3-13-2017

Twenty Years of Technology Integration and Foreign Language Teaching: A Phenomenological Reflective Interview Study

Nilsa Becho Sullivan
Texas A & M University, Corpus Christi, nbecho47@hotmail.com

Kakali Bhattacharya
Kansas State University, kakalibh@ksu.edu

Follow this and additional works at: https://nsuworks.nova.edu/tqr

Part of the Bilingual, Multilingual, and Multicultural Education Commons, Curriculum and Instruction Commons, Other Education Commons, Quantitative, Qualitative, Comparative, and Historical Methodologies Commons, and the Social Statistics Commons

Twenty Years of Technology Integration and Foreign Language Teaching: A Phenomenological Reflective Interview Study

Abstract

The evolution of the use of technology in the foreign language classroom has proven to be a challenge. In this paper, we highlight a study whose purpose is to understand how one retired foreign language educator reflected on the ways in which she integrated different modes of technology in her classroom. In this interview study, the participant discussed how technology has evolved in the span of her twenty-year career as a foreign language educator and how she integrated various technologies as they evolved in her classroom. The researchers employed a modified van Kaam method as defined by Moustakas (1994) to analyze the data collected through phenomenological interviews. The results revealed a complex negotiation process, a thoughtful reflection of advantages and disadvantages of technology integration in foreign language classrooms, and the value of understanding the cyclical nature of technology integration in education.

Keywords

Foreign Language, Technology, Technology Integration, Phenomenology

Twenty Years of Technology Integration and Foreign Language Teaching: A Phenomenological Reflective Interview Study

Nilsa Becho Sullivan
Texas A & M University – Corpus Christi, Texas, USA

Kakali Bhattacharya
Kansas State University, Manhattan, Kansas, USA

The evolution of the use of technology in the foreign language classroom has proven to be a challenge. In this paper, we highlight a study whose purpose is to understand how one retired foreign language educator reflected on the ways in which she integrated different modes of technology in her classroom. In this interview study, the participant discussed how technology has evolved in the span of her twenty-year career as a foreign language educator and how she integrated various technologies as they evolved in her classroom. The researchers employed a modified van Kaam method as defined by Moustakas (1994) to analyze the data collected through phenomenological interviews. The results revealed a complex negotiation process, a thoughtful reflection of advantages and disadvantages of technology integration in foreign language classrooms, and the value of understanding the cyclical nature of technology integration in education. Keywords: Foreign Language, Technology, Technology Integration, Phenomenology

Often when one looks back at one's career, the perspectives and insights that emerge are different from when one must work in the trenches, within the daily drudgery of the details of lived realities. In this study, we work with a retired foreign language educator, Sama, who has been a foreign language educator in the K-12 education system in South Texas for the last twenty years of her career. During these years Sama experienced administrative mandates to integrate technology in the classrooms and the pressure to do so exponentially increased and did not stop at the point of Sama's retirement. In this paper, we[1] explore the ways Sama negotiated the mandates of new technology integration and how such negotiations influenced her emotions and the way she managed her daily teaching routine using documents, informal conversations, open-ended interviews, and photo-elicitations.

This paper is grounded in Vygotsky's (1978) social constructivist theory of the Zone of Proximal Development (ZPD) not only for the purpose of looking at learning processes, but also for understanding how educators can trace these learning processes to inform their own teaching approaches. In discussing ZPD, Vygotsky described one's learning process being reflected by what one can accomplish individually versus what one can do with the assistance of others who are more skilled than the learner. By working with others who are more skilled than one individual learner, the individual learner can make a choice to model his/her own approaches to a task based on the expert performer. This form of modeling can lead to a new stage of cognitive development. Specifically, Vygotsky stated, "The actual developmental

---

[1] The two authors played different roles in shaping this paper. The first author is the primary researcher and the second author played the role of a methodologist and a subject matter expert. At times in the paper if there are first person narratives, it refers to the experience of the first author. Both authors actively collaborated on all sections of this paper.

level characterizes mental development retrospectively, while the zone of proximal development characterizes mental development prospectively" (Vygotsky, 1978, p. 87). These concepts of ZPD support that learning is a social process through interactions with peers and adults who are better skilled and that such learning experiences can be created by those educators who are aligned with the ways cognitive development occurs as described by Vygotsky. Through such cognitive development one can expect students to become better problem solvers and critical thinkers.

In the context of this study, Sama taught students a second language, which was driven heavily through various mandates to integrate technology, especially in the form of software and programs used to learn a language. Someone such as Sama, who has been teaching for more than two decades, then, were compelled to modify her teaching approaches with the call for integrating these new technologies in her classes. These teaching approaches, when guided by the assumptions of social learning, create a learning environment where the teacher has to be seen both as the expert in navigating the technology and the subject matter. Depending on the availability of technology and pedagogy used in teaching, technology-integrated instruction could be used to provide opportunities for students to learn about information retrieval and dissemination, create collaborative products, all in alignment with the tenets of ZPD.

However, such creation of a learning environment comes with a learning curve for educators to master, both in the area of learning the technology and in the area of exploring and aligning pedagogies that are appropriate for meaningful learning experiences. Thus, even if the expansion of technology holds the promise of benefits for students, due to the plethora of softwares and programs used to teach students a second language, it seems that teachers are having to learn a new language themselves. In the state of Texas, foreign language teachers are required to incorporate technology into their teaching and planning as part of their daily work as mandated by the Texas Education Agency (TEA) and the Texas Essential Knowledge and Skills (TEKS) at all levels of progress. Indeed, Warschauer and Healey (1998) recognized early on such calls for technology integration compels teachers to play dual roles in a classroom, as facilitators and direct information givers (pp. 57-71). These dual roles for the teachers are further grounded in the assumption that it is the teachers who are expected to demonstrate ongoing adaptability to new technologies as the call for technology integration intensifies. For example, in a study conducted by Kramsch and Andersen (1999), where foreign language was taught via various types of multimedia, teachers were exposed to numerous technologies for teaching purposes. These technologies included reel-to-reel films, televisions connected to VCRs and VHS cassette tapes, cassettes and stereos, language labs with audiotapes, DVD players and DVDs, computers and appropriate language learning softwares. It was only when teachers adapted to learning the role of these various types of technologies and the options for learning integrating such technologies would create, that they were able to create appropriate cultural contexts that students found relevant for their learning. This study particularly underscored the role of an evolving technology culture intersecting with the call for shifting instructional practices where traditional and innovative approaches are blended to teach students a foreign language. Given the continued call for technology integration and the importance of learning a foreign language, it becomes critical to focus on how teachers navigate their experiences of teaching while becoming learners themselves in a teaching culture where adaptability has become the golden currency.

Thus, the purpose of this study was to understand how one retired foreign language educator reflected on the ways in which she integrated different modes of technology in her classroom. Two research questions guiding this study were:

1. How does the participant describe evolution of technology in foreign language teaching?

2. How does the participant describe employing the different modes of technology in her classroom?

Background and Context

Davies (2011) suggested that, "we are living in a time when people have unprecedented access to information and knowledge" (p. 14). The technology revolution has been a driving force in the evolution of the foreign language classroom. In the 1980s, integration of technology in the foreign language classroom consisted of using film, radio, television, portable or fixed language labs with audio and videotapes, computers, and interactive video (Cunningham, 1998). Software known as Computer-Assisted Language Learning (CALL) was also developed to help students become proficient in a foreign language, but it was limited to drill-and-practice exercises (Iandoli, 1990). Today, in addition to the Internet, teachers integrate more multimedia including various forms of distance learning, computer applications and communications technologies such as electronic mail to help students familiarize themselves with the foreign language (Kern, 2006; Le Loup & Ponterio, 2003; Liu, Moore, Graham, & Lee, 2002).

