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Student-Centered Educational Technology in the Language Classroom

Domenick Anthony Chiddo

The College of William and Mary

School of Education

Master's Program in Curriculum and Instruction

Williamsburg, Virginia

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Domenick Anthony Chiddo

School of Education, Curriculum and Instruction, French

Advisor – Janet Dannemiller-Parker

College of William and Mary

Williamsburg, VA

2593 Ambling Circle

Crofton, MD 21114

domenickchiddo@yahoo.com

Abstract

The purpose of this professional development in-service curriculum is to respond to a need for educational technology training. Research indicates that many teachers feel insufficiently prepared to use technology in their instruction and have difficulty keeping pace with students in using the latest computer tools available.

Such tools can be appealing and motivating to students, can have a positive impact on their learning, and can allow them to demonstrate their knowledge in ways that take advantage of their strengths. To stay up-to-date on educational technology as it changes, teachers need regular opportunities for training. Teachers who receive technology training are more confident in their use of technology, more likely to use it with their students, and more likely to use it effectively.

This in-service curriculum focuses on the integration of digital filmmaking, blogs, podcasting, wikis, and instant messaging into the foreign or second language classroom. More research is needed to determine how commonly these tools are used, how comfortable teachers feel with them, and how effective they are in producing positive learning outcomes.

I. Introduction

In 1965, Gordon Moore, co-founder of Intel, remarked that the complexity of semiconductor computer chips had been doubling every year since the first microchip was manufactured in 1959, and he predicted that it would continue to do so for decades. Moore's prediction, although contested by some, turned out to be more or less accurate, and has been popularized in the media as "Moore's Law" (Tuomi, 2002). Although the time frame for each doubling has been amended to eighteen months and will possibly continue to increase as researchers approach the physical limits of what can be done with microchips (as they are currently manufactured), computer processing power will most likely continue to grow exponentially into the foreseeable future (Kanellos, 2005). As hardware becomes more and more powerful, programmers take advantage of increased capabilities to create innovative software with an ever-growing array of features (de Dinechin, 2004). This rapid rate of progress creates many opportunities for educators to bring new computer applications into the classroom for instructional use, but the increasingly dizzying range of options available, the challenge of mastering them well enough to use in class, and the sometimes unfamiliar jargon that accompanies them can discourage teachers from trying to incorporate new uses of technology into the curriculum.

Many teachers feel insufficiently prepared to use technology effectively in their instruction (Smerdon et al., 2000; NetDay, 2005) and have a hard time keeping up with their students in using the latest computer tools available (NetDay, 2005). The use of such tools is not only appealing and motivating to students (Means & Olsen, 1995; Steelman, 2005), but can also have a positive impact on their learning outcomes (Najjar,

1995; Mayer, 2001; Kulik, 2003) and allow them to demonstrate their knowledge in new ways that take advantage of their strengths (Veenema & Gardner, 1996; Rose, Meyer, Strangman, & Rappolt, 2002).

To stay up-to-date on educational technology as it changes, teachers need regular opportunities for training, which has been shown to make teachers more confident in their use of technology, more likely to use it with their students, and more likely to use it effectively (Smerdon et al., 2000; Martin, Hupert, & Admon, 2004; Franklin, 2005; NetDay, 2005). The U.S. Department of Education (2004) emphasizes the importance of being comfortable with new computer technology, asserting that educators must take advantage of what it has to offer to bring classrooms into the digital age and empower students to learn in innovative ways.

A lack of available computer resources has become less and less of a barrier to the widespread use of educational technology. Now, almost every public school classroom has access to the Internet, and the ratio of students to Internet-connected computers is down to almost 4:1 (Parsad & Jones, 2005). Although many schools do not have much more than basic Internet-connected computers in terms of hardware and software, an increasing number of resources are available online, free of charge. A school may not have a language lab for foreign language classes, but language teachers can utilize tools on the Web that have many of the same functions as expensive language-learning software. The purpose of this professional development in-service curriculum is to introduce teachers to such tools: how to find them, how they work, and how they can be used for instructional purposes.

