

**DIALOGIC PRACTICES IN USING PODCASTING  
AND BLOGGING AS TEACHING TOOLS FOR  
TEACHERS SEEKING ESOL CERTIFICATE**

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**ABSTRACT**

Rapid globalization and the emergence of new instructional technologies have encouraged educators to explore technologies like podcasting and blogging to enhance their teaching. This study examines how six English speakers of other languages (ESOL) teachers used podcasting and blogging to help young English learners, themselves 21st century digital citizens. The ESOL teachers used technology to develop innovative teaching methods and enhance their professional identities. Four themes emerged from the examination of ESOL teachers' uses of new technologies to increase peer engagement through deep classroom interaction: ESOL teachers' varying levels of use of instructional innovations, dialogic uses of podcasting and blogging to encourage educational engagement, the impact of innovative technology on teachers' professional identities, teaching digital-native English learners, benefits of technology for assignments, and challenges for ESOL teachers' active learning.

Today's younger students have been dubbed *digital natives* (Prensky, 2011) and the *net generation* (Tapscott, 2009, p. 11), and educational professionals have begun to take advantage of technological innovations for teaching and learning. Various studies have shown how the use of Web 2.0 in countries such as Australia (Lee, McLoughlin, & Chan, 2008) and Ireland (Lawlor & Donnelly,

2010) facilitates learning (Lee et al., 2008). Researchers have also explored the adoption of Web 2.0, particularly Facebook and blogging, in K–12 and university settings (Fisher & Kim, 2013; Hew, 2009; Kim, 2009a; Rosell-Arguilar, 2007), generally finding that these multimedia-authoring tools facilitate learners' understanding of content (Kim, 2009b). McKinney, Dyck, and Luber (2009) describe how mobile learning using podcasting and blogging provides educational benefits. Kim (2009a) argues that, although current teachers skillfully use some technology for teaching young learners, preservice teachers still often have trouble implementing podcasting and blogging because of attitudes toward and skills and experiences with these tools. Lambert, Gong, and Cuper (2008) describe how preservice teachers' attitudes and ability to integrate technology in the classroom are influenced by their prior technology experience. Given the new generation of digital native students, integrating innovative instructional technologies is crucial for educational effectiveness, and it is vital to study their implications further (Prensky, 2011; Tapscott, 2009).

In order to adapt to the new global context and embrace the digital natives of the 21st century, it is important to study how preservice teachers seeking an English for speakers of other languages (ESOL) certificate adopt innovative instructional technology that is relatively new in teacher education. Rogers (2003) defines an *innovation* as “an idea, practice, or object that is perceived as new by an individual or other unit of adoption” (p. 11). Hall and Loucks (1978) argue that “change is a process, not an event” (p. 37). Individual teachers and learners who adopt these technologies change their feelings, skills, and approaches across a series of stages. Rogers (2003) describes this as instructional *diffusion*, “the process by which an innovation is communicated through certain channels over time among the members of a social system” (p. 5). It is clear that individuals adopt such innovations more or less extensively and employ technologies in varying ways. This is often referred to as “Levels of Use” or “LoU” (Easterbrooks, Stephenson, & Gale, 2008; Loucks, Newlove, & Hall, 1998).

Levels of Use are observable styles and behavior patterns in the use of innovation exhibited by individuals and groups. Loucks et al. (1998) developed the LoU model to describe the levels of use of innovations with respect to the concerns-based adoption model (Hall & Hord, 1987), which is a model of change in individuals. LoU has eight levels: Level 1 (*nonuse*), Level 2 (*orientation*), Level 3 (*preparation*), Level 4 (*mechanical use*), Level 5 (*routine use*), Level 6 (*refinement*), Level 7 (*integration*), and Level 8 (*renewal*) (Hall, Loucks, Rutherford, & Newlove, 1975). Each level of use describes the behaviors of the innovation user: having little or no knowledge of the innovation as a nonuser (Level 1), acquiring information about the innovation (Level 2), focusing on day-to-day use of the innovation (Level 3), managing (Level 4), routinizing and refining (Levels 5 and 6), and integrating (Level 7) and exploring renewal (Level 8) of the innovation. This framework is useful for exploring ESOL teachers' current levels of use and how they adopt innovation, their changes

during the developmental process, and to what extent and under what conditions they integrate and adopt instructional innovations (Orr & Mrazek, 2009).

Since 2005, *podcasts*—Internet-based radio shows and other audio programs—have been available for download over the Internet and playable through computers or MP3 players (Stephens, 2007). A *blog* (weblog) is a type of website, usually maintained by an individual, with frequent updates (Kim, 2009b). Blogs are typically a series of entries posted in reverse-chronological order. There are also audio blogs, an interactive blog that combines text, images, photos, and possibly interactive media (podcasts, video, etc.). Both podcasts and blogs are easily posted on a website.

Because podcasting and blogging are new to teacher education, relatively few have studied them. Studies have focused on making podcasts with children (Putman, 2008) and on teachers' experiences in implementing instructional technologies such as podcasting and blogging (Evans, 2008; Fisher & Kim, 2013; Kim, 2009b). Some of this work has examined connections between teachers' development of their professional identities and their mastery of instructional technology (Luehmann, 2008). Emphasizing the need for continuing research on teacher training, Kim (2009b) underscores the importance of new technologies in teacher education and shows how to implement them step by step. ESOL teachers confront various challenges as they encounter English learners who are not only linguistically and culturally diverse, but who also constitute a new digital generation.

To explore the use of podcasting and blogging in teaching and learning with English learners, this study draws on Bakhtin's (1986) sociocultural account of dialogical practices. Knowledge is not an individual creation but is instead socially shared and emerges from cultural practice. Bakhtin referred to dialogue as a continuity of utterance, which includes a speaker, an active listener, and given boundaries. Dialogue is an invitation to think, to communicate, and to produce purposeful meanings. This article describes how ESOL teachers' perceptions, practices, and reflections, as they learn podcasting and blogging, emerge through and have effects within dialogic practice. The ESOL teacher not only dialogs with the task, but also with his or her future English learners (Kim, 2011). To construct such dialogic practices (Bakhtin, 1986), ESOL teachers in the Second Language Literacy (SLL) course we studied are required to conduct an English-learner case study as a key project that consists of three steps: conducting the case study, podcasting, and blogging. Our account of these dialogic practices shows the potential of podcasting and blogging as tools in teacher education.