The technology revolution is not going away and subsequently it will continue to influence how we live, work, learn, and play (Kern, 2006). Kim and Rissel (2008) explored the ways in which the beliefs of three different language instructors' "language teaching and learning affected their use of computers in teaching in a postsecondary context" (p. 61). The findings of the study showed that an instructor's beliefs and approach to language teaching can affect how frequently that instructor uses a computer in their classroom (Kim & Rissel, 2008). Further, Davies (2011) asserted that integrating technology would allow teachers to tailor curriculum to the individual needs of each student while working in a mode that is familiar and comfortable for them. We argue that teachers cannot integrate the appropriate technologies in their classrooms unless they are completely comfortable using them because they received the proper training to incorporate the technologies to the fullest potential and for all of their probable uses.

Other scholars discussed the need for foreign language teachers to be prepared to integrate CALL in their classrooms starting at the undergraduate level because many new teachers coming out of their respective universities are reporting that they are unprepared to incorporate technology into their planning and subsequent delivery of lessons to students (Hubbard, 2008; Kessler, 2007; Warschauer & Healey, 1998). Moreover, Kessler (2007) reported that graduates of programs with insufficient technological preparation rely on their own "informal sources and personal experience rather than thorough formalized preparation" (p. 173). First year teachers find themselves trying to manage classrooms, different ability levels, and technology that they are sometimes unfamiliar with. This unfamiliarity can stem from their university training having lacked the technologies needed to learn from or having contemporary or archaic versions of the programs on which to practice.

Moore (2006) conveyed the importance of employing technology to teach culture related to the foreign language, in this case Spanish. Moore (2006) concluded from a study that he conducted that teachers prefer to focus on teaching grammar and vocabulary, and on developing reading and writing skills was due to the standardized tests' focus on those aspects of language. Additionally, Warschauer and Meskill (2000) determined that computer technologies are not a cure-all for learning a new language. Despite having many different technologies readily available, using technology commands significant dedication of time and money, with no guarantee of results (Warschauer & Meskill, 2000). Some teachers and administrators are not fully convinced that incorporating technology helps students acquire a second language as evidenced by Warschauer and Meskill (2000) and Lam (2000). However

important as all of this information is, these studies and commentaries do not focus specifically on the educator who has had to implement the technologies in his or her classroom.

However, in one relevant study Lam discussed "the perceived 'technophobia' of teachers" (Lam, 2000, p. 389). The study was conducted in order "to determine whether fear is the underlying factor behind their decisions regarding technology" (Lam, 2000, p. 389). Lam suggested that teachers are not really fearful or anxious about implementing technology, but that schools and institutions of higher education are exceedingly enthusiastic in their haste to purchase and put into action the most recent technological advances, often without acknowledging the needs of the teachers and students who will be applying it daily in the classroom (Lam, 2000). We would add that the hesitance of teachers in incorporating technology, despite the proof that it is beneficial, could come from a lack of training. Another important conclusion of the study was that some teachers choose not to use technology that is provided to them by schools, not out to fear, but rather because "they are not convinced of its usefulness" for the students who will be using it (Lam, 2000, p. 413). Warschauer and Meskill (2000) argue that even some school administrators are not fully convinced of the effectiveness of technology as a way of promoting language learning.

On the other hand, we found it helpful that Salaberry (2001) listed the technologies that have impacted the teaching of foreign languages and the instructional movements that resulted as a consequence of the development of new technologies. These technologies include audiovisual media, language laboratories, computer-assisted instruction, computer-assisted language learning, and advanced multimedia platforms (Salaberry, 2001, pp. 40-42, 44-46). Thus, in this study, by exploring the perceptions of someone with more than twenty or more years of experience in teaching foreign languages have implemented new technologies in their classroom can add to the conversation at the intersection of foreign language learning and technology integration.

Epistemic and Methodological Framework

We argue that in order to effectively understand one's experience in an in-depth manner, one needs to explore how one's knowledge of understanding truth and reality are situated and how such understanding informs the methodology of inquiry. Therefore, in this study we situate ourselves in phenomenology. Giorgi, Fischer, and Von Eckartsberg (1971) stated that choosing a research method must come from trying to be responsive to the phenomenon in question. In this study, the phenomenon in question is navigating through the call for technology-integration while teaching a foreign language. Moreover, Van Manen (1990) defined phenomenology as a methodical effort to expose and explain the formations of a lived experience. Here, we expose and explain the formations of Sama's lived experiences as a foreign language teacher while attempting to adapt to the evolving calls for technology integration.

Phenomenology is taken up differently by various disciplines in academia, including social sciences, sociology, nursing and health sciences, and education (Creswell, 2013). Three of the key scholars who informed information presented in this paper are George Hegel, Edmund Husserl and Clark Moustakas. For the purposes of this study, the key ideas of Hegel, Husserl, and Moustakas will be examined in relation to lived experiences, phenomena, and universal essence and how these three concepts relate to each other. While Husserl is considered the father of phenomenology, Hegel (1910) used the term phenomenology to depict the coming to complete self-awareness of the mind or the spirit, a process completed in consecutive stages. Unfortunately, despite his philosophical beliefs in phenomenology, Hegel (1910) did not allow for the individual as an inimitable, enthusiastic, choosing, conscious person who would be the participant. Husserl (1999) challenged the concepts developed in

phenomenology by questioning the assumptions of a person towards the world. In questioning why a person believes what they do and how this belief system affects research is the foundation for phenomenological reduction, epoché, and bracketing (Husserl, 1999). Therefore, lived experiences, either positive or negative, directly affect the course of a person's life. These lived experiences are what the researcher must learn to discern and discover the essence of such experiences while conducting the interviews.

The description of these lived experiences determines the phenomenon that leads to observable chunks of information or circumstances that in turn indicate any universal essences among the participants. The phenomenon that drives these lived experiences can be simple or complex. Moustakas (1994) offered various examples of phenomenon that might change a person because they have lived a particular experience. These experiences can include physical and/or emotional phenomena that might change a person (Moustakas, 1994). The universal essences are the "human experiences concerning a phenomena" (Creswell, 2003, p. 15) as described by the participants in a study. The essence is described as the "particular, everyday experiences in people's lives" (deMarrais & Lapan, 2004, p. 57).

Situating this study in phenomenology allows us to explore the participant's experiences in an in-depth manner as the participant reflects on the details of her experiences and how she has made meaning of those experiences. This framework has allowed us to become engaged "with phenomena in our world and make sense of them directly and immediately," upon being asked questions that will elicit responses that require deep reflection on the past (Crotty, 1998, p. 79). While there are many branches of phenomenology, this study was not situated in a specific branch. Instead, the authors were inspired by the works of Merleau-Ponty, Spiegelberg, and Moustakas. For example, Spigelberg (1982) states that phenomenology is a "return to the unadulterared phenomena" and an "unusually obstinate attempt to look at the phenomena and to remain faithful to them before even thinking of them" (pp. 680, 717). In this study, we looked at technology evolution and its integration in education as the unadulterated phenomena. While we would not be able to claim that we stayed faithful to the phenomena without thinking about it beforehand, we attempted to remain responsive to the ways in which the understanding of the phenomena unfolded in the study and continuously interrogating the influences that allowed us to make sense of the phenomena. Additionally, Merleau-Ponty (1962) reminds us that "in order to see the world and grasp it as paradoxical, we must break with our familiar acceptance of it" (p. 62). For us, we continuously interrogated various paradoxical moments in the study with guiding questions such as "What else is going on" so we did not stay with the familiar perspective or to the perspective we would most naturally be drawn based on our subjectivities.