In choosing the computer applications to cover in the in-service curriculum, I

considered the following factors: their prevalence in instructional technology literature; their potential benefits for student learning in foreign and second language classes; their popularity among students in settings outside of school; and their newness (or the likelihood that teachers do not yet know enough about them). I decided on the following topics as having the most potential to be of interest to language teachers: digital filmmaking/storytelling, blogs, podcasting, wikis, and instant messaging.

Digital filmmaking/storytelling is the act of creating a film or multimedia presentation by importing digital images, video, and/or audio files into a digital moviemaking program. These files might be created by students with a webcam, digital camcorder, digital camera, drawing program (e.g., Microsoft Paint), or a microphone. Alternatively, students could find multimedia materials available online to use in creating a film. Teachers have many options when choosing software to use for digital filmmaking and storytelling, such as Windows Movie Maker or Apple's iMovie. If a teacher or school purchases webcams for students to use, most webcam products include movie editing software. For this in-service program, I have chosen to focus on Microsoft Photo Story 3, because it is a very easy to use option for creating films using still images and student-recorded narration, and because Windows XP users can download it for free from the Microsoft Web site.

The word blog is short for weblog, a Web site onto which a user adds entries that are displayed chronologically, the most recent entry displayed at the top. Blogs are very popular among young people, an increasing number of whom regularly transcribe their thoughts and feelings for the world to read (although many blogs can be made private). Blogs can be described as online journals, but they can be used in many different ways in

educational settings. In addition to writing text in blog entries, users can upload images and insert hyperlinks to other blogs, Web sites, and media. Also, readers can post their own comments and reactions to the blog entries. In language classes, blogs can provide an easily accessible electronic forum for multimedia projects and group discussions in the target language.

Podcasting, a combination of the words "iPod" and "broadcasting," is the recording of audio content that can be downloaded from the Internet. Podcasting software, in essence, allows anyone with a computer and a microphone to make their own radio show. Unlike radio listeners, however, podcast listeners are not required to tune in at a certain time to hear the program they want to hear; they can subscribe to a podcast and access it anytime, and if they want, they can download the audio onto a portable music player (not necessarily an iPod) and listen to it whenever and wherever they want. In addition to allowing teachers to record shows for students, podcasting creates an opportunity for student-centered activities in which students can practice speaking in the target language, listen to their own voice, rerecord if necessary, and publish their recordings online so that their teacher and classmates can listen. This type of oral presentational practice is generally less anxiety provoking than speaking in front of the class. Podcasting also prepares students for the speaking section of the AP Language tests, on which students will have to speak into a tape recorder.

Unlike most Web pages, which are read-only, wikis are Web pages that can be edited by anyone who visits them. The word wiki comes from a Hawaiian word meaning quick, which is a good description of the speed with which a Web page can be created and edited when many people are contributing. Wikis offer students many of the same

advantages that blogs do: Wikis can be used to create multimedia projects integrating text, images, and hyperlinks to other wiki pages or Web sites, and they allow students to instantly publish their work online, so that other students and teachers can access it. Unlike a blog, however, a wiki is a collaborative endeavor. If students are working in groups, each group can set up a wiki, either as the end product of their efforts or as a tool to gather information and images to later transfer into another medium. Rather than being huddled around a single computer or having to send files back and forth between computers, students can each work at their own computer and add to or edit the communal wiki page. Wiki users are not limited to one page, of course; they can create as many interconnected pages as they want, eventually building a complex web of information if the project lends itself to doing so.

Instant messaging, the real-time exchange of written messages over a computer network, has been a staple of teenage life since the late 1990s, but language teachers may not be familiar with this application or how it can be used for educational purposes. Typically, interpersonal communication in the foreign language classroom almost always takes the form of oral interaction. Real-time, written communication through instant messaging programs allows students to negotiate meaning and build conversational strategies in way that is less threatening for students with language anxiety, those who become nervous when speaking in class or with a partner or group. Instant messaging also builds writing skills and provides written evidence of students' language development.