### **EMPLOYING PODCASTS AND BLOGS IN EDUCATION**

Podcasts are an important slice of the mobile-learning pie, and several universities have joined the iTunes U Initiative to implement podcasting as an instruction and information-delivery tool (Kim, 2011; Lee et al., 2008). Students have access

to audio and video content such as school information and lectures via handhelds and computers. Podcasting and blogging are beginning to reshape K–12 and higher educational systems and pedagogies (Cebeci & Tekdal, 2006; Dippold, 2009; Ducate & Lomicka, 2008; Evans, 2008; Lawlor & Donnelly, 2010; Sloan, 2005). Mobile learning extends the advantages of podcasting and blogging, adding the flexibility of portable wireless technologies (Evans, 2008). McKinney et al. (2009) provide evidence that mobile learning using podcasts improves classroom performance. Sloan (2005) lists potential uses for distance learning, self-paced learning, the remediation of slower learners, the provision of extra content, help for students with reading or learning disabilities, access to guest speakers in remote locations, the ability to present guest speakers to many sections and classes, and other ways in which these technologies can generate a richer learning environment.

Teacher educators have used and taught two types of podcast and blog use: with preexisting materials, as a supplement to the main teaching materials, and the creation of new podcasts and blogs. In the first use, teachers employ podcasts and blogs for purposes such as revision (Evans, 2008), language practice (Hsu, Wang, & Comac, 2008), and as examples of podcasts created for students (Hew, 2009). As Evans (2008) shows, podcasts are more effective revision tools than textbooks, and they are also more efficient than traditional note-taking, partly thanks to the flexibility of access. In the second use, teachers assist students in creating podcasts and blogs. Thus students create content for their own learning as they complete their assignments (Fisher & Kim, 2013; Kim, 2009a, 2011).

Churchill (2009) describes the benefits of blogging, suggesting several effective blog-based activities for learning. Students' reading and writing through blogs can extend their language learning (Ducate & Lomicka, 2008). Blogs can also be useful as assessment and information-exchange tools, and for acknowledging the responses of others. Even though blogging often involves text-based websites, audio blogging (with podcasts) is increasingly popular. Several scholars have focused on language teaching and learning. Dippold (2009) describes how blogs enhance peer feedback in German classes. Hsu et al. (2008) explore how audio blogs and podcasts facilitate English language learning, by effectively teaching English while also allowing instructors to observe students' growth.

Podcasting and blogging provide unique enhancements to the learning process: the learner constructs knowledge through active exploration, observation, processing, and interpretation (Rosell-Arguilar, 2007) while interacting with others. Cebeci and Tekdal (2006) used podcasts to assemble lessons and to support learning. These and other researchers have demonstrated the pedagogical usefulness of podcasts (Lee et al., 2008; Wiley (2002). Lee et al. (2008) proposed five principles for successful educational podcasts: The well-designed podcasts should be *simple to produce*, *immediate*, *educationally focused*, *reusable*, and *engaging* (p. 505). At this point we need more naturalistic studies of how blogs and podcasts are being used with preservice ESOL teachers.

### THE IMPACT ON THE DEVELOPMENT OF TEACHERS' PROFESSIONAL IDENTITIES

Most existing studies have described how instructors create and use podcasts in their instruction (Evans, 2008; Hew, 2009; Hsu et al., 2008). We also need to study the impact of such instructional technology on teachers' identities. Identity refers to "being recognized by others" and the social categories in which this happens (Gee, 2008). Luehmann (2008) found that instructional technology plays a significant role in developing teachers' professional identities, which are closely linked to their personal identities (Kim, 2011) and beliefs (Zheng, 2013). Canrinus (2011) explores how personal identity is linked to teachers' professional identities. We need more research on the role technology plays in the development of teacher personal and professional identities, for ESOL teachers in particular.

Lamote and Engels (2010) argue that the teacher must "be responsive to issues of identity formation if learning is to take hold" (p. 4). Kao and Tsai (2009) argue that a teacher's Internet self-efficacy and beliefs about Web-based learning have consequences for the teacher's Web-based professional development, which is tightly connected to their self-confidence and self-recognition, directly impacting their professional identity. Similarly, Yang and Tsai (2008) discussed various characteristics of university students with regard to informational technology and Web-based learning.

Lamote and Engels (2010) further found that teachers' professional identities consist of various subidentities, depending on the context and relationships. They explore four indicators in their studies: professional orientation, task orientation, teacher self-efficacy, and commitment to teaching. In the case of language teachers, Kaplan-Leiserson (2005) demonstrates that the collaborative development of audio learning objects supports students' conceptualizations of a discipline's content, as they share with their peers—creating social perspectives, constructing meaning, and promoting the construction of students' professional identities. In ESOL teacher education, however, studies are scarce. The most-studied aspect of this topic is teachers' attitudes and motivations toward instructional technology.

Integrating instructional technology into teacher education is imperative for ESOL teachers. This will allow teachers to develop real-life experience with the technologies, and they will learn to use these methods efficiently and effectively with their own students. Brown and Warschauer (2006) emphasize the effectiveness of implementing various instructional technologies in teacher education, but few studies examine the integration of this instructional technology into assignments. Incorporating these tools into assignments can be pivotal to examining learning processes (Kim, 2011). Understanding ESOL teachers' use of technology will help us to understand factors involved in their learning, as well as how we can improve pedagogical results.

This study focuses primarily on the second and third steps of the English-learner case-study projects in a teacher education classroom for ESOL: podcasting and blogging. We explore ESOL teachers' dialogic uses of instructional technology as well as their reflections on the process, focusing on how they implement podcasting and blogging as a part of completing their English-learner case-study projects.

Two research questions guided this study:

1. How do ESOL teachers produce and make use of podcasts and blogs while compiling their English-learner case-study projects?
2. How do ESOL teachers construct dialogic practices using podcasting and blogging as they complete their English-learner case-study projects?

## METHODS

Most current studies of instructional podcasts and blogs have been conducted with large numbers of subjects using quantitative research methods (Hoskins & Hooff, 2005; Kao & Tsai, 2009). For a fuller understanding of ESOL teachers' learning processes and professional development, however, qualitative research methods are necessary (Lincoln & Guba, 1985; Merriam 2009). This qualitative case study (Merriam, 2009) examined six ESOL teachers' learning processes and dialogic practices as they completed a core task in their teacher education program. Using purposive sampling (Merriam, 2009), we investigated 6 graduate students out of 30 in two SLL courses during the fall of 2008 and fall of 2009 at a research university in the southeastern United States.