Research Methodology

This inquiry is designed in the format of an interview study. The study was conducted over a period of four months with a retired research participant, Sama, who has more than 20 years of experience in the foreign language classroom. Conducting a thorough phenomenological study will require that the primary researcher (first author) understand her feelings about the phenomenon, but use only the Sama's experiences to tell the story of her encounters with the phenomenon of technology. In this section, we describe in details how the research was designed, participant selection, data collection and analysis processes.

There are several reasons for selecting one participant for an interview study. Broadly speaking, qualitative researchers do not make the argument about generalizing findings from their studies as quantitative researchers do, because they do not set up their studies to be generalizable. Instead, qualitative researchers attempt to share an in-depth rich, descriptive, analytical narratives and insights through understanding, interrogating, or deconstructing

certain social structures, experiences, documents, phenomena, etc. (Lather, 2006). Therefore, sample selection for qualitative research is driven by cultivating conditions that allow for fulfilling the purpose of study to the best of the ability of the researcher, which includes her time and resources. A sample size of one is quite common in several qualitative studies (See Gillen & Bhattacharya, 2013). Additionally, qualitative researchers could engage in sample selection that reflects a combination of purposeful, criterion-based sampling (Bhattacharya, 2009). In this study, the criteria for the selection of the participants was an educator who had the rare experience of bearing witness to the technology explosion for twenty years (from 1991 onwards) and who has experienced the various challenges of negotiating the technology integration mandates that have been placed on K-12 educators in the U.S. This kind of information-rich participant is rare to discover and what is more critical here that the social history of education that this participant can document is not well documented elsewhere from the unique perspective one could have that would allow an in-depth understanding of the experiencing of a phenomenon. Thus, the participant selected what at once both purposeful and through criterion-based sampling procedures. This study surely could have been enhanced by more participants for further in-depth perspectives, and perhaps providing opportunities to compare and contrast perspectives. However, as researchers we decided that the participant was so information-rich, that it would have been unrealistic to be able to complete the study in any reasonable manner and generate in-depth analytic insights based on the availability resources and our access to them.

Design of the Study

This study was conducted with institutional approval for human subjects research from the Texas A & M University, Corpus Christi. During the four-months of the research study with Sama, four in-depth semi-structured open-ended interviews were collected yielding over 4.5 hours of interview data. Sama, is a 65-year-old Hispanic woman. She has more than 20-years experience teaching Spanish. She has a double major in Spanish and Government from the University of Texas-Austin and a Master's Degree in Spanish Literature from Texas A&M University - Kingsville. Sama is currently retired from the public school system since 2011 but continues to teach Spanish at a private school.

Sama also participated in two photo-elicited interview sessions described later in this paper. In addition, Sama participated in e-mail conversations due to scheduling conflicts, and offered detailed documents of her lesson plans relevant to this study. Adding to these data sources, the primary researcher maintained a researcher journal, conducted peer debriefings for verification of her processes and findings, and conducted member check interviews with Sama. This process contributed to over 400 pages of raw data collected for analysis purposes.

Subjectivities and Situating the Researcher and the Researcher

It is our position that the line between the researcher and the researched is often blurred. In that spirit, it is important to explore the values, beliefs, assumptions, and subject positions that are held by the researchers in the context of this study to situate the study with intellectual integrity. To that end, the following narratives are of the first and the second author respectively.

Nilsa's subjectivities. In looking at the technologies that I had available in my classroom as I planned for the second half of the 2012-2013 school year (an overhead projector, a computer and printer, and a boom box, I stopped and considered my own experiences with the phenomenon of technology. My experiences included: learning how to work with each one over time, reconfiguring a lesson if the technology is not cooperating, or learning how to make

do without one and finding another manner to teach the content. It is in considering what I have or do not have, that this study came to fruition. In light of my own experiences, my goal came to be to understand the experiences of Sama, a retired foreign language educator, and how she adapted to and then implemented new technologies in her classroom during the course of her career.

This study matters to me because as a foreign language teacher, I must integrate technology in my teaching as much as I can. The only trouble with integrating technology at the school where I currently teach is that there is not enough technology for everyone in the school. In order to use one of only three projectors and laptop carts, I must reserve one in the library at least a week in advance. Checking out a television and DVD player combination cart is just as much work. I have to reserve it with at least one week's notice, check it out of the library, and wheel it to my portable building on the outskirts of the main building. There is also mandatory paperwork to be filled out for showing a video in class as it must have some educational purpose to be shown in the classroom. Smart Boards are available in my school, but they are permanently installed only in the classrooms of all science and mathematics teachers as they are the priority due to state-mandated assessment accountability. My foreign language department does not receive the same funds as core class (Social Studies, English, Mathematics, and Science) departments do to purchase technological advances as they come out.

Towards the end of the 2012-2013 school year, I received a portable projector for instructional purposes that I did not use at all due to lack of wires for connectivity. I do have a small boom box in my classroom that was provided by my department on which to play outdated compact discs that accompany the adopted textbook. I also received a large stereo towards the end of the year that I started using when reviewing for the final exam despite how cumbersome it is to move around the classroom. I only have my teacher computer in my classroom that I gladly share with students as needed for them to complete assignments or to look up information pertaining to my class or to another class.

Kakali's subjectivities. I have a background in instructional design and development. Over the years, I have seen that educators, administrators, and politicians have jumped on the bandwagon of technology and often any new technology has been presented as a panacea for all ills in education. While such a perspective is slightly hyperbolic, I have seen the shifts in education through web-based learning, online education, and now mobile technology. Technology does not create better learners and teachers. Pedagogy and good training in various teacher education programs do. I am passionate about students who want to explore this issue of technology-integration and negotiating pedagogy in thoughtful, in-depth manner.

Data Management and Analysis

Given that this study is informed by phenomenology, data analysis of this study followed a modified van Kaam method as defined as Moustakas (1994). Giorgi (1975) suggested that the researcher must saturate him/herself with the transcripts collected during the interviews after bracketing and prior to beginning with any data analysis. Saturation in the data comes from listening to the audio recordings of the interviews and reading through the transcripts repeatedly as this provides a perspective for the materialization of codes, categories, and eventually themes (Giorgi, 1975). Moustakas (1994) provided eight essential steps for conducting a modified van Kaam method of data analysis. Each step must be conducted thoroughly on all of the data for each of the participants. The steps are: (1) horizonalization [the listing of every expression relevant to the experience from the transcripts as a code], (2) reduction and elimination to determine the invariant constituents [taking every expression or code from the step of horizonalization and testing the expression to determine if it necessary to

include it and if it is possible to abstract and label it thereby ridding the study of unnecessary codes], (3) clustering and thematizing the invariant constituents [grouping similar codes into themes], (4) final identification of the invariant constituents and themes by the application of validation [testing themes against the transcript to see if they are explicitly expression or compatible to what was mentioned and then eliminating those that remain], (5) constructing an individual textural description [using the validated codes and categories to construct the experiences of the participant using verbatim examples from the transcriptions], (6) constructing an individual structural description [using the individual textural description and imaginative variation to construct a description of the structure of the phenomenon], (7) constructing a textural-structural description [creating a description based on the transcriptions and the structure of the phenomenon that involves the codes and categories], and (8) finally developing a composite description of the meanings and essences representative of all the research participants (Moustakas, 1994, pp. 121-122). Since this study involved only one participant, the last step outlining the development of composite narrative was modified because the narrative developed was composite in the sense it represented the essence of the participant's experiences informed by data analysis across and within all data sources. Therefore, a traditional composite narrative detailing the essence of all research participants is understandably absent in this study.