This in-service curriculum is designed to provide teachers with an introductory look at the above technologies, giving them some ideas about how each could be used for

student learning, and arming them with enough technical knowledge to create simple digital films, blogs, podcasts, and wikis, and to use instant messaging. For a more in-depth understanding of each of the applications and all the possibilities that they offer, teachers are encouraged to refer to the resources suggested for further study in each section of the in-service presentation companion Web site, and, most of all, to continue experimenting with the various tools mentioned in the presentation.

II. Literature Review

Current Trends Demonstrating a Need for In-Service Training

According to a nationally representative survey of public schools (Smerdon et al., 2000) conducted for the National Center for Education Statistics (NCES), as of the year 2000, only "one-third of teachers reported feeling well or very well prepared to use computers and the Internet for instruction" (p.9), despite the availability of professional development. The situation has begun to improve, perhaps as a result of continued awareness of the necessity of training teachers in educational technology. In a more recent survey (Parsad & Jones, 2005), the NCES reports that opportunities for development in technology use are quite common: "In 2003, nationwide, 82 percent of public schools with Internet access indicated that their school or school district had offered professional development to teachers in their school on how to integrate the use of the Internet into the curriculum in the 12 months prior to the fall survey" (p.14). Widespread technology training through professional development and pre-service teaching programs seems to be leading to an increase in teachers' confidence levels in using instructional technology. In a survey study that included 15,000 teachers from all 50 states, the NetDay organization (2005) found the following:

Teacher education programs are receiving high ratings from teachers in terms of preparing them to use technology for instruction. 63% of teachers say that their pre-service education prepared them somewhat or very much. This number is even higher for recent graduates of teaching programs. Teachers are also very satisfied with the professional development opportunities available through the school or district with 91% reporting that these opportunities have helped them prepare to use technology for instruction." (p. 32)

Teachers are becoming more comfortable with technology as training opportunities become more commonplace, but they are still having difficulty keeping up with newer applications that students are using outside of school, especially in the realm of communication (NetDay, 2005). To help teachers stay abreast of new technologies and enable them to make effective use of these technologies in the classroom, school districts should provide frequent opportunities for teachers to update their knowledge through professional development, which has been shown to have a positive effect on classroom technology use. According to the NCES, teachers who spend more time in professional development feel better prepared than their colleagues, and teachers who feel better prepared are more likely to use technology (Smerdon et al., 2000). Not only are they more likely to use it, but they also tend to use it more effectively; in a meta-analytic study of instructional technology research, Kulik (2003) determined that professional development improves learner outcomes in lessons using instructional technology. Similar conclusions were reached in the following studies.

Over a period of five years, the state of New Mexico funded a teacher training program called the Regional Educational Technology Assistance (RETA) initiative,

which helped teachers develop skills in integrating technology into instruction. Data collected over the course of the five years showed that participating teachers increasingly developed curricula that included the use of various multimedia and internet-based applications; assigned project-based, learner-centered computer work; and had students present their work using technology (Martin, Hupert, & Admon, 2004). Martin, Hupert, & Admon concluded that "those teachers who are best prepared, through sound, research-supported professional development practice, are most likely to implement effective classroom use of technology in their schools" (p. 4).

In a study of recent graduates of elementary education program at a mid-Atlantic University, Franklin (2005) found that technology training had a significant effect on teachers' use of computers in the classroom, concluding that teacher preparation predicted student engagement in complex multimedia and communication tasks.

Such studies highlight the benefits gained through teacher technology training, and the purpose of this in-service program is to reap these benefits by focusing on the area in which teachers need the most help—new applications made possible through the technology advancements of the last few years. Teachers who are not recent graduates from pre-service programs may not have been exposed to these applications and their potential for educational use, although their students already use them for recreation and communication. Such applications include recording and movie editing software, blogs, podcasting, wikis, and instant messaging, all of which are discussed in the in-service program.

The issue of professional development in instructional technology is a topical one. The recent No Child Left Behind act established standards requiring teachers to know

how to integrate technology into their curricula, and to this end, the National Education Technology Plan recommends that teachers receive improved training in the use of technology, so that they can incorporate more digital content into their instruction. The Department of Education even asserts that staying astride and taking advantage of innovations in the rapidly changing digital age in which we live could lead to a "new golden age in American education" (U.S. Department of Education, 2004, p.8). Most teachers seem to agree that technology is important in helping them reach their objectives; according to NetDay (2005), "61% of teachers believe that technology is an asset in helping them meet No Child Left Behind requirements. Only 4% say it's a distraction" (p. 32).