### English-Learner Case Study

The SLL course met for 16 weeks with 3 hours of class time each week, providing students with a critical understanding of instructional delivery tailored to the linguistic and literacy needs of minority and heritage communities. ESOL teachers in the SLL course were required to complete an English-learner case study as a core project constituting 30% of their grade.

The English-learner case study had three steps. For Step 1, the ESOL teacher gathered the data for the English-learner case study. The ESOL teacher located an English learner in one of various contexts (mainly K–12), collected data such as interviews, reading and writing samples, and then analyzed the dataset. The ESOL teachers met with the English learner an average of three times for a total of 3 to 4 hours. In Step 2, each ESOL teacher podcasted the audio files (the introduction to the study, interview segments, and reading samples). In Step 3, the ESOL teachers blogged their completed case studies to the course website. They blogged six segments of the study: the English learner's social and linguistic background, the English learner's language development, a reading analysis, a writing analysis, anticipated problems, then recommendations and other materials

such as writing samples in reversed chronological order. Peers then read the English-learner case study and added their comments.

This study focuses on Steps 2 and 3 of the English-learner case study in order to examine the dialogic processes ESOL teachers used while implementing instructional technologies. Using Google Sites and Ning.com, the instructor created websites for the study. The teachers used Audacity and the LAME encoder, an educational tool, to create audio files. Once editing was complete, the ESOL teachers uploaded their files to the Internet, making them available for download. To blog their English-learner case studies, the ESOL teachers used blogging tools like Blogger and Google Sites. As a final product, the ESOL teachers podcasted their interviews and reading samples and blogged the written portion of the case study and the English learners' writing samples on the website (cf. Figure 1).

### **Participants**

The participants in this study were students in a second language literacy (SLL) course taught by the first author. We purposefully selected six graduate students using three criteria: completion of the task on time, conducting the English-learner case study with K–12 students, and willingness to participate. Gender and ethnicity were not used as selection criteria. The participants were Silvina (female, Hispanic), Kevin (male, Caucasian), Jane (female, Caucasian), Rae (female, Caucasian), Ellie (female, Hispanic), and Sam (female, Caucasian). All names are pseudonyms. Our framework to describe the ESOL teachers' learning processes for instructional innovation relied on the LoU described by Loucks et al. (1998).

Silvina was in her late 50s and emigrated from Mexico at the age of 8. She had no background knowledge of instructional technology and referred to herself as a "technology immigrant." The instructor met with Silvina often, providing her with extra explanations and demonstrations. Kevin was 29 years old and had previous experience podcasting and blogging. He was proficient with instructional technology and volunteered to work with his colleagues to provide technical support. Jane, 27, an elementary education major, was a positive and advanced user of instructional technology. She often helped her classmates. Rae was a 37-year-old novice in instructional technology, but she was eager to learn. She was anxious, and the instructor had several extra meetings with her to explain assignments. Ellie was 23, very active, and at an intermediate level in instructional technology. She was excited about and enjoyed the assignment. Sam was 36, an exemplary student with some experience of instructional technology. He was very considerate and active in trying innovative teaching methods. Other than Jane, all students were majoring in English secondary education.

**Profile of an ELL**

Posted by [sardemartino](#) on Oct 21, 2009

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### Societal Linguistic Background

My student subject was born May 23, 1991, making her 18 years of age at the time of our interview. She was born in Aguascalientes, Mexico. Her home language is Spanish. Aguascalientes is located 300 miles outside of Mexico City. It isn't a densely populated area, but is a fast growing area. Aguascalientes is the home of the largest fair in Mexico, the San Marcos Fair. For more information about Aguascalientes, please visit: <http://en.wikipedia.org/wiki/Aguascalientes>. Her family is made up of her father, who is 39 and a chef in two restaurants, her mother, who at age 39 cleans houses and is frequently traveling between Florida and Mexico, and her two siblings, a brother age 11 and a sister age 13. Spanish is the primary language spoken in the home along with having mainly Spanish books and magazines. She does get the opportunity to speak English with her brother and sister, but mostly speaks Spanish outside of school due to the lack of English language skills in both her parents.

Her parents are supportive of her and her siblings learning English. AS  
[http://www.ell-ed.com/uncategorized/2009/10/21/profile-of-an-ell/](#)

#### Slideshow

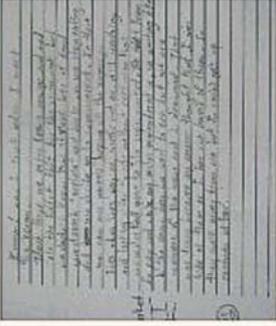


Figure 1. A sample English-learner case study.

Table 1. Participants

Name	Age	Gender/Ethnicity	Technological proficiency at the beginning	Major	Perception of use of technology
Silvina	Late 50s	Female/Hispanic	Level 1 (nonuse)	Secondary	Technology immigrant
Kevin	29 years old	Male/Caucasian	Level 7 (integration)	Secondary	Supporter
Jane	27 years old	Female/Caucasian	Level 5 (routine)	Elementary	It's fun to learn
Rae	37 years old	Female/Caucasian	Level 1 (nonuse)	Secondary	Utilize technology
Ellie	23 years old	Female/Hispanic	Level 5 (routine)	Secondary	Love technology
Sam	36 years old	Female/Caucasian	Level 5 (routine)	Secondary	It's motivational part

### **Data Collection and Analysis**

Data collection involved three components: (a) observation and field notes for one semester for each participant; the instructor wrote reflective field notes, recording, for example, participants' behaviors, questions, and responses during class for 16 weeks of regular class time; (b) two interviews after the completion of the course; and (c) data from their English-learner case-study projects, during which the participants articulated their thoughts and responses. As instructor for the course, the first author observed students throughout the semester and wrote reflective field notes immediately after each class session.

As we analyzed these data, themes emerged. We transcribed the interviews and reviewed the data three times. We coded with ATLAS.ti, the qualitative data-management software program. Data analysis involved three stages of coding, open coding, axial coding, and relating codes to each other (Corbin & Strauss, 2007). The first stage of coding sorted data into precategories. The second stage sewed saturated subcategories together to form new themed categories (e.g., teacher identity, advantages, challenges). The third stage compared and contrasted new themes and we related them to similar themes. Reviewing each case carefully, we identified patterns and created taxonomies (LeCompte, 2000).