Data Reduction and Analysis

The process of data reduction was first informed with making the researchers familiar with the data. Nilsa in periodic consultation with Kakali created the following narrative of her data reduction and analysis process.

Nilsa's Narrative

We used Moustaka's (1994) eight steps and each step was conducted thoroughly on all of the data for the participant. The following sections detail the process.

Horizonalization. Horizonalization is taking every statement or horizon from each of the interviews and giving them equal value as it pertains to the topic or to the research questions (Moustakas, 1994, p. 118). In this phase of the research, I reviewed the interviews and the photo-elicitation session, and studied the documents provided by the research participant. I regarded each statement as having equal value and "list[ed] every expression relevant to the experience" because they stand out amongst all of the other statements (Moustakas, 1994, pp. 120, 128). To complete the horizonalization process, I combined all of the interview transcriptions onto a master list and then highlighted the information that was relevant to the experience. I conducted horizonalization by going through each of the interviews and highlighting in yellow the information that was relevant to the experiences of the participant. Below is an example of horizonalization taken directly from my own notes:

Researcher	Thanks for that information. I am going to ask you several questions regarding your experiences with technology in your own classroom. First of all, can you describe a typical day in teaching when you integrate technology?
Sama	Integration of technology at this time consists of using a DVD program that students watch and listen to in order to complete written exercises based on the presentation. At other times students listen to recordings to

	<mark>obtain information</mark> and <mark>demonstrate comprehension</mark> of the spoken language.
Researcher	Tell me about the first time you integrated any kind of technology in your classroom.
Sama	In the <mark>late 70s</mark>, I had a <mark>classroom that was equipped with headphones</mark> over each student's desk. <mark>Students could listen to recorded material and answer</mark>. The <mark>teacher could also communicate with each student individually</mark>.
Researcher	Can you give me examples of the different kinds of technology you have used in your classroom?
Sama	I have used <mark>headphones</mark>, <mark>portable language labs</mark>, <mark>cassettes</mark>, <mark>DVDs</mark>, <mark>CDs</mark>, <mark>tape recorders</mark>, and <mark>Smart Boards</mark>.

Figure 1. Sample of horizonalization taken from the notes of the researcher based on the interviews conducted with the research participant.

I saved this highlighted horizonalization document as its own file and then copied and pasted it into a new document to ready for the next step of reduction and elimination.

Reduction and elimination. After listing each statement relevant to the phenomena, I tested each expression to begin narrowing the list of codes into categories against two requirements. Each expression must: (1) "contain a moment of the experience that is a necessary and sufficient constituent for understanding it" and (2) it must be "possible to abstract and label it" (Moustakas, 1994, p. 121). If the statements met both requirements, it was considered a theme of the study. These categories are known as "invariant constituents" (Moustakas, 1994, p. 121). If the statements did not meet the requirements, then they were eliminated altogether or reworded in more exact, expressive terms (Moustakas, 1994). Moustakas (1994) recommended eliminating expressions that are "overlapping, repetitive, and vague" (p. 121). Reduction and elimination in data analysis took the format of removing all of the information that was not highlighted into a new document and saving that to look at it at again in case information was missed in the initial horizonalization phase. An example is included below.

Researcher	Um, what other technologies should our schools be incorporating? Other than…I know that you're fortunate enough to have a Smart Board in your classroom. Um, do you, can you think of anything else?
Sama	I think the because I think or a for our students so that. Uh, we can also and the as well.

Figure 2. Sample of reduction and elimination taken from the notes of the researcher based on the interviews conducted with the research participant.

Each of the remaining highlighted statements was then tested against the overarching topic of technology, leaving the possibility for the codes to be further labeled.

Clustering and thematizing the invariant constituents. After establishing a list of categories known as invariant constituents, the next step is to combine similar categories into clusters under thematic labels (Moustakas, 1994). These clusters become the "core themes of the experiences" (Moustakas, 1994, p. 121). I took the list of invariant constituents, or codes,

and began to group them together by similar categories. Because the focus of this study is technology, I asked Sama to list all of the technologies she has employed in her classroom or would like to employ in the future. She mentioned 14 different types of technologies as our interviews progressed. I lumped them together into one category known as types of technologies. An example of clustering is:

Types of technologies
classroom that was equipped with headphones
headphones
cassettes
using a DVD program
DVDs
CDs
Reel-to-reel
Smart Boards
tape recorders
portable language labs
boombox
computer
Internet
iPad

Figure 3. Sample of clustering and thematizing the invariant constituents taken from the notes of the researcher based on the interviews conducted with the research participant.

Final identification of the invariant constituents and themes by application: Validation. The next step is to test each of the invariant constituents (categories) and core themes of the study against the data gathered from each of the original research participants (Moustakas, 1994). To be used in the study, the categories and themes must be "expressed explicitly in the complete transcription" or compatible to what was "expressed explicitly" for each participant (Moustakas, 1994, p. 121). Moustakas (1994) indicated that if the categories and themes are not "expressed explicitly" or "compatible" to each research participant, it is not relevant and should therefore be deleted (p. 121). The previous codes mentioned fall under the overarching theme of the different technologies that Sama, the participant, mentions using in her classroom or as wanting to employ in the future. Each technology was directly stated in the transcript as evidenced below:

Researcher:	Can you give me examples of the different kinds of technology you have used in your classroom?
Sama:	I have used headphones, portable language labs, cassettes, DVDs, CDs, tape recorders, and Smart Boards.

Figure 4. Sample of final identification of the invariant constituents and themes by application of validation. Here the researcher has verified that each cluster fits the theme. The sample is taken from the notes of the researcher based on the interviews conducted with the research participant.

The previous steps have led to the development of three major themes: technology and the different types available for teachers to use, technology integration by the students and the teacher, and looking to the future.

Individual textural description. Having established the codes and verified the categories and themes against the data from each participant, the next step is to create an individual textural description of the phenomena for each research participant (Moustakas, 1994). An individual textural description must be vivid and include data taken directly from the transcriptions of the interviews (Moustakas, 1994). An example of this process is demonstrated below.

> From incorporating the use of the Smart Board to project movies, images, or videos from her computer, a DVD, or the Internet, or using the boom box in the corner of her classroom to play music or the compact discs that accompany the textbook, I asked Sama to describe how she integrated technology in her classroom. Technology integration in her classroom (in her own words were) "consists of using a DVD program that students watch and listen to in order to complete written exercises based on the presentation. At other times students listen to recordings to obtain information and demonstrate comprehension of the spoken language."

