Images Over Time: The Intersection of Social Studies Through Technology, Content, and Pedagogy

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Abstract

In this study, the authors examined the intersections between technology, pedagogy, and content through two social studies teachers' development from preservice to in-service teaching. Qualitative data were collected during their teacher education programs, student teaching experiences, and 5 years into their in-service teaching. Teacher narratives illustrate the connections between technology, pedagogy, and content in these teachers' social studies classrooms. The researchers note the complexity of technology integration and recommend that teacher educators support and promote opportunities for continuing education and professional development in teachers' growth of technological pedagogical content knowledge.

The potential influence that technology can have on social studies teaching and learning has been discussed for years. Yet, technology has not made the impact expected on social studies instruction (Berson & Balyta, 2004; Zhao, 2007) even though social studies researchers have urged social studies educators to be on the cutting edge of technology (Fontana, 1997) and to participate in the "doing of social studies in the pursuit of citizenship" (Hicks, Doolittle, & Lee, 2002, p. 2185).

For some, questions have emerged about whether technology integration can impact student learning any more than can traditional social studies instruction (Diem, 2000). Although advocates of technology maintain that technology integration can revolutionize social studies teaching and learning, critics have decried that technology's promise is not proven (Friedman & Hicks, 2006). Subsequently, researchers have called for an examination of the impact of technology integration on social studies teaching and learning in teacher education programs and K-12 classrooms (Lee, Doolittle, & Hicks, 2006).

Given that preservice teachers tend to use technologies used by their teacher educators (Mason et al., 2000), social studies teacher educators should model technology integration in their own pedagogical practices. Brush and Saye (2009) questioned whether the inadequate use of technology in K-12 schools could be related to the teacher preparation provided to preservice teachers. Wilson (2003) recommended that preservice teachers should be afforded the opportunities to observe, receive support, and participate in appropriate technology practices in their field experiences in order to later apply what they have learned in their own classrooms.

When considering technology integration in the social studies classroom, Fairey, Lee, and Bennett (2000) noted the power of technology to become a change agent for social studies teaching and learning while emphasizing that the subject matter must be enhanced by the technology. Hicks et al. (2002) noted the need for educators to use technology as a "partner" versus a "teacher." They challenged educators to discern between *why* and *how* technology in the social studies does or can develop meaningful learning. Further, Doolittle and Hicks (2003) suggested constructivist strategies to encourage the use of technology as a tool for increasing inquiry and authentic learning fostering global and local interaction, building on students' prior knowledge, enhancing knowledge with meaningful assessment, and cultivating students' independence and creative thinking in the social studies classroom.

Others have begun to explore the interrelationship of content, pedagogy, and technology in the social studies; this interweaving of technological pedagogical content knowledge is now commonly referred to as technology, pedagogy, and content knowledge (TPACK; Mishra & Koehler, 2006). Although this notion has garnered a great deal of attention in the field of instructional technology, only a few studies have examined this framework in relation to social studies teachers and their practices (e.g., Brush & Saye, 2009; Lee, 2008; Swan et al., 2007). The current study explores how two social studies teachers developed *over time* to demonstrate the interweaving of TPACK. Specifically, we examine how the teachers in this study viewed, negotiated, and enacted the complexities of social studies and technology for social studies teaching and learning.

As previously mentioned, teacher educators and teacher education research have most recently considered the TPACK framework. The TPACK framework "requires a thoughtful interweaving of all three key sources of knowledge: technology, pedagogy, and content" (Mishra & Koehler, 2006, p. 1029) and builds upon Shulman's (1987) notion of the interplay between content and pedagogical knowledge (pedagogical content knowledge). Interactions and connections between technology, pedagogy, and content knowledge are complex.

Often, when integrating technology, teachers utilize "technocentric strategies" (techniques that focus on using a specific tool or skill), rather than a TPACK-based learning activity type (Harris, Mishra, & Koehler, 2009), which consists of evolving and flexible pedagogical strategies specific to content. However, TPACK can be a "moving target" (Hofer & Swan, 2008-2009, p. 196) and particularly challenging to teachers who have varying levels of knowledge in technology, pedagogy, and content. Also challenging are the expectations in teacher practice that require implementation of standards, professional development that may focus on a desired skill or a technique, and the different needs of students in teachers' classrooms. Such challenges may require teachers to reconfigure their approaches in their use of technology, pedagogy, and content knowledge.