Technology Resources Typically Available in Schools

When designing a program for professional development, one must consider the resources required for teachers to apply what they have learned once they return to the classroom. Programs in technology use must be relevant and applicable to whomever the audience might include. In the past, inequity in school technology resources might have made this a difficult task. During the past decade and a half, however, the landscape changed significantly as technology spending became a growing priority. Since 1990, the United States has invested more than $40 billion to provide schools with computers, software, and Internet connectivity (Benton Foundation, 2003). Now, access to computers and the Internet is almost ubiquitous:

> "In fall 2003, nearly 100 percent of public schools in the United States had access to the Internet, compared with 35 percent in 1994….Public schools have made consistent progress in expanding Internet access in instructional rooms. In 2003,

93 percent of public school instructional rooms had Internet access, compared

with 3 percent in 1994." (Parsad & Jones, 2005, p.4)

Not only do most classrooms have Internet-connected computers, but, as of 2003,

"the ratio of students to instructional computers with Internet access in public schools

was 4.4 to 1" (Parsad & Jones, 2005, p.7).

Access to computers may no longer be a significant barrier to implementing

computer-based lessons in most schools, but budget constraints and policy changes have

created a situation in which expenditures on educational technology are being

reconsidered (Benton Foundation, 2003). Many schools are limited in their ability to add

new items to budgets that are already overstrained. As such, this in-service program will

focus on applications that can be acquired cheaply or free of cost. Aside from addressing

budget issues, this will ensure that the program is applicable at most any school.

Benefits of Computer-Based Activities Described in the In-Service Program

Today's young people have grown up in a visual world, getting sensory input

from movies, television, comic books, video games, and the Internet. They have become

accustomed to getting information visually outside of school, and teachers are

increasingly seeking ways to integrate visual media into the curriculum. Multimedia

activities, especially via computer, are becoming more commonplace as teachers weave

together text, graphics, pictures, animation, sound, and video to promote learning.

Research in information processing shows that the benefits of multimedia have a

cognitive basis. According to dual coding theory, information is processed through two

independent channels; one processes verbal information, such as text or audio, and the

other processes nonverbal images such as illustrations or sounds. In a review of the

research on dual coding, Najjar (1995) found that "people seem to learn better when related information is presented simultaneously via verbal and pictorial media than when the information is presented via verbal or pictorial media alone" (p.8). Such findings suggest the potential not only of teacher-created multimedia presentations, but also of student-created ones. This in-service program will describe ways in which students can acquire and demonstrate knowledge through the creation of digital projects that will include text and images combined with audio and video, all of which can either be student-generated or gathered online and used in accordance with fair use guidelines.

Such projects not only facilitate information processing by making use of verbal and nonverbal channels, but also promote critical thinking and communication skills when students make decisions about how to integrate relevant words and images to create an effective presentation (Mayer, 2001; Steelman, 2005). In today's world, these are important skills to have. "Teaching communication used to be simple: teach writing and speaking. But today's students must be able to communicate with pictures, both moving and still; audio; and text" (Scot & Harding, 2004, p.26). Technology has changed the notion of literacy, and foreign language educators should embrace these changes by incorporating new technology into the curriculum. Indeed, Kulik (2003) found that "simply giving students greater access to computers and Internet resources often results in gains in writing skill" (p.x).

At the essence of using digital projects to build writing skills is the idea that student work created via computer is easily shared with others and is in a format appealing enough that students will want to share their work with each other. "When students enter information into the computer for someone else to retrieve and use, they

must compose with the reader in mind. This frequently involves making explicit use of what they know about what makes a text comprehensible" (Simic, 1993, p. 4). When foreign language students utilize presentational or interpersonal communication skills via multimedia projects, blogs, wikis, and instant messaging, as discussed in this in-service program, the fact that they are using the language for an audience of peers will lead them to show increased concern for correctness of form and, depending on the task, for appropriate use of pragmatic language skills (i.e. formal vs. informal language). "When students are creating pieces for viewing by a broad audience, they are much more attentive. They feel their work has meaning and that others value it" (Steelman, 2005, p.17).