Individual structural description. After establishing the individual textural descriptions for each participant, the researcher begins fabricating an individual structural description for each person (Moustakas, 1994). The individual structural description "provides a vivid account of the underlying dynamics of the experience" and how the experience makes the participants feel (Moustakas, 1994, p. 135). Some "imaginative variation" must be used to construct the individual structural description (Moustakas, 1994, p. 121). Imaginative variation is defined as "varying elements of an experience imaginatively" so that "the essences of the experience remain" (Turley, King, & Butt, 2011, p. 129). In this study, imaginative variation looked like:

> Sama, the research participant, defined technology as having information at her fingertips and being able to communicate very quickly with anybody, anywhere in the world. As with any new technology, Sama stated that it was the duty of the teacher to become familiarized with how to use operate the machinery in class. In her 20 years of experience in the classroom, she has incorporated "reel-to-reel players and films, VHS and VHS tapes, portable language labs and headphones, DVD players and DVDs, boom boxes and compact discs, and Smart Boards." She described each being "helpful" when they were the only technologies available. During the second and third interviews, we did a photograph elicitation session where I showed Sama researcher-chosen images of technology. Sama laughed until she cried with the images of the tape recorder and the cassettes.

Textural-structural description. At this phase of the study, a textural-structural description was constructed for each participant (Moustakas, 1994). This steps involves establishing "the meanings and essences of the experience, incorporating the developed categories and themes" (Moustakas, 1994, p. 121). An example of this is presented below:

> Sama was quiet and pensive when I asked her about the future of technology in foreign language classrooms. It was at this point in the conversation that Sama's husband emerged from another room in the house to announce the death of Hugo Chavez, Venezuela's dictator president. She was lost in thought about Chavez's passing and the future of Venezuela as I asked her about whether she

thought we would have progresses as far as we are now with technology, ten, fifteen, twenty years ago? She replied "Not in my wildest dreams, I don't think. I guess, you know, living in the moment and you don't think too far ahead as far as technology is concerned until it hits you over the head and you have to start using it [laughs]." She wondered aloud about the direction of technology in the future and what was coming. She said that she "often ask [her] students, 'What do you think things are going to be like in five years, ten years, when you have children of your own? What do you think they will be using?' And so they start giggling and some of them really start thinking about it, and it's interesting to watch."

Composite description. In the final step of the data analysis, Moustakas (1994) recommends that all of the textural-structural descriptions for all of the research participants be combined to form a composite description of the "meanings and essences of the experience, representing the group as a whole" (p. 121). However, this step is not possible for this study because there is only one participant. It is impossible to form an overall description of the phenomenon of technology via the experiences of only one participant.

When I felt sufficiently familiar with the data, I set out to develop codes. Moustakas (1994) made the process easy for me. I had electronic copies of the transcripts copied and pasted into one large document and I went through and digitally highlighted every appearance, emotion, and mention related to the phenomenon of technology. After saving the initial coding document, I copied and pasted the highlighted coding document into another document and removed the irrelevant information to another document. Each of the kept codes was tested to ensure that it was necessary to the experience for understanding it and that it was possible to make abstractions as required in step 2 of Moustakas (1994) modified approach of van Kaam's method. My next step was to begin clustering the codes into themes. I opened another document with formatted tables and copied all of the codes. I rearranged the codes into clusters because due to some common feature. For example, I asked Sama to list all of the technologies she had employed in her career. During our conversations, she described having to use all of these technologies. The codes that came from this process were classroom that was equipped with headphones, headphones, and cassettes, using a DVD program, DVDs, CDs, Reel-to-reel, Smart Boards, tape recorders, portable language labs, and a boom box. On a master list, I moved these codes under the category, *types of technologies*, and then aligned it to the pattern I identified that was semantically similar to a phrase Sama shared, "It's really a wonderful tool. We just need to learn how to use it properly." A brief example of this process is included in Figure 5.

After clustering codes to columns based on similar meanings, I had a list of codes and categories that was iteratively growing as I reflected on them while reading and transcribing data. I promptly saved this document and identified three salient themes to the study. Using Moustaka's eight steps and a modified van Kaam's approach, these themes began to capture the essence of the participant's experiences as she negotiated the integration and subsequent employment of new technologies in her classroom, including her fears and victories.

What students do with technology	What teachers did with technology	Types of technologies
students listen to recordings	teacher could also communicate with each	classroom that was equipped with headphones
Students could listen to recorded material	student individually	headphones
and answer	cultural, just videos, cultural	cassettes
obtain information	Cultural videos, but usually you had to check	using a DVD program
demonstrate comprehension	those out from a, like a media center	DVDs
students watch and listen	punch the right button or you were in trouble.	CDs
complete written exercises based on the	"Don't do it for me, show me how to do it so	Reel-to-reel
presentation	that I can learn."	Smart Boards
listening exercises		tape recorders
I ask them for help when I get stuck		portable language labs
they're always very nice and very good		boombox
about showing me how to do things		iPad
Time frames	**Feelings**	**Specifically** Spanish
late 70s	helpful in their own time	don't think we had programs for Spanish
	frustrating	
	I'm glad I've had to use a computer in school	
	I remember being very fearful	
	a little scary	
	I've learned not to be afraid	
	Happy	
Definition of technology	being able to have so much information at my fingertips	
	being able to communicate very quickly with anybody, anywhere in the world	
	it's really a wonderful tool; we just need to learn how to use it properly	
Advantages		

access so much information through the Internet
sometimes if I find something on the internet that I can show, um, culture-wise, I use, uh, the Smart Board
amazing that you can get information so quickly, that you have it right there at your fingertips.
access to more information. Uh, more exercises
More culture. [long silence] Plus, uh, I think we can have access to more current things, you know, what, what perhaps teenagers are doing in other countries and uh, compare ways of life for teenagers in other, in other countries with their own here.
Probably because some of these students write in such a way that it's so difficult to read their papers and, uh, they're, they tend to be messy

Figure 5. Sample of coding and clustering as taken from the notes of the researcher based on the interviews conducted with the research participant. The researcher put all of the interview transcripts on a master sheet and started categorizing them according to commonalities. It was at this point that certain themes became concrete for the researcher.

Results and Discussions

The three themes identified as a result of data analysis include: (1) technology as tool in the classroom, (2) integrating technology, and (3) looking ahead to the future of technology in the foreign language classroom.

Technology - It's really a wonderful tool. We just need to learn how to use it properly

Sama defined technology as having information at her fingertips and being able to communicate very quickly with anybody, anywhere in the world. As with any new technology, Sama stated that it was the duty of the teacher to become familiarized with how to use operate the machinery in class. In her 20 years of experience in the classroom, she incorporated "reel-to-reel players and films, VHS and VHS tapes, portable language labs and headphones, DVD players and DVDs, boom boxes and compact discs, and Smart Boards." She described each technology as being "helpful" when they were the only technologies available. During a photo-elicitation conversation Sama was shown some researcher-chosen images of technology. Sama laughed until she cried with the images of the tape recorder and the cassettes (see Figure 6 and Figure 7).

Figure 6. Cassette player.

Figure 7. 60 minute Cassette tape.

Sama: [Look of disbelief on her face] That looks like my husband's old tape recorder [referencing picture of tape recorder]. [Laughs again] Certainly not voice activated [researcher and participant laugh]. You had to punch the right button or you were in trouble. I remember using those for, uh, I don't know, I think in, when I was teaching at a middle school.