TPACK in the Social Studies

Lee (2008) noted that TPACK develops as "teachers transform their knowledge of content for pedagogical purposes" and technology is used "as a dynamic component in this transformative process" (p. 2), building upon Shulman's (1986) notion of pedagogical content knowledge (PCK). Manfra and Hammond (2008-2009) found the TPACK framework to be useful in "discussing teachers' intentions, actions, and outcomes in a technology-rich classroom" (p. 240), adding that TPACK allowed them to "make sense of the complex interactions between technology, content, and pedagogy in the history classrooms" (p. 24). They studied the use of digital documentaries to teach history. However, they found that "teachers' pedagogical aims significantly influenced their use of digital documentaries to teach history" (p. 240).

Lee (2008) further explored TPACK in the social studies in his study of how a group of preservice teachers located digitized information for democratic life. This study presented a "heuristic for understanding how TPACK takes shape in a specific social studies setting" (p. 10). Lee concluded that the group engaged in three distinct phases: context (technology); delimiting the resources (content); and elaboration (pedagogy). Lee noted the interdependence between content and technology and that of content and pedagogy as he discussed the connectedness of the technology, content, and pedagogy.

Day-to-day classroom dynamics can change the way such connections occur and how they may look in any given classroom on any day. Brush and Saye (2009), in their study with preservice teachers, noted that classroom challenges teachers face serve as barriers to TPACK. Overcoming the barriers requires additional considerations and negotiations, and these are often met with teacher skepticism, thus further impacting technology use in the social studies classroom (Swan et al., 2007).

Background for the Study

As teacher educators, we have strived for purposeful technology selections in our teaching. Much of our work has focused on best practices of technology integration for teaching and learning. As we collaborated on our research we found the TPACK framework helpful in understanding how our teachers did (or did not) make connections between technology, pedagogy, and content.

However, the construct remained complex and a little messy as we continued to identify how, why, and when a teacher negotiated the difficulties and barriers of a classroom to integrate technology in teaching content. Lee's (2008) phases of engagement of context, delimiting the resources, and pedagogical elaboration proposed a framework and a guide as we read, studied, and deliberated data from this study to help us understand these teachers' uses of technology.

This research is part of a larger body of work in which we examined a group of social studies teachers (Wilson & Wright, 2007; Wright & Wilson, 2007). We followed the group, who attended a university in the southeastern U.S., through their teacher preparation program, student teaching experience, and first year of in-service teaching, and revisited them during their fifth year of teaching social studies. All of the participants were enrolled in their secondary social studies methods course during the fall of 2001. The participants were part of a technology-rich teacher education program and were exposed to multiple classroom, interactive, and emerging technologies available at the time (e.g., online discussions, development of online electronic portfolios). The teacher

education program integrated technology across the curriculum versus requiring the preservice teachers to enroll in separate computer applications classes.

The teacher education faculty members in this program continually search for emerging technologies and adapt applications in content accordingly each year. During the time in which the participants were in their teacher education program, preservice teachers were required to produce electronic portfolios showcasing products (such as presentations, resource databases, multimedia projects, and electronic field trips) they had developed for their classrooms and personal use. These preservice teachers were encouraged by their instructors to "think outside the box" and to develop a mindset for technology development, selection, and implementation in their future classrooms.

In the first phase of this larger study, we used the Hooper and Rieber (1999) model of teachers' use of technology to frame our findings of the teachers' overall uses of technology throughout their classroom practice (Wright & Wilson, 2007). We made suppositions based on data from our interviews and observations. From these data, we initially characterized the teachers in one of Hooper and Rieber's five stages of technology use by teachers.

The first stage recognizes that the teacher has learned a technology (Familiarization). The second stage acknowledges that a teacher tries the technology (Utilization*).* The third stage recognizes that a teacher uses technology for certain tasks and would have difficulty performing those tasks without the technology (Integration*).* The fourth stage illustrates that the teacher is using technology for more than content delivery *(*Reorientation),while the final stage denotes that the teacher continues to evolve in how technology is incorporated into the classroom (Evolution*).*

At the conclusion of a later study (Wilson & Wright, 2007), two teachers were categorized as teachers possessing TPACK. Each teacher employed technology purposefully and meaningfully in their social studies classrooms. Unlike some of their peers, these teachers did not use technology for "technology's sake" or as an add on. Instead, both carefully analyzed the impact of the technology use on their students and whether or not using the technology was the best way to facilitate the social studies content for their students.

Method

The current research explores the evolution of two social studies teachers from their teacher education program into their development as teachers in their own classrooms and demonstrates how each can be described as a teachers possessing TPACK. Antonio and Ted (pseudonyms) were selected for this study because they were the only two social studies teachers in our earlier research (Wilson & Wright, 2007) who seemed to recognize and value the importance of technology as they carefully selected and implemented technology that complemented their social studies content and pedagogy.