In addition to increasing motivation, allowing students to create multimedia projects accomplishes another important goal—it gives students the opportunity to demonstrate their knowledge in the way that best suits their unique abilities and strengths (Veenema & Gardner, 1996). Using computers, students can complete tasks in many ways, including through recorded speech, video, images, animations, or text, creating an opportunity for teachers to differentiate instruction and assessment. This concern is especially important for students with motor or learning disabilities, such as dysgraphia or language delay. Providing multiple modes of expression allows these students to participate more fully and gives teachers a better measure of the students' success in reaching the learning objectives (Rose, Meyer, Strangman, & Rappolt, 2002).

Alongside multimedia projects such as digital filmmaking, the in-service program will explore more recent applications, such as blogs, podcasts, wikis, and instant messaging, suggesting a variety of ways in which students can show their control of the

target language.

An online journaling tool, the blog has been around since the late 1990s, and in the past few years has seen a huge growth in popularity. In the language classroom, the blog can be a powerful tool, one that "promotes reflective analysis, intellectual interaction, as well as the dissemination of information, and provides push-button publishing" (Ray, 2006, p.1). Depending on the content, blogs can provide a forum for presenting information and research, for describing personal experiences, or for reflecting on learning. Teachers may even choose to have students reflect in English to focus on the metacognitive aspect of the reflection. Whatever the purpose of the task, the fact that students are writing for an audience adds to the perception that their work is important and increases concern for the quality of their writing (Means & Olsen, 1995). Readers of a blog have the opportunity to respond to entries, potentially turning a presentational exercise into an interpersonal one. Ray (2006) emphasizes the importance of ensuring student safety when blogging by not allowing students to reveal personal information, a topic discussed in the in-service program.

Podcasting is similar to blogging, except that the creator records spoken word entries rather than written ones. This technology is often used in foreign language classes as a teacher-centered tool, with teachers recording daily or weekly items that students can access and listen to at home or in a computer lab. Podcasting can also be learner-centered, however, giving students a chance to practice oral presentational skills in manner that causes less anxiety than speaking in front of the class (Flanagan, Calandra, 2005). An added benefit of podcasting is the fact that students and teachers will have a record of student progress in speaking skills and an organized collection of recordings

that can be useful for review before an oral examination.

A tool that can be more challenging to implement is the wiki, a Web site that can be edited by anyone who visits it (or, in the case of password-protected wikis, by anyone possessing a password established by the creator of the wiki). This in-service program will describe ways in which wikis can be used to foster collaboration among students, either as a whole class working together on a project or in small groups that each work on their own wiki. According to Lamb (2004), wikis can be challenging to assess because of the difficulty of determining what each person contributed. Lamb also identifies management issues that may arise because of students' ability to edit each others' work. These are important issues to consider, and, as such, they are addressed in the program. Although it may take some time for teachers and students to become accustomed to the wiki, it is a tool that has great potential to facilitate collaborative learning.

Outside of school, students are very familiar with software that allows synchronous (or real-time) written communication, often spending hours after school instant messaging to communicate with their friends. In the traditional foreign language classroom, interpersonal communication is predominantly oral, and when it is not, as in the case of writing letters to pen pals, it is rarely synchronous. As the norms of communication in the outside world change, so too should the nature of communication that occurs within the classroom, such that it reflects the use of language as it exists in authentic, real-life situations.

Instant messaging can increase learner interest because of its privileged status at home, and it also carries several benefits from a linguistic standpoint. In a study on the effects of electronic, synchronous conversations on second language learning, Tudini

(2005) found that they promote negotiation of meaning and noticing of errors, leading to modified output. They also help students gain confidence in their interactive language skills "in an unthreatening forum where learners can without embarrassment engage in metalinguistic discussions and rehearse conversational strategies such as the organisation of turn taking" (Tudini, 2005, p.227).