When asked about the predecessor to the VCR and VHS cassette tape, Sama laughed again and spoke about her experiences with the reel-to-reel films, a technology that we had not thought to include in the photo elicitation interview because it was a medium used prior to the researchers' own experiences of being in the classroom. Sama remembered having to "get the big reel and [you had to] put it on the machine, and you had to thread it through the machine" to show a film in class. Even with the ability to show the films, Sama also mentioned how films tore in the middle a showing and how she "couldn't continue" showing the film or "you could continue" if you hastily repaired the film with tape. However, it was difficult "at the end of the day…when you returned the tape [reel]…" to the media center and you had to confess that "a chunk was missing" and it was being held together with a piece of tape so they could splice it or fix it…whatever they did."

In examining the technology that most changed how she taught, Sama replied that "the Smart Board" without hesitating because she "can access so much information through the Internet." Despite having technology readily available to use, Sama stated that it is difficult to find "materials and sites that are suitable or appropriate for high school students." She was more readily incorporating technologies that she was previously fearful and hesitant to use as demonstrated through inclusion of technology in her lesson plans. Sama also described the problem with having technology so readily available.

Reflecting back on the various technologies Sama used, she asserted that's he would not bring back some of those technologies.

Researcher: What of that [technology] would you bring back?
Sama: Not much [participant and researcher laugh]. With all the improvements, I don't miss the, the mishaps we used to have the equipment [researcher laughs]. It wasn't quite perfected yet.

The availability and ease of technology did not make Sama's job any easier. In fact, it added to her daily responsibilities when she did have to employ technology to teach a lesson. Her exposure to the many different technologies she mentioned as having employed in her classroom (reel-to-reel players and films, VHS and VHS tapes, portable language labs and headphones, DVD players and DVDs, boom boxes and compact discs, and Smart Boards) ensured that she came to prefer some more than others due to their familiarity and ease of use both at home and in her professional life.

Integrating Technology

One of the research questions for this study addressed the use of technology in Sama's own classroom. We specifically wanted to know how she employed the different technologies. From incorporating the use of the Smart Board to project movies, images, or videos from her computer, a DVD, or the Internet, or using the boom box in the corner of her classroom to play music or the compact discs that accompany the textbook, Sama was asked to describe how she integrated technology in her classroom. She stated that technology in her classroom "consists of using a DVD program that students watch and listen to in order to complete written exercises

based on the presentation. At other times students listen to recordings to obtain information and demonstrate comprehension of the spoken language."

When asked for clarification in the process of technology integration from the first moment to the last Sama stated that she

> print[s] copies of the material that is going to be covered in the DVD and then use my computer to show the DVD on the Smart Board. Sometimes I have the students just watch the first time so that they can get a feel for things and then I have them, uh, watch it again and fill in the exercises.

We asked Sama about the advantages and disadvantages to having or incorporating technology in the classroom. In addressing the advantages, Sama sees the advantage of utilizing the Internet to supplement dated materials that she must use. She finds material, especially having to deal with culture, on the Internet and then shows it to her students via the Smart Board. For Sama, the greatest advantage is having "access so much information through the Internet right there at your fingertips" especially when dealing with cultural topics that are difficult for students to understand when they read in a textbook.

However, just as Sama saw advantages in integrating technology, she also saw disadvantages. As mentioned earlier, Sama stated that one of her primary challenges is finding material and websites that are appropriate for high school students. This is particularly important as she taught in a private Catholic school. In using older technologies, she talked about the use of portable language laboratories and headphones (See Figure 8).

Figure 8. Headphones.

Even with the benefits of integrating portable language laboratories and headphones can have on students, Sama stated that the experiences she had could have been improved.

> Researcher: Okay, um, also, um, when we talked last time you talked about, um, how in the late 70s you had a classroom equipped with headphones over your student's desks, um, what could have improved your experiences back then?

> Sama: If I had had carrels, or something to, uh, divide, uh, or to enclose each student so that they wouldn't be a distraction to each other, that would have been good.

> Researcher: Could you hear what your students, like their neighbors' were saying?

> Sama: Yes, and, uh, the students tended to speak louder because they had the headphones on. And so, if I wanted to deal with one particular student, everybody pretty much could hear everything.

The distractions caused by incorporating this technology made Sama realize that improvements were still necessary to get them to the point at which they needed to be to make them successful. Upon showing Sama a picture of the headphones, she discussed how unhealthy they could be.

Sama was most expressive in talking about what technology has done to the art of communication, handwriting, spelling, and general student neatness in their assignments. She stated that technology has caused students to "lose the social contact" and she thinks that it is important. She further believed that "some of our students currently are beginning to lose the social graces" when it comes to dealing with other people. Spelling and handwriting were important to Sama and lamented that her students are no longer mastering spelling and handwriting because "they rely on the spell check [feature] on the computer or whatever gadget they're using" as well as using word processor software to do their assignments. Text language also is featuring prominently in student work and "everything is abbreviated and so spelling has gone out the window."

With the various new technologies available and her natural aversion to integrating it, Sama still remained open to incorporating the iPad™ in her classes. She mentioned,

> I would eventually like for each of my students to have something like this [referring to the researcher's iPad™] because we could do so many more things. The only drawback that I see is that kids are losing the art of handwriting, they are also losing the art of face-to-face communication, and social skills.

One major disadvantage that Sama perceived for integrating technology was the high prices that individual families must pay for students to have technology readily available. She stated that schools should implement "some kind of program where the [economically] disadvantaged [students] would be able to have the same kind of equipment" as their wealthier counterparts. In doing this and leveling the playing field, Sama asserted that she thought it would help close the educational achievement gap that plagues our society.

Despite Sama's reservations about some types of technology, their utility in integration, throughout her career, Sama integrated various types of technology in her classes. She has remained vigilant of the advantages and disadvantages of these technology integration initiatives, not only from the perspective of focusing on learning new technologies, but also from the perspective of infrastructure, affordability, and relevance.

"Looking ahead…No telling what will be available next"

We asked Sama about any technologies our schools should currently be incorporating in the classroom. She addressed the use of the iPad™ and the re-use of the portable language laboratories in the classroom. Sama stated that using an iPad™ in the foreign language classroom "would be very good because I think we could probably find reading selections or a bigger variety of reading selections for our students so that they can practice." In addition, students would be able to "look up so many more things and they can see more of the cultural stuff as well."

Sama would also like to see portable language laboratories used more in the foreign language classroom. Using the portable language laboratories would help students…

be able to hear, reply, perhaps, and record what he is saying. This would also help them [students] as far as pronunciation because I don't think they always hear themselves when they speak Spanish. It might help to improve their pronunciation.

Sama was quiet and pensive when asked about the future of technology in foreign language classrooms. It was at this point in the conversation that Sama's husband emerged from another room in the house to announce the death of Hugo Chavez, Venezuela's dictator president. She was lost in thought about Chavez's passing and the future of Venezuela while reflecting on the technological progresses made when compare to her experiences 10, 15, or 20 years ago. Could she even imagine we would come this far or how far we could progress? She replied "Not in my wildest dreams, I don't think. I guess, you know, living in the moment and you don't think too far ahead as far as technology is concerned until it hits you over the head and you have to start using it [laughs]." She wondered aloud about the direction of technology in the future and what was coming. She said that she "often ask [her] students, 'What do you think things are going to be like in five years, ten years, when you have children of your own? What do you think they will be using?' And so they start giggling and some of them really start thinking about it, and it's interesting to watch."