Findings from the study may not be generalizable because of the small sample size and potential context specificity. As a thickly descriptive study filled with emic voices, however, the study might be transferable, with insights relevant to similar settings. We performed peer debriefing and developed a reflexive journal, in which we as researchers examined the personal record of our learning experiences, to ensure the trustworthiness of the study (Lincoln & Guba, 1985). We were also careful to remain aware of how both researchers' positionality, one being a teacher educator as well as a participant observer and the other being an English learner, has influenced our awareness of these issues (Merriam, 2009) and may have influenced our interaction with the participants throughout the study.

## **RESULTS**

The results illuminate ESOL teachers' attitudes, practices, and reflections while podcasting and blogging. Four themes emerged: (a) ESOL teachers' LoU of an instructional innovation, (b) the dialogic nature of podcasting and blogging, (c) the advantages of integrating innovative technologies and their impact on ESOL teachers' professional identities and (d) ESOL teachers' challenges with active learning.

### **ESOL Teachers' Levels of Use of an Instructional Innovation**

As described above, Loucks et al. (1998) identified eight levels of use of instructional innovations. We assessed each ESOL teacher's LoU with a self-assessment,

a brief survey of their experiences, background, and daily usage of various technologies, and through the first author's observations as course instructor. Hall et al. (1975) and Orr and Mrazek (2009) identified eight LoUs of innovations: *nonuse*, *orientation*, *preparation*, *mechanical use*, *routine*, *refinement*, *integration*, and *renewal*. (See Table 2.)

Two of the teachers, Silvina and Rae, expressed anxiety about implementing new instructional technology. These two were at Level 1 (nonuse) for podcasting and blogging at the beginning of the course. Sam, Ellie, and Jane were positive and skillful learners and assessed as Level 5 (routine) because of their previous experience with various instructional technologies. Kevin was at Level 7 (integration), combining his own efforts to use the tools with colleagues' activities and thus supporting both his own and others' learning.

At the beginning of the semester, Silvina revealed her attitude and her high degree of anxiety. She said,

So I think you always have to keep in mind the fact that technology is the way of the world, it is the new literacy. . . . Absolutely, I am a technological immigrant. I was an immigrant the first time around when I learned English, and now I am a technological immigrant. I guess I am just never going to get out of that mode.

Calling herself "a technological immigrant," Silvina compared her current technological shock, emotional anxiety, and frustration at the new technology to the jolt of her initial immigration to the United States at the age of 8. Using a "new literacy" metaphor, Silvina described her emotional anxiety about the technological tools. Silvina compared herself to an inner-city child required to read Ralph Waldo Emerson; she felt at an enormous cultural distance from the reality of the assignment that she had to carry out. Rae, who also had no previous experience with instructional technologies, displayed a similarly high degree of

Table 2. Participants' Levels of Use and Adoption of Innovation  
Based on the Hall et al. Framework (1975) and  
Orr and Mrazek's Study (2009)

Name	Level of use	Level of adoption
Silvina	Level 1 (nonuse)	Level 4 (mechanical use) & Level 7 (integration)
Rae	Level 1 (nonuse)	Level 4 (mechanical use) & Level 7 (integration)
Sam	Level 5 (routine)	Level 7 (integration)
Ellie	Level 5 (routine)	Level 7 (integration)
Jane	Level 5 (routine)	Level 7 (integration)
Kevin	Level 7 (integration)	Level 8 (renewal)

anxiety about implementing these innovative instructional teaching methods, saying, “I am kind of nervous.” During the course, Silvina and Rae moved up to Level 4 (mechanical use), a relatively skillful level. They focused most of their effort on the short-term project, but they jumped up to Level 7 (integration) as they planned for their future teaching with podcasting and blogging. In their aspirations, then, they leap-frogged over Levels 5 (Routine) and 6 (Refinement). They were not yet skillful users, but they knew how to imagine sophisticated future teaching, and they advocated for their colleagues to use it.

Jane, Sam, Ellie, and Kevin advanced from Levels 5 and 7 to Levels 7 and 8. They were excited about the project and anticipated future uses of the technologies. Sam found the assignment an enjoyable activity, and Jane began to connect to her students’ experiences with technologies. Jane said,

I think it’s fun to learn about new technology. I think the more I know, maybe I’m, at least, on a par with most of my students, because they are bound to know more than I do, but I think it’s fun to learn, especially when you become a student to the teacher.

Sam echoed this:

Yeah, I know how to use the computer and the Internet. Yeah, I was familiar with the iPod and what podcasts were. I didn’t know how to make them before this class; I actually learned that here. [laughing] But with using blogs and social networking. . . . And I’m on Facebook and things like that now. That’s how I was using [technology] prior.

Ellie added,

I love technology and I always like to learn new things. And that covers being able to use it to teach, but also being able to use it to maybe, like, how to use computers to put their grades in and not to use it for our scoring or—just get data out of it to create crafts out of the student’s progress maybe. So, there are a lot of uses of it on both ends of the students and the teachers.

She clearly learned about podcasting and now has the confidence to envision more pedagogical uses.

Sam agreed that his previous experience using the computer and the Internet helped a great deal in this project. He felt confident and ready to move forward with new instructional technology. Jane liked the empowerment of English learners as they teach their teacher, displaying their skills as digital natives. Similarly, Ellie, who loves technology, shared her excitement about implementing these instructional technologies and also noted her proficiency at using Windows Movie Maker and Photoshop.

Sam, Jane, and Ellie developed their skills and were able to coordinate their own use of the innovation with colleagues. Kevin ascended to Level 8. He was very confident in his skills and often helped his colleagues. Kevin said, “I will keep practicing new instructional technologies for future use in educational

contexts. . . . So that if I do this with students now, the same problem might pop up, I already know how to troubleshoot it.” He wanted to learn alternatives and wanted to improve the quality of outcomes by using the technologies. The ESOL teachers’ attitudes toward instructional technologies reflected their various LoUs. ESOL teachers who were low LoU (e.g., Silvina and Rae) had more negative attitudes toward integrating these instructional technologies, while those with high LoU (like Kevin) had positive attitudes. After practicing podcasting and blogging, the ESOL teachers adopted innovative methods and created positive professional growth in their knowledge of and confidence with educational technologies, and this was reflected in their professional identities.

### **Dialogic Practices of Podcasting and Blogging**

All six ESOL teachers were eager to discuss issues they encountered when using technology and to help one another. They also dialogued in various formats, both technologically mediated and in person, sharing their projects with others. Silvina’s case provides an excellent example of dialogic practice. Although originally a nonuser, Silvina grew comfortable with these technologies. She struggled at the beginning of the semester, but through dialogue she developed a positive attitude toward technology and teaching: “I would definitely [blog], that instead of, if I required a portfolio of them, instead of them having to turn in something written . . . they can [blog] and I could be responding to them.” After her initial difficulty, Silvina defined this technology as “a new literacy”: “I would describe it as things that would enhance the actual engagement and meaning, like blogging, or even text messaging. It’s a new literacy.”

After implementing podcasting and blogging, Silvina remarked, “So, those are the things that are just—but once you do it, you go, God, it was so simple, why am I worried?” Silvina concluded her dialogue with, “Oh, I think they are great. I absolutely embrace the new technology and especially for my content area.” She recognized the importance of instructional technology for enhancing teaching in her content area, and she came to believe that its implementation can be easy. Silvina also said that her peers’ positive comments on her case study encouraged and motivated her to adopt instructional technologies with her future students.

Podcasting and blogging allow ongoing revision and reflection and let multiple people access the results (Davis & McGrail, 2009). Uploading each case study to the website allowed the ESOL teachers to share their results and to reflect on their learning together. As Davis and McGrail (2009) also observed, as the ESOL teachers revisited their projects, they collectively reflected on their learning experiences. The experience of podcasting and blogging helped them to understand productive uses of technology, boosting their competence. The implementations also gave them confidence to use blogging and podcasting in their own classes. Rae said, “They offer opportunities to enhance, kind of, what

your teaching makes the classroom curriculum, where kids can express themselves also through creating their own types of products on the computer and using technology and expanding their learning, as well.”

For Kevin, solving problems in his teacher education class allowed him to practice instructional technologies. As an *integrator* (Level 7), Kevin was also able to help his classmates perform better and imagine alternatives. He said,

I would say, because I already had a good idea how to handle them, the best progress that I made was experiencing problems from the perspective of my colleagues. They had problems I didn't have, so I was able to troubleshoot different issues, and that was a great experience, because I was able to be more cognitive of what kinds of problems you might encounter.

Kevin describes how he learned through teaching others, and this experience will improve his future teaching. For all participants, uploading and sharing their projects on the website gave them confidence as experts in the technologies. They developed ownership of their learning, and this enhanced their sense that they could not only use technology with their own students but also themselves help students and colleagues.

### **Advantages of Integrating Innovative Technologies**

The results show three advantages of integrating innovative technologies. The ESOL teachers' professional identities grew and expanded. These teachers will be able to help digital-native English learners learn in a comfortable context and cross the boundary between learner and teacher. Finally, integrating instructional technology into the assignments ensured that the ESOL teachers learned the technologies in contexts that resemble their future teaching, making transfer more likely.

#### *Advantages for ESOL Teachers' Professional Identities*

Through their projects, the ESOL teachers developed their professional identities and demonstrated their developing knowledge of instructional technologies. Their responses were overwhelmingly positive, sharing their impressive final projects, appreciating the opportunity to practice with new technologies, and extending their expertise to new technologies like podcasting and blogging.

Silvina mentioned her position as a teacher: “No, I think if you feel threatened by adaptation, then you shouldn't be in teaching, because all professions change. Nothing stays the same.” She added, “I would love to be able to do podcast, because I think kids would love to do a podcast of a book review instead of doing a written book review.” She already imagined how she would use podcasting in her own teaching. Silvina also addressed the importance of professional development using various instructional technologies, even though she was concerned about her limited experience with the instructional technology. “So as far as

professional development, I loved it. I absolutely loved it.” Silvina understood this technology as a new literacy and articulated her thoughts about the importance of practice: “I think learning about technology is practice, like anything else.”

Jane, Ellie, and Sam all enjoyed improving their technological capacity to become more skillful teachers. They were aware of the need to integrate instructional technologies in the contemporary world, which offers so many groundbreaking tools. They did not want to fall behind and wanted to become capable, competent teachers. Jane said,

If you have chosen the career because you really want to help students succeed in life as they go on, then that’s part of your job. Your job is to keep up-to-date and current on technology, no matter how strange it may get, whatever may come.

Similarly, Ellie said,

Because podcasting, recording the students, maybe used as a—maybe monitoring process where you record them during the first day of school or maybe throughout the period of time and then you could prepare how they probe this in the English language, or maybe you could use it for—as an instructional tool. Maybe recording like I can read a book and create a podcast with voice reading the book, and then the students can use it to hear the book.

Sam emphasized that “John [a technology specialist in the university] created some really neat audio bookcasts.” He continued, “It’s a project that was designed to work with high school kids, but he did them with his teachers, and just the potential there is really neat and gets kids excited about books.” He also described how children are excited about the projects they can create. Jane, Ellie, and Sam realized that their future students would be digital natives, and they wanted both to help develop their students’ technological skills and to motivate them to excel in their subject matter.

#### *Advantages for Digital-Native English Learners*

The ESOL teachers expected that their students would likely be more proficient in instructional technologies than they were. As a new generation, the net generation (Prensky, 2011; Tapscott, 2009), most students are capable of using digital technologies more readily than previous generations. The ESOL teachers understood that there will be gaps between teachers and students. The teachers’ experiences with their projects helped them to become more skillful users. This is important because the quality of technology-assisted interaction and communication between a teacher and students will be vital. As Silvina observed, “So why not engage them in the technologies that they are used to. It just doesn’t make any sense not to use that skill that they have.” Drawing upon the new generation of students’ unique skills and strengths would enhance students’ learning. Because the ESOL teachers are eager to reach English learners, they were excited to learn

new instructional technologies and started creating innovative ways to use these technologies with future students. The ESOL teachers agreed that podcasts and blogs would enhance English learners' engagement (e.g., see Rae's and Silvina's cases). For example, Silvina's English learner was highly engaged in her reading and corrected herself while reading the text.

The ESOL teachers quickly generated many ideas for implementing these technologies in their own teaching. Jane, Ellie, Sam, and Rae saw that English learners often learn easily through visual and auditory media, so using appropriate tools would help English learners (Peregoy & Boyle, 2008). Jane said, "So it's visual and it's auditory, so that you actually know how to say it." Ellie continued, "Yes. Once again, it's ESOL students, it's effective because it adds more and more valid keys in their learning. They will have the visual, the artifacts, they can read, and basically that's the key to enhancing their learning." Jane, Ellie, Sam, and Rae agreed on the importance of providing English learners with contextual cues and various means of learning. Sam gave an example:

It helps them to activate their schema, it helps them to find—you know, if they don't understand the English word, at least there's something that they can associate with it, either a picture or a sound, that she can bring in using the computer that they can work with.