In a previous study of synchronous online communication, Pellettieri (2000) also concluded that it fosters negotiation of meaning, the exchange of corrective feedback, and form-focused self-correction, for which Pellettieri credits the fact that "students communicating through this medium have more time to process and monitor the interlanguage" that they use (Pellettieri, 2000, p.83). Pellettieri advises that conversation through this medium be goal-oriented. To structure the communication, teachers should require that students request and obtain specific pieces of information in order to successfully complete the task.

When students create projects using technology, they are more motivated to complete a task, spend more time revising their work, and take more pride in the finished product (Means & Olsen, 1995). At the conclusion of each semester of a technology-infused foreign language class, students could take with them an electronic portfolio of their best work, or, better yet, their portfolio could be available online on a Web site that they created, available for the widest possible audience to see.

Challenges

To be most effective, technology should be used to foster communicative competence, not for drill-and-practice activities:

All language instruction should be properly task-driven; the classroom should be

input-rich, and information-exchange tasks should form the unit of instruction.

This would mean that language learners work together to solve a problem, answer

a question and use communication as a means to an end. (Blake, 1997, p.4)

Teachers must find ways, although it can be challenging, to use technology to

facilitate student-centered, proficiency-oriented, task-based activities, and the purpose of

this in-service program is to give them a starting point in doing so.

Teachers should also work to make sure their students understand the reason for

each task they are asked to complete. "Learners should have opportunities to discuss the

purpose of the computer task or program as well as its nature. They should be aware not

only of what they are supposed to do, but also of why doing it is important" (Simic, 1993,

p.3).

Another important issue to consider when completing computer-based tasks is

copyright law and how it applies to educational settings. In creating multimedia projects,

teachers and students may want to use relevant images, videos, or music that they have

found on the Internet. Unless otherwise specified, material found online is usually

copyrighted, and although it can be used in most cases for educational purposes under the

fair use doctrine, it is still subject to restrictions concerning its use (White, 2000). These

restrictions can be quite confusing, and because many educators are not trained in the use

of copyrighted material, they are often unable to identify if their use of intellectual

property falls under the fair use guidelines (Johnson & Simpson, 2005). This situation

presents a problem for teachers who want to model appropriate and legal behavior for

their students, whose understanding of copyright and permissions is influenced by their

teachers (Steelman, 2005). The in-service program provides an introduction to this topic

and directs participants to resources from which they can learn more about copyright issues.

In-Service Format

Abbot and Faris (as cited in by the Center for Applied Research in Educational Technology, 2005) describe positive results from hands-on technology training sessions that took place in a computer lab equipped with a video projector, which the instructor used for demonstrations as participants use individual computers. The sessions were conducted with small groups of teachers so that the instructor could respond to the needs and questions of each participant. This in-service program will be of a similar format.

III. Professional Development In-Service Curriculum

Purpose and Objectives

The purpose of this professional development curriculum to enable participating teachers: to create their own Microsoft Photo Story films, their own blogs, their own podcasts, and their own wikis, as well as to use instant messaging software for practice with the target language; to show their students how to do the same; to develop student-centered activities using the above applications; to explore resources available online to learn more about these applications; and to locate resources in order to learn more about copyright issues as they relate to education. During the development session itself, each participant will create and use a blog, a podcast, and a wiki, and will converse with a partner using America Online Instant Messenger (AIM) Express.

Materials and Room Organization

The presentation is housed on a Web site located at the following address: http://dachid.people.wm.edu/599/599.htm. The session will take place in a computer lab

equipped with a video projector, so that instructor can bring up the Web site on the projector screen to use as a visual aid to guide participants, who will each be at a computer following along on the Web site.

Time Frame and Target Audience

The development session will consist of two ninety-minute segments separated by a fifteen-minute break. Ideally, the group will not be too large, so that the instructor can respond to the needs and questions of each participant. Probably the best situation would be to conduct the session with all the foreign language teachers at a single school; this way, the group is not too big, the teachers know each other, and the instructor can meet the group in the school's computer lab after school.