Because of her many years of experience, Sama was asked what advice she would offer to a new foreign language teachers who wanted to integrate technology in the classroom. She replied, "I would say 'Go for it. Use it, but also be careful that you don't overdo' because again of the social interaction. The students need to be able to interact with the teacher as well as with other the students in the class." Reflecting on perhaps what an ideal technology integration might look for Sama, she mused,

I wouldn't even begin to come up with a program (laughs). I'd have to rely on the younger generation to come up with programs and maybe [I'll] work in a consulting capacity so that they can incorporate things that I think would be necessary.

Yet, Sama remains optimistic for what lies in the future. She stated, "Well, I'm putting my hope in the younger generation to come up with better programs that will help all kids, not just the privileged and somebody that can be a role model for those same kids." The flashes of Hugo Chavez's life passed through the TV screen as Sama concluded her thoughts.

Through the richness of Sama's career, it became evident whatever her apprehensions might have been for integrating technology, when it was mandated, and she had to do it, she did what she needed to, while trying to maintain some authenticity in how she valued teaching foreign languages. Her career spanned with moments of instability, advantages and disadvantages associated with technology integration, and yet she is hopeful for the future. She is aware of the exponential progress of technology that allows her to imagine unlimited possibilities for the future. She was able to realize that she used more technology than she consciously attended to as a result of participating in this study and became more crystallized on the value of patience and practice when technology integration is becoming more and more critical in classrooms.

Conclusions and Implications

This study was designed to explore the ways in which technology has evolved and then been integrated in the foreign language classroom from the perspective of a retired Spanish educator. Sama had to adapt her professional career and personal life to integrate the different

technologies as they evolved. Teachers often have to integrate new technologies with little to no training on how those said technologies work, what their purpose is, how to fix mistakes when things go wrong. It is in integrating new technologies, or lack thereof, where teachers are challenged to teach difficult concepts to students who have no prior schema with the language.

The essence of Sama's experience reveals that while she was unable to resist the influx of various technologies, top-down mandates, and some ineffective instructional technologies, she was still able to find some value in technology integration as long as she stayed self-aware, authentic in what she wanted to teach the students, and had enough wisdom to exercise patience when forced into new teaching and learning environments. Sama described the evolution of technology in ways where she became self-aware of the myriad of technologies she has used while marveling at the exponential progress of educational technologies. She lamented the disadvantages in using some of the technologies, especially in foreign language teaching where students are unable to learn spelling, handwriting, and proper grammar. While Sama did not have a specific formula for employing different technology, it was her need to focus on what she actually wanted to teach her students that drove the ways in which she negotiated the role of technology in her classroom. While this sounds simple enough on paper, in practice this is much harder to accomplish in a culture of standardized test scores, top-down mandates, and various types of intrusive teaching evaluation practices in Texas. Additionally, Sama is critically conscious about access to technology and how an overdependence on technology disadvantages poor students who cannot access technology as readily as their less poor counterparts. There are several scholars who have focused on the discourse of technology integration within their individual fields and the issue of accessibility, including those who work in practitioner spaces, those who do critical, interrogative work, and those who work in spaces of accommodation for students with disability (Bhattacharyya & Bhattacharya, 2009; Foss, 2009; Gikas, Martindale, & Bhattacharya, 2009; Turner, González, & Wood, 2008). However, what is notable about this perspective is that Sama is not an educational researcher. Sama works from a place of rich experience and disciplinary history. Sama has focused on educating students and the contexts within which such education can occur. Given the issue of access can determine how technology is integrated in learning environments and who has what kinds of access, and to what technology can become a barrier to actual learning. Surely, learning occurred and can occur without technology. Therefore, for someone with a retrospective view, a critical consciousness about the hierarchical differences created by access is important to note, because these hierarchies could often create various deficiency labels in schools and thereby promote several types of inequities directed to people who have limited access. Thus, this position highlights the caution Sama and other educators need to practice while riding the various waves of technology integration. This first-person perspective is within the context of the current educational climate where resources are distributed unfairly, standardized tests determine allocation of resources, and teachers are placed with continuously increasing responsibilities to become more technology literate. Sama's advocacy of critical consciousness in this space instead of playing to maintain status-quo is noteworthy and should have a space in academic discourses.

This study presents how a veteran teacher reflects on her career and technology integration after retirement and how such reflection demonstrates a struggle, adaptation, and a critical call for accessibility of technology should technology integration become more and more necessary in foreign language classrooms. Additionally, Sama's reflection poses warnings to educators as some of the ways in technology integration pose real danger to compromising content and learning objectives in foreign language classrooms.

Additionally, this study, like others are not free of limitations. First this study was contingent on Sama's availability and the researcher's time and engagement with the

participant for four months. We have no doubt that if we were to engage in a longer study with Sama, we would have been able to present richer narratives with different (perhaps even deeper) analytical insights. Additionally, the first author conducted this project as her first qualitative research project. While the project has strong scholarly merits, we conclude that with time, the first author's interview skills, rapport building, relationship developing skills would enhance the subsequent knowledge construction of the project. Also, our time and resource availability limited us to one information-rich participant. However, if we were to secure people who fit the criteria of retrospective experiences of technology explosion and integration in K-12 education, it would have been helpful to explore if participants brought the same critical consciousness to the teaching and learning spaces as Sama did and how their perspectives and instructional strategies were similar and different.

This study has several implications associated with the evolution and integration of technology in the classrooms especially in foreign language classrooms. First, because Sama was even unaware of her own integration of 12 different technologies during her career, her experiences revealed a cycle of pattern in technology integration. The cycle begins with the technology being introduced to teachers, followed by utilization by teachers and possibly students, said technologies then becoming outdated, broken and irreplaceable, and then the subsequent replacement of the technology for something new or it not being replaced at all. The cycle then begins anew. Through all of this, teachers have had to learn and then adjust to integrating new technology in their classrooms. The implications emerging out of this cycle of technology use lie in the ways in which teacher education programs inform pre-service teachers of this cycle, administrators' expectations of in-service teachers, designs of professional development programs, and teachers' own expectations of self, designing and delivering instruction, and expectations from students. If in one's career span, one might end up working with 12 different types of technology while integrating them in one's classroom and become aware of a pattern of embracing and discarding technologies, then it is possible that such experiences can cause burn out, fatigue, and affect job satisfaction and performance. Therefore, it is critical that this cycle of technology use in education is understood and addressed more saliently in all relevant spaces of teacher training, professional development, and assessment.

Further, it is important to realize for school districts and their administrators to as Lam (2000) indicated, that teachers are not afraid of implementing new technologies. Rather teachers are more than willing to use technologies with proper professional training to successfully implement them so long as teachers find it beneficial for their students. Take for example the research participant. At 65 years of age, she learned to operate a SmartBoard in her classroom with the training that was provided to her in one afternoon by her school.

Finally, while the advent of new technologies offer possibilities of high levels of student engagement and even an alignment with how students' might learn along with their overall comfort with technology, Sama's experiences really call for a mindful awareness of the ways in which new technologies can distract and distort learning of some fundamental concepts and an awareness of such disadvantages imply that teachers and administrators need to work on mitigating the disadvantages through some other educational interventions. Because, at the end of the day, what matters is not how technology can be integrated, but what matters is how learning can occur in an enhanced, engaged way, so that students can retain what they learn in foreign language classroom long after class is over.