Rae added,

Rather than strictly just being a purveyor of information, they can help them to learn to construct their own information through showing them the different ways and by using the different ways of conveying that information to them. Then I could utilize those technologies to help them learn in their own ways.

Sam and Rae also pointed out the "repeating" function that technologies provide for English learners. English learners can repeat certain content while employing their favorite ways of learning. Rae described one incident:

Uh-huh. It was good. Actually, she [Rae's English learner] did really well on reading. I thought it was a great experience for her and for me to be able to go back and re-listen to her reading out loud and then pinpoint the difficulties she was having or the nuances of what her weaknesses were.

All participants, including the technological novices, said that they felt privileged to have had the experience of doing these technology projects. Silvina's English learner wanted a copy of the CD that her voice was on. Silvina's rapid speech and the higher pitch of her voice in the following segment showed her excitement about her student's response.

Silvina: The student [Silvina's English learner] was thrilled to be able to hear herself. . . . She [Silvina's English learner] loved it. She loved it, and I explained to her that that would be a way she could learn to self-correct any miscues [reading research components], that she could read a book, she could read a passage from a book, tape record it or do it on a podcast and

then listen back in reference to what she was reading so that she could see where she made mistakes, even when she wasn't in school for somebody to be able to correct it. . . . I am extremely grateful that she [the instructor] exposed me to all that stuff, because I know now that it's available."

The participants enjoyed creating the English-learner case study and working with their students. Jane mentioned that the English learners developed their self-confidence through the process.

Jane: The technology allowed—I think, the students were more excited about finishing their product and making sure that it was really done well, because they were able to record their own voice and then they were going to get to hear it later on. . . . So it made it more special, it made it more exciting for them instead of just, oh, actually write a Bio-Poem . . . make their voice and put it on top of their poem and they are going to see their poem and it's going to be read by them instead of it just being this real mundane, write a poem. . . . So I think it makes it more intriguing instead of boring.

Sam and Jane agreed that English learners would be digital natives. Sam said, "It's kind of the motivational part of it—the thesis that it's going to be something that they think it's cool, they think it's fun; something they're familiar with and know how to do." Jane also mentioned an example of how she had learned from her own ESOL students in class when she encountered a technological problem. The opportunity to help her teacher [Jane] empowered the English learners. Sam also mentioned that most teachers are behind the new generation of students and need to update their skills and knowledge.

#### *Advantages of Conducting an English-Learner Case Study as an Assignment*

The ESOL teachers learned a great deal through this assignment. Most of them learned about their English learner's cultural backgrounds, their home literacy, and the socioeconomic circumstances in which their learner was situated. Kevin, Ellie, and Sam all emphasized that they had learned about their English learners' cultural and social backgrounds as well as their first- and second-language literacy through the project. It provided the ESOL teachers the opportunity to listen to an English learner's voice and stories. Ellie emphasized the importance of listening to and learning from English learners.

I learned a lot from it. It was amazing to learn about the place he was from, his culture, and to actually put into practice what we had been learning in class—like, we analyzed our reading messages and figured out some suggestions, recommendations for him. It was really interesting. I enjoyed it. Yes, I found similarities and noticed some differences compared to the American culture—and you just don't know and you are teaching the students that are sitting in your classrooms you don't know until you talk to them.

This project taught ESOL teachers the importance of understanding English learners' situations and integrating instructional technology into their teaching. Kevin, Sam, and Rae spelled out what they learned from this project. Kevin said,

He [Kevin's English learner] hadn't picked up very much language that applied to his home and his own culture, which I thought was an interesting perspective, because it demonstrates for me a kind of learning that he was doing whether it was good or not, that was the learning he was doing.

Sam agreed:

I really liked having it [podcasting] on, having it recorded so I could listen to it more than once, and then being able to upload it onto Audacity and do an introduction. . . . For blogging, you'd have to go through and reformat and figure out, okay, how to get everything so it would fit on the screen, especially with the pictures, like trying to add.

He also highlighted the challenge of blogging a digital picture of a handwriting sample. Nonetheless, he concluded, "After all, the great part is that now I can use them in my teaching."

Because this project offered the ESOL teachers a chance to hear about the English learners' social and cultural backgrounds, their first-language literacy, and their second-language learning experiences, the teachers were better able to connect with the English learners in the classroom. Rae enjoyed this aspect of the experience. She said, "I thought it was a great experience. I liked discussing with her, having conversation with her [Rae's English learner] about her background and how she came to be in the United States, the different difficulties that she's having." She also highlighted specific benefits of the project, stating, "As a Native American person who hasn't had those experiences, it gave me a lot more insight into the great challenges that she had. So it helped me to be a better teacher when I have English-learner students in my class."

The ESOL teachers also mentioned that integrating podcasting and blogs into the assignments made them practice and understand not only the mechanisms of these instructional technologies, but also the English learner's sociocultural background and second-language literacy history. Rae said explicitly that she expects this research experience will help her be a better teacher because she now better understands English learners. Sam also expects that the experience of implementing podcasting and blogging would transfer to her future teaching. Kevin thinks this experience may enable teachers to transfer this knowledge into their own future practitioner research.

The ESOL teachers used the project to begin their transformation into experts capable of implementing instructional technologies in future teaching. Silvina, for instance, imagined more active ways of using podcasting for her students such as podcasting a book review, instead of turning in a written book review. It was gratifying to hear Silvina note how she could use podcasting, how she

appreciated English learners as digital natives, and how far her journey had taken her. Learning through these instructional technologies clearly enabled ESOL teachers to integrate them into their future teaching.

### **Implementing Technologies**

The ESOL teachers faced methodological difficulties in implementing these instructional technologies, such as school regulations and policies for using technologies in the classroom, poor K–12 school support systems and equipment, and English learners’ limited access to computers. They also discussed the technological difficulties that they encountered throughout the project. Silvina described her previous negative experiences with technology, justifying her initial negativity toward it. She said,

It was the day that I had to go and tape the podcast for the child who was waiting for me in the school. It was at a particular time, at a particular period of the day, and I had to be there, and the microphone wasn’t working—and use the microphone in the laptop. But the audio was not good afterward, so anyway.

The other ESOL teachers also noted that the work might demand serious time, particularly if they encountered technological problems. They felt the need for good technical support. At the same time, they were concerned about being students: Silvina and Rae had worried a great deal about their grade. Silvina said, “My major concern was that my lack of experience in technology not hinder my grade.” Ellie also pointed out how much time it took to implement this innovative teaching method: “It was time consuming. It had taken me days to record it and edit it, but it was worth it, I would say that.”

The ESOL teachers observed the wide gap between their university and their K–12 contexts. School systems were behind in implementing these technologies, and they felt schools should do something about this. Kevin, a high school teacher, was concerned about administrators’ passive attitudes and reactions to his request for innovative teaching tools and about the many regulations for integrating instructional technology into the classroom. He also mentioned how poorly equipped many K–12 schools are. Jane pointed out that some English learners did not have computers at home, such that the teacher needs to take this possibility into consideration when implementing innovative teaching methods for students. In contrast, the university has a good, well-equipped, and supported technology center. Despite the fact that the teachers had these concerns, they ultimately showed positive attitudes in implementing technologies in their projects and in planning to use innovative teaching methods. They became advocates for integrating instructional technologies into their classrooms. They each had different ideas, from audio books to iMovies to digital book talks (Table 3). Their ideas were brilliant, innovative, and practical ways to implement podcasting and

Table 3. ESOL Preservice Teachers' Emic Voices on their Future Plans

Name	Emic voice
Kevin Audio book	One of the great things that I used one time for our class was the <i>iTunes' Audiobooks</i> . The class at that time was trying to—they were doing shared reading of a novel, and instead of the teacher reading out to the class, the iTunes' Audiobooks were great, because you had a great narrator.
Ellie iMovie	But it's great to use a computer to show how to graph, the possible graphing, also creating iMovies with the different steps on to how to graph a linear equation. Yeah, it was good. It was a good experience. Well, I feel very blessed to have learned it, and I think we shall be learning it more, instructional technology, because in the 21st century that we are in right now, I think it's necessary and concluded the urgent necessity of implementing instructional technologies into assignment.
Jane Bio-poem	Something that's called a Bio-poem. It's a biography poem, the bio-poem, and it's just a great way to learn about somebody. So they first wrote a bio-poem about themselves and then they wrote a bio-poem about a famous person, and in this case it was Dr. Martin Luther King. Then, they read their bio-poem onto a recorder.
Silvina Audio book report	Multiple intelligence[s]—I think for the kids who are so hooked on technology and are so—they may not know how to do a book report, but they certainly know how to do podcast. For language arts, it's a wonderful thing to have access to technology that would make connections between text and real life—
Sam Digital book talk	Podcasts, digital book talks, they get more involved in the text. They'll really analyze it if they're about to go in and create a project that they know people are going to listen to and that they can use some creativity with . . . "Okay, this is my book report." They can create a digital book talk, they can create a podcast, they can create a blog . . . the kids will get into it, they want to pull out all the aspects of the text.
Rae Journaling and blogging for subject matter	With the journaling and the blogging, my vision would be using it for something similar to like what I said with a Literature group or even discussion of Social Studies or a Science topic so that the children can then post their ideas for information that they found, and then other children could draw from their information and more of information-sharing rather than just expressing your own ideas.

blogging tools in their own teaching of various subjects. The ESOL teachers were excited to share these innovative new ideas with the instructor and each other.

These innovative ideas came from the ESOL teachers, unsolicited by the instructor. They developed these techniques on their own and willingly shared them. As noted in the table, each ESOL teacher developed a future plan. They acknowledged English learners' capacities for learning through instructional technologies and the advantage of integrating these into teaching various subjects. They envisioned a classroom enhanced by these technologies.

## DISCUSSION AND IMPLICATIONS FOR TEACHERS

The results from this study provide insight into how ESOL teachers implement new technologies. Based on the results, we discuss three main topics: (a) integrating instructional innovation into an assignment, (b) ESOL teachers' reflections, and (c) ESOL teachers' professional identities.

### Integrating Instructional Innovation into an Assignment

There were six ESOL teachers in this study. Two were technological novices (Silvina and Rae), calling themselves "technology immigrants." Three others were routine users (Sam, Jane, and Ellie) poised to be integrators. Kevin, already an integrator, reached the renewal level in technology as described in the LoU of Loucks et al. (1998). They all demonstrated at least some initial reservations about this project, but grew excited about it when they learned how to use the tools, and they all envisioned significant implications for their future teaching. The individual's perceptions of ease of use and usefulness influence attitudes toward learning (Lau & Woods, 2008). Figure 2 represents the pedagogical implications of how the ESOL teachers at various levels of technology adoption used instructional technology as a part of their core assignments.

The framework in Figure 2 shows how to incorporate instructional technology into a core task. These ESOL teachers were at various levels in using instructional innovations. At Plane 1 (Evaluation of ESOL teachers' levels of use), the instructor evaluates ESOL teachers' levels of technology skills based on self-reports and observable behavior. In this study ESOL teachers were labeled Level 1 (Silvina and Rae), Levels 5 (Sam, Ellie, and Jane), and Level 7 (Kevin). At Plane 2 (Integration of the task), the instructor used the core task, in this study the English-learner case study, as an opportunity to practice podcasting and blogging. At Plane 3 (Dialogical implementation of instructional technologies), the instructor promoted dialogical aspects of podcasting and blogging by modeling, questioning, and encouraging conferencing among the students

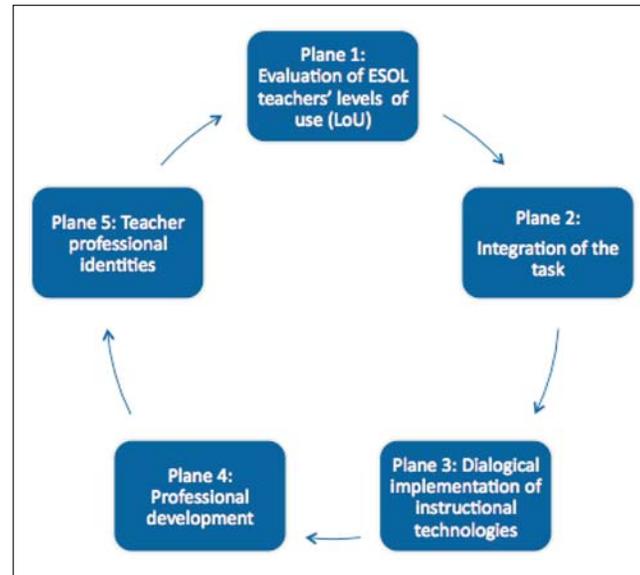


Figure 2. Framework for the dialogic practice of implementing instructional technology into a core assignment.

themselves. Through these dialogic practices, students identified cognitive and affective effects the technologies might have on English learners and ways to increasing the impact on English learners. The ESOL teachers increased their LoU from Level 1 to 5 (Silvina and Rae's case), from Level 5 to Level 7 (Sam, Jane, and Ellie's case), and from Level 7 to Level 8 (Kevin's case). At plane 4 (Professional development), ESOL teachers developed their professional skills by practicing and integrating these instructional innovations. At Plane 5 (Teacher professional identities), ESOL teachers developed their identities as professional teachers who were competent in technology use for their own and for instructional purposes.