Procedures and Activities

The homepage of the Web site has links to seven categories: objectives, digital filmmaking, blogs, podcasting, wikis, instant messaging, and copyright issues. We will progress sequentially through these seven categories. Each of the five major categories (digital filmmaking, blogs, podcasting, wikis, and instant messaging) is divided into six subcategories: definition, benefits, examples, tutorial, challenges/concerns, and links. The definition, benefits, challenges, and links sections are didactic, and the examples and tutorial pages contain experiential elements. The procedure is as follows (see Web site for reference):

Objectives

This category is purely didactic. The instructor will present the objectives for the training session and describe what will be happening.

Digital filmmaking

This category is didactic as well, the only one of the five major categories to be didactic only. The instructor will walk the participants through the tutorial section, but in the interest of time they will not actually create an example, as they will do in the other categories. The participants will watch the example film on the projector screen.

Blogs

This category contains a mix of didactic and experiential activities. After presenting the examples page, the instructor will ask the participants to do a think-pair-share activity to brainstorm other ideas for activities using blogs (each teacher will think individually for one minute, share with a partner, then share with the rest of the class). In the tutorial section that follows, participants will create their own blogs, which they can use in the future for their classes. They will be asked to post a sample blog entry using one of the ideas mentioned in the brainstorming session. As participants are creating their blogs, the instructor will circulate and record the Web addresses of each person's blog, which will be written on the board or put up on the projector screen. When the teachers are finished posting their blog entries, they will go to the blog of someone else in the group and post a comment, in order to get an idea of how this process works.

Podcasting

This category contains a mix of didactic and experiential activities. Like for blogs, after presenting the examples page (the sample podcast recordings will be played over the speakers in the computer lab), the instructor will ask the participants to do a think-pair-share activity to brainstorm other ideas for activities using podcasts. As they did for blogs, participants will create their own podcasts following the tutorial and post a sample recording using a microphone. Like before, when the teachers are finished they will listen

to the podcast of someone else in the group. This activity requires headsets with microphone attachments, which can be purchased cheaply.

Wikis

This category contains a mix of didactic and experiential activities. On the examples page, participants will be asked to follow a link to a wiki page created for the in-service. This time, instead of a think-pair-share, the teachers will use the wiki to collaboratively create a list of activities or lessons that could be carried out using wikis. The purpose for this activity is twofold: participants will be brainstorming ways in which wikis can be used while at the same getting practice using a wiki and seeing how it works. Next, the instructor will guide the teachers through the tutorial so that they can each create their own wikis, which they can use in the future with their students.

Instant messaging

This category contains a mix of didactic and experiential activities. On the tutorial page, participants will be asked to follow a link to AOL, where they will run and use AIM Express, an instant messaging program that does not require any software downloads. Each participant will choose a partner, get the partner's screen name, and have a conversation in the target language with that partner through AIM, with the goal of finding out what that person is planning to do during the rest of the day.

Copyright issues

This category is purely didactic. The instructor will present the Web page, discussing educational fair use guidelines and resources where teachers can learn more about this topic.

Evaluation of Objectives

Since participants in this in-service program will be creating electronic products during the training session, the instructor has an opportunity to see how effectively the tutorials are presented and how well the objectives of the in-service are being met. To conduct a formative assessment of how the group is doing, the instructor can circulate through the computer lab to gauge progress as participants work, offer suggestions for improvement to those who are having difficulty, and point out advanced features to those who are ahead of the rest. To measure of long-term success in meeting the in-service objectives, the instructor can start a database of the Web addresses of the projects that participants create during the in-service, in order to see if the teachers continue to add on to and use their blogs, wikis, and podcasts.

IV. Implementation Issues

Benefits of Web site Format

Using a Web site as the medium for the presentation of the in-service curriculum, rather than a PowerPoint presentation, handouts, or other methods, greatly benefits the implementation of the program. Since participants can each access the presentation on individual computers in a lab, they can follow along more actively as the instructor moves from section to section. The hands-on activities planned for the training session require the use of various resources found online, and since the in-service program Web site provides links to these resources, the flow of these activities (and of the presentation as a whole) is not hindered by the instructor having to make sure everyone can find the appropriate Web pages.

Another advantage of using a Web site is the fact that the presentation is accessible from any computer with an Internet connection. When the instructor wants to

have a training session, he or she does not have to worry about carrying around a CD or disk drive that holds the presentation. If participants want to revisit some of the tutorials after the session, they can go back to the Web site at any time, wherever they are. Also, if a teacher is unable to attend the in-service, that teacher can go to the Web site and get the same information that he or she would have gotten at the meeting.

School-to-School Differences

Before the in-service program is implemented at a particular school, the instructor must determine if there are any circumstances specific to that school that might affect the relevance of the topics covered or the method of delivery of the presentation. An example of the latter would be if the computer lab at a school were not equipped with a projector and screen. In this case, the instructor would have to open the Web site on a desktop computer to look at while discussing each section of the presentation, while participants follow along on their individual computers. This situation illustrates an additional benefit of the Web site format; if the presentation is in PowerPoint form, there is no feasible way to display it without a projector and screen.

Another question to ask is if the school has blocked any Web sites so that they cannot be accessed by school computers. If one of the sites used in the in-service program is blocked, the instructor must ask if it can be unblocked, modify the presentation to exclude that section, or use a different Web site to accomplish the same goal.

The instructor must also consider what resources are already available and being used in the school. Does the school have a language lab or language software that would make parts of the in-service irrelevant? If so, the presentation will need to be modified. For example, if a school has language learning software that includes an instant

messaging program, the instructor may decide to exclude or modify the instant messaging portion of presentation, depending on how widely the software is used in the school and whether teachers might want additional information about how to use it.

Acceptance

Aside from redundancy issues at technologically advanced schools, this program should most likely be accepted and desired by language teachers. As discussed in the review of the literature, many teachers feel like they need to know more about instructional technology and think that training programs are helpful in developing their technology skills. Even teachers who have previously received technology training may want to know more about the topics covered in this in-service, since these topics were chosen partly because they are new and unfamiliar to many teachers.

This in-service program is especially useful and relevant because it provides information about resources that are user-friendly and available for free. For the most part, the applications described in the program require nothing more than computers with Internet connections, which, as noted previously, are nearly ubiquitous in U.S. public schools.

Anticipated Outcomes

Teachers are more likely to use instructional technology when they have received training on how to use it. An added motivator for teachers participating in this in-service program is the fact that, by the end of the session, they will have already set up a blog, a podcast, and wiki, so there will be no excuse not to use them! As teachers integrate these tools into their instruction, their students will reap the benefits associated with the use of technology to create multimedia projects and to communicate. And since students' digital

projects will be published online, their parents will be able to view the work they are doing, observe their progress, and congratulate their teacher for helping them create such high-quality and exciting work!

Aside from reaping benefits in language acquisition through educational technology, students will also build technology skills as they work to complete their projects. Such skills are increasingly important and will serve students well throughout their schooling and beyond.

V. Recommendations/Implications

Recently developed computer applications, including movie-making software, blogs, wikis, podcasts, and instant messaging programs, have significant potential for facilitating language learning. Resources available online can effectively turn a computer lab into a language lab. Expanding the use of educational technology in the language classroom can bring numerous benefits to students, allowing them to express themselves and demonstrate their knowledge in ways that are collaborative, innovative, and engaging. An increasing variety of tools are available to educators, but many teachers feel unprepared to use these tools. To remedy this problem, schools and districts must provide regular access to hands-on professional development opportunities (such as the one presented here), so that teachers can stay abreast of new options in instructional technology.

In order to effectively design such professional development programs, more research should be conducted to determine what, specifically, teachers need to know; to find out which applications are gaining widespread appeal among teachers and how frequently they are used; and to measure the degree of success achieved as a result of

using these applications. Some teachers have begun to share their successes and failures

with emerging technologies by using the technologies themselves; there are an increasing

number of blogs, podcasts, and even some wikis devoted to sharing thoughts and ideas

about blogs, podcasts, and wikis. Perhaps this trend reveals how the transmission of

teaching techniques and best practices will occur in the future; as teachers become more

adept at using new communication tools, they will gather the knowledge they need from

an interconnected web of content produced by a committed community of educators.

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