References

Bhattacharya, K. (2009). Othering research, researching the other: De/colonizing approaches to qualitative inquiry. In J. Smart (Ed.), *Higher education: Handbook of theory and*

research (Vol. XXIV, pp. 105-150). Dordect, The Netherlands: Springer.

Bhattacharyya, S., & Bhattacharya, K. (2009). Technology-integrated project-based approach in science education: A qualitative study of in-service teachers' learning experiences. *Electronic Journal of Science Education, 13*(3), 113-138.

Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed method approaches* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. Thousand Oaks, CA: Sage Publications.

Cunningham, D. (1998). 25 years of technology in language teaching: A personal experience. *Babel: Journal of the Australian Federation of Modern Language Teachers' Association, 33*(1), 4-7.

Davies, R. J. (2011). Second-language acquisition and the information age: How social software has created a new mode of learning. *TESL Canada Journal, 28*(2), 11-19.

deMarrais, K. B., & Lapan, S. D. (2004). *Foundations for research: Methods of inquiry in education and the social sciences*. Mahwah, NJ: Erlbaum.

Foss, J. (2009). Lessons from learning in virtual environments. *British Journal of Educational Technology, 40*(3), 556-560.

Gikas, J., Martindale, T., & Bhattacharya, K. (2009). *How and why professors use wikis, blogs, and podcasting.* Paper presented at the Association for Educational Communications and Technology, Louisville, Kentucky.

Gillen, N. K., & Bhattacharya, K. (2013). Never a yellow bird, always a blue bird: Ethnodrama of a Latina learner's educational experiences in 1950-60s South Texas. *The Qualitative Report, 18*(14), 1-18. Retrieved from http://nsuworks.nova.edu/tqr/vol18/iss14/2

Giorgi, A. (1975). An application of phenomenological method. In A. Giorgi, C. Fischer, & E. Murray (Eds.), *Duquesne studies in phenomenological psychology* (Vol. 2). Pittsburg, PA: Duquesne University Press.

Giorgi, A., Fischer, W. F., & Von Eckartsberg, R. (Eds.). (1971). *Duquesne studies in phenomenological psychology* (Vol. 1). Pittsburgh, PA: Duquesne University Press.

Hegel, G. W. F. (1910). *The phenomenology of mind*. London, UK: S. Sonnenschein & Co.

Hubbard, P. (2008). CALL and the future of language teacher education. *CALICO Journal, 25*(2), 175-188.

Husserl, E. (1999). *The idea of phenomenology*. Dordrecht, The Netherlands: Kluwer Academic.

Iandoli, L. J. (1990). CALL and the profession: The current state. *The French Review, 64*(2), 261. doi:10.2307/395871

Kern, R. (2006). Perspectives on technology in learning and teaching languages. *TESOL Quarterly, 40*(1), 183-210.

Kessler, G. (2007). Formal and informal CALL preparation and teacher attitude toward technology. *Computer Assisted Language Learning, 20*(2), 173-188.

Kim, H. K., & Rissel, D. (2008). Instructors' integration of computer technology: Examining the role of interaction. *Foreign Language Annals, 41*(1), 61-80. doi:10.1111/j.1944-9720.2008.tb03279.x

Kramsch, C., & Andersen, R. (1999). Teaching text and context through multimedia. *Language Learning and Technology, 2*(2), 31-42.

Lam, Y. (2000). Technophilia vs. technophobia: A preliminary look at why second-language teachers do or do not use technology in their classrooms. *Canadian Modern Language Review, 56*(3), 390-420.

Lather, P. (2006). Paradigm proliferation as a good thing to think with: Teaching research in

education as a wild profusion. *International Journal of Qualitative Studies in Education, 19*(1), 35-57.

Le Loup, J. W., & Ponterio, R. (2003). *Second language acquisition and technology: A review of the research*. Washington, DC: Center for Applied Linguistics.

Liu, M., Moore, Z., Graham, L., & Lee, S. (2002). A look at the research on computer-based technology use in second language learning: A review of the literature from 1990-2000. *Journal of Research on Technology in Education, 34*(3), 250-273.

Merleau-Ponty, M. (1962). *Phenomenology of perception* (C. Smith, Trans.). London, UK: Routledge & Kegan Paul.

Moore, Z. (2006). Technology and teaching culture: What Spanish teachers do. *Foreign Language Annals, 39*(4), 579-594. doi:10.1111/j.1944-9720.2006.tb02277.x

Moustakas, C. E. (1994). *Phenomenological research methods*. Thousand Oaks, CA: Sage.

Salaberry, M. R. (2001). The use of technology for second language learning and teaching: A retrospective. *Modern Language Journal, 85*(1), 39-56. doi:10.1111/0026-7902.00096

Spigelberg, H. (1982). *The phenomenological movement: A historical introduction* (3rd ed.). Boston, MA: Martinus Nijhoff.

Turley, E. L., King, N., & Butt, T. (2011). It started when I barked once when I was licking his boots! A descriptive phenomenological study of the everyday experience of BDSM. *Psychology & Sexuality, 2*(2), 123-136. doi:10.1080/19419899.2010.528018

Turner, C. S. V., González, J. C., & Wood, J. L. (2008). Faculty of color in academe: What 20 years of literature tells us. *Journal of Diversity in Higher Education, 1*(3), 139-168. doi:http://dx.doi.org/10.1037/a0012837

Van Manen, M. (1990). *Researching lived experiences: Human science for an action-sensitive pedagogy*. Albany, NY: State University of New York Press.

Warschauer, M., & Healey, D. (1998). Computers and language learning: An overview. *Language Teaching: The International Abstracting Journal for Language Teachers, Educators and Researchers, 31*(2), 57-71.

Warschauer, M., & Meskill, C. (2000). Technology and second language teaching. In R. J. (Ed.), *Handbook of undergraduate second language education* (pp. 303-318). Mahwah, NJ: Lawrence Erlbaum.

Author Note

Nilsa Becho Sullivan is a doctoral student in Curriculum and Instruction in Texas A & M University in Corpus Christi. She has been deeply invested in technology integrated literacy practices, especially within the areas of foreign language instruction. Correspondence regarding this article can be addressed directly to: Texas A & M University – Corpus Christi, Educational Leadership, Curriculum and Instruction: 6300 Ocean Drive, Unit 5834, Corpus Christi, Texas, 78412-5384; Email: nbecho47@hotmail.com.

Kakali Bhattacharya is an Associate Professor at Kansas State University and has been working as a qualitative research methodologist for ten years. Her interests are in arts-based research, de/colonizing and contemplative epistemologies, transnational issues of race, class, and gender in higher education, and technology-integrated learning and social environments. Correspondence regarding this article can also be addressed directly to: the Department of Educational Leadership, Bluemont Hall 321, 1100 Mid-Campus Drive, Kansas State University; Manhattan, KS 66506; Email: kakalibh@ksu.edu.

Article Citation

Becho Sullivan, N., & Bhattacharya, K. (2017). Twenty years of technology integration and foreign language teaching: A phenomenological reflective interview study. *The Qualitative Report, 22*(3), 757-778. Retrieved from http://nsuworks.nova.edu/tqr/vol22/iss3/6