Each of the ESOL teachers generated several ways of using these technologies. As active learners, their identities shifted from that of learner to that of future teacher (Gee, 2008). They also displayed positive attitudes toward learning and using technology as they did their projects. This motivation was key, permitting the ESOL teachers at various levels of expertise to grow toward becoming integrators (Level 7), and eventually reaching the level of renewal (Level 8). Integrating more instructional technologies into the assignments and coursework provides them with the means to enhance their teaching (Hew, 2009).

By using these instructional technologies in a core assignment, the ESOL teachers were able to transform themselves into more capable future teachers (Luehmann, 2008; Schepens, Aelterman, & Vlerick, 2009). For instance, by

uploading their case-study podcasts and blogs to the designated sites, each of the teachers reviewed additional case studies. Reviewing the various case studies of English learners which were posted by their classmates offered them insight into both the social and cultural backgrounds of the English learners and their second-language literacy processes. Especially for English learners, these technologies offer multiple access points to materials and the benefits of multiple revisions (Davis & McGrail, 2009), which have a positive impact on their learning.

### **ESOL Teachers' Reflections**

These six ESOL teachers had productive learning experiences as they incorporated podcasting and blogging into a core task. When the semester began, four of them—Kevin, Sam, Jane, and Ellie—indicated that they were fluent in using instructional technologies. They were excited about a new opportunity to use those technologies. They also anticipated positive outcomes from their English-learner case studies. Even in the face of potentially challenging instructional technologies, these four ESOL teachers' attitudes were very constructive. In contrast, the other two ESOL teacher candidates, Silvina and Rae, initially displayed serious anxiety about the assignment. Through dialogue with the learners, the instructor and their peers, however, these ESOL teachers used the technologies and ultimately became strong advocates for them. Silvina's case illustrated how a novice teacher could be transformed into a capable and competent user of technology with her future students (Luehmann, 2008; Schepens et al., 2009). All the ESOL teachers recognized the importance of learning these instructional tools and incorporating them into their teaching and learning.

It became clear that technical support and the implementation of new technologies into school systems are extremely important in both higher education and K–12 contexts. In K–12, administrators and educators need to be more proactive in creating new innovative environments. School systems are too often poorly equipped with instructional technologies, and some students may lack updated computers at home and thus need access to computers at school.

In higher education, technical support systems must be scaled up to incorporate new instructional technologies. Podcasting and blogging are effective, readily available tools for future generations (Kao & Tsai, 2009). Our study suggests that providing opportunities for the integration of these tools into projects can arouse some level of stress and anxiety in some ESOL teachers, but that even novices can become eager to learn and use these tools in their teaching. The participants became very positive about learning new technologies in their professional development as well (cf. also Luehmann, 2008). As ESOL teachers master new technologies, they become ready to use them with their students. The results suggest that teaching with new technologies will encourage ESOL teachers to seek out and use more online resources. Now they are better prepared to teach digital-native English learners for the future.

### ESOL Teachers' Professional Identities

These ESOL teachers enhanced their professional capacities by accomplishing their tasks (the English-learner case study), increasing their capacity to support English learners, and confirming their commitment to teaching (Lamote & Engels, 2010). They listened to the English learners' voices and needs, learned about their cultural and societal backgrounds and their home literacy practices. This project offered us all the opportunity to learn from English learners. As Luehmann (2008) points out, blogs offer the potential to support professional learning and the development of professional identity. This study shows that practicing podcasting and blogging as a part of an assignment advances ESOL teachers' professional identities as competent technology users and more effective teachers. Cohen (2008) has also shown that teachers who participate in projects like this one strategically position themselves with peers and actively engage in the dialogical process, negotiating and sharing their professional roles as knowledge producers. Through such dialogic practices as implementing instructional technologies and working with English learners, these ESOL teachers developed their professional identities as they did their projects and developed skills to enhance their future teaching. They became experts at using innovative teaching tools such as podcasting and blogging and shared how they wanted to implement them in that future teaching. Even though they began at different levels of instructional-technology proficiency, they all developed their professional identities and practiced their *ownership of learning*, which Milner-Bolotin (2001) describes as three interacting components: finding personal value, feeling in control, and taking responsibility. In these three ways, the ESOL teachers' professional identities evolved through the project.

These ESOL teachers learned that familiarity with instructional technologies constitutes an important part of most digital-native English learners' strengths. As described above, the six ESOL teachers now each have fully developed plans for using technology with their own students. As Dlott (2007) showed, elementary students can create podcasts, thus extending their lived experiences from their own world to the classroom. The ESOL teachers dialogued with the English learners, with their own tasks, and with their practice of instructional technologies. To minimize anxiety, a project like this one facilitates such success by creating simple procedures for educators who want to implement instructional technology (Kim, 2009b).

### CONCLUSION

Incorporating technology into classroom assignments was enjoyable, effective, and beneficial for everyone involved. Implementing podcasting and blogging into a core assignment offered participants an effective way to learn instructional technology and to advance to the next level of implementation. This study shows

how we as teacher educators can teach instructional technology to ESOL teachers, as well as build bridges to younger people who are digital citizens (Prensky, 2011) through podcasting and blogging. The results of the study show the pedagogic benefits of these technologies (see Figure 1), demonstrating how to integrate instructional technology into assignments and also how to engage ESOL teachers in implementing teaching in a more exciting way. Figure 1 shows how we can utilize dialogical practice in implementing instructional technology in a core task and help teachers plan to integrate instructional technologies in their own teaching. As Sam and Ellie mentioned earlier, using the various instructional technologies provides various means for reaching English learners with a range of talents. Implementing these technologies may well motivate digital-native English learners and enhance their strengths. This offers a partnership between the English learner and the teacher and empowers both (Freire, 2000). The results of this study can guide effective implementation of podcasts and blogs, as well as provoke further research into various instructional technologies. As we employ innovative instructional technology, we teach a new generation of students without the limitations of space and time, building on digital natives' strengths in an ever-changing global world.

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