLuhan (1994) includes many anecdotes about unexpected sociocultural outcomes that ensue from the introduction of technology, including the very persuasive apocryphal story of a village in India. A visiting group of engineers installed plumbing in the village so that each home

was provided with running water and individuals no longer needed to depend on the village well. When those who had installed the plumbing returned to the village a short time later, the villagers surprisingly asked that the technology be removed because, without the constant communication and relationship building that traditionally occurred at the communal well, “the whole social life of the village had been impoverished” (McLuhan 1994, 86). Texts such as these provide teachers with reflection and discussion material about the ways that identity, relationships, and communication are impacted in unforeseen ways by technology.

Fishbowl comparative observation

In a fishbowl activity, each participant gets an opportunity to speak without interruption, and there is also a chance for whole class interaction at the end. This activity lets teacher trainees notice and explore the impact that technology has on classroom interactions.

To begin, create two technology-based mini-lessons related to the learning of new vocabulary (see Appendix 2 for examples of two technology-based mini-lessons). Ask four participants to volunteer to carry out both mini-lessons while the rest of the class observes. Before beginning the activity, provide the observers with questions to guide their noticing of interaction patterns (e.g., Who is doing the communicating? How evenly distributed is the communication? What do student-teacher and student-student interactions look like? What role are the students taking in determining the content of the communication?). After the mini-lessons are completed, provide time for each observer to use his or her answers to the questions to discuss the ways mini-lesson interactions were impacted by the use of technology. This activity can culminate with a whole class discussion.

Case studies

This activity sets the stage for rich discussions about the subtle and unexpected shifts that occur when teachers incorporate technology into their classes. Case studies are especially powerful for increasing the awareness of power, literacy, relationships, and the spaces we create in classrooms. Journals

such as *TESOL Quarterly*, *Computer Assisted Language Learning*, and *Language Learning and Technology* occasionally include cases of technology incorporation that raise sociocultural questions. Good examples include Lam and Lawrence's (2002) case of a high school Spanish class and Lam's (2000) case of a high school student who develops language and literacy as his identity changes through online communication. Provide guiding questions for the teachers (e.g., What roles do learners take when they go online? Do learners shrink or expand their linguistic horizons when they go online?). If an online conferencing option such as Skype is available, invite an author to discuss a case with the group from a distance. The authors of this article have pleasantly discovered that researchers are often quite willing to talk about their findings in this way.

Conclusion

Our understanding of the range of assumptions that teachers bring with them regarding the integration of technology with language learning is based upon our growing experience of providing professional development for ESL/EFL teacher trainees from a variety of countries. Applying a slightly modified version of Warschauer's (1998) model of researchers' approaches to language technology has given us the guiding principles for responding to these assumptions with activities that invite teachers to analyze, reflect on, and refine their initial perspectives. Ultimately, our goals for all teachers are the same—to develop comfort with language learning technologies, to approach them with innovation, to design instruction according to sound SLA principles, and to critically consider the socio-cultural impacts of technology integration. This model for professional development can help ESL/EFL instructors utilize technology in the language learning classroom in the most productive and rational way possible.

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Appendix 1 Instructions for Petting Zoo Technology

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1. Instructions for Resource Area: *Teachers' TV*

- Go to <http://teachers.tv> and click on the “Subjects” link.
- Browse through the subjects, focusing on those that correspond to the ones you teach or that your students are learning in other classrooms.
- Pay special attention to videos titled “Lesson Starters.”
- Choose one of the “Lesson Starters” that relates in some way to your ESL/EFL lesson or the curriculum students are learning in English in another classroom. How could you incorporate this into your unit? How would you introduce the video? What would you ask students to listen or watch for while they experience the video? What would you ask students to do after the video? How would you tie the video into the unit’s activities?

2. Instructions for Creation Area: *Prezi*

- Go to <http://prezi.com> and sign up for a free “Public” account.
- Click on the “Learn” tab at the top of the page and watch Lesson One and Lesson Two to become familiar with what Prezi can do and how to use it. Note the way that videos and images can be incorporated into presentations and how presentations can be designed collaboratively.
- Check out how Sabio (2010) uses Prezi to create lessons at his site, Ralph’s EFL Junction (www.ralphsesljunction.com/prezi.html). In particular, observe the way that he incorporates images in his “Quantifiers” presentation.
- Read the list of ideas for Prezi presentations in Pires’s (2010) blog entry (<http://eblahblah.com/index.php/2010/01/>). Consider how you might incorporate Prezi into a presentation assignment for your students. How might it ease and support the drafting process and the final presentation for them? How could you use it as a presentation tool yourself?

3. Instructions for Widget Area: *Oneword*

- Go to <http://oneword.com> and register at the site.
- Read the brief directions and click on “Go.” Immediately begin to write about the word that appears at the top of the page—you have 60 seconds. The bar moving across the bottom of the screen will visually remind you of how much time you have remaining.
- Once you submit your entry, you will be able to see what others have written if you wish. Your entries are stored on the site so that you will be able to see any changes or progression over time in your writing fluency.
- Consider whether this tool might be useful as a daily activity for your students to develop writing fluency. Do your students have consistent access to the Internet either through computers or cellular phones? How might you shape the activity so that students reach the objectives for their fluency building?

Appendix 2 Technology Mini-Lesson Plans: Vocabulary Development with Images

Identifying Our Approaches... • Gina Mikel Petrie and Lisa Avery

1. Technology Mini-Lesson Plan: Vocabulary Development with Google Images

- Lesson preparation: Create a display of everyday items in a school from images you find through a Google Images search (click on “Images” at www.google.com and type item names in the search box). Choose the most appropriate pictures, including those with challenging, less familiar vocabulary, and copy and paste them into a document. Create a wordless handout with these images only.
- Basic steps: Announce to the students that the vocabulary list this week relates to items found in a classroom or school. Divide the students into pairs, distribute the handout, and ask each pair to label those images whose names they know or can guess at. Next, ask the whole group to choose the most difficult vocabulary and to explain why they want to learn it. Circle and label 10 of the most popular items to create the week’s vocabulary list.

2. Technology Mini-Lesson Plan: Vocabulary Development with Digital Camera Images

- Lesson preparation: Secure two digital cameras and USB cords to download images from the cameras to a computer connected to a projector. Explain how to use the equipment. Assign partners and distribute a camera to each student pair.
- Basic steps: Announce to the students that the vocabulary list this week relates to items found in a classroom or school. Students will create the vocabulary list this week by concentrating on items that are of the most interest to them. The students form pairs and use the digital camera to move around the classroom or school and take pictures of items that they do not know the names of and would like to learn. Give them 5 to 10 minutes to take pictures of items that they predict their own students might choose. After they have finished, have them download the pictures to the computer and project them onto a screen. Then ask the group to discuss each picture as it is projected and, if necessary, provide the correct name for each item. Let the group choose the 10 items that they are most interested in learning that week. Copy these images and labels to a document and distribute them to the class as the week’s vocabulary list.