As we explored the two teachers in our study, we chose to develop a framework adapted from Lee's (2008) study to examine how the teachers viewed, negotiated, and enacted social studies and technology in their classrooms. Subsequently, we asked several questions as we examined the data, which included the following:

- When incorporating technology into their instruction, how did the teacher view the context for using technology for social studies students and classroom? (Context).

- How does the teacher evaluate and negotiate the affordances and constraints of using technology when teaching social studies? (Delimiting technology resources).
- How does the teacher enact technology as part of his pedagogical practices for social studies? (Pedagogical Elaboration).

Qualitative data sources for this study included (a) fieldnotes taken throughout the duration of the study, (b) interviews with the participants at different points in the study, (c) open-ended surveys completed during their teacher education program, and (d) classroom observations during the participants' preservice program and later during their in-service teaching. The interviews occurred during each teacher's class preparation time or before or after school hours, and typically lasted 1 hour. The interviews were audiotaped using a digital recorder, and the files were downloaded to a computer for ease of transcription. Observations were made and field notes were taken during an entire class period of the teacher's choice and one that reflected a typical day in the classroom.

The researchers recorded and noted teaching methods, student interactions, and any uses of technology by the teacher and the students. The interviews were then printed, read, and reread, along with typed notes of the observations and the field notes. Data were triangulated across the data sources and analyzed for emerging patterns and trends using constant comparative analysis (Miles & Huberman, 1994).

Findings and Analysis

Antonio

Antonio, the son of two educators, was a student with a 4.0 grade point average in his undergraduate teacher education program. Antonio was a diligent student who participated in campus-wide academic and social activities. Throughout the study, Antonio had a vast tool box of pedagogical methods to employ in his classroom with and without technology. During his preservice preparation, Antonio seemed to enjoy learning about technology and was one of the students most eager to use technology in his field experiences. At the beginning of the methods block semester, Antonio was open to the possibilities technology could offer his social studies students. He wrote that technology "is more applicable to today's world…I plan to use all kinds of technology to help my students have a better grasp on the subject matter."

He quickly moved from the familiarization (learning how to use technology) to the utilization stage, in which he demonstrated using the technology in certain classroom situations. For instance, during his methods block semester Antonio participated in a project in which 10th-grade U.S. history students worked with 5th-grade U.S. history students on digital timelines. During his clinical placement, Antonio was placed with a "chalk and talk" teacher who relied on his world history textbook to teach his students. These students had little access to technology at school; the 40-year-old school had one computer lab. Aside from the computer lab, teachers could do little with technology in their classrooms since the rooms had only two electrical outlets (context).

Antonio was determined to develop lessons that would motivate the students to learn history when he had the opportunity to teach. For a lesson on China, Antonio spent hours scanning pictures he had taken in China and developing a multimedia presentation for his students. Due to accessibility and technical issues, his methods professor helped him finish and implement the project in his middle school classroom. By the end of the semester, Antonio became more selective in his plans for technology, discussing the two

specific applications he would use: "I enjoy using technology and think it improves the overall learning environment. I plan to have students develop websites for my classes and use PPT [PowerPoint] often."

Despite Antonio's interest and excitement, technology issues frustrated him. An early advocate of using technology to teach in the social studies classroom, at times he became overwhelmed with the difficulties involved. In his frustration, he wrote his methods professor that "I have spent hours working only to have it disappear. I know we are supposed to use technology in our lessons….I just don't know if I can depend on it" (delimiting).

While teaching high school social studies during student teaching, he employed several technology activities in which he hoped the technology would motivate his students to learn history. Antonio's student teaching placement was vastly different from his previous clinical placement. This time, he was teaching in a new school in which technology was easily accessible. His cooperating teacher was deemed a Clinical Master Teacher by the university and was known for her outstanding content knowledge and classroom management. However, there were some students Antonio felt were not being motivated in her class (context), so he decided to employ different methods to motivate them to learn (pedagogical elaboration).

For instance, Antonio searched and located a piece of software that was used to teach World War II war strategy. During the student teaching experience, Antonio seemed to move from the Utilization phase, as categorized by Hooper and Rieber (1999), to the Integration phase. When this occurred, technology was the conduit for this teacher. Without technology, he could not teach certain lessons (which was the case when he taught World War II strategy). This is one example of how Antonio was thorough and deliberate when he used technology in his teaching.

Antonio began his in-service teaching in an affluent school system in a neighboring state. Although the school was new when Antonio began teaching, Antonio did not have ready access to emerging technologies or hardware. For 2 years, he was a traveling teacher and borrowed equipment from other teachers to ensure that his social studies instruction provided his students with the opportunity to use technology. During our observations and through our discussions, we noted that Antonio would scaffold the content for his students and would use technology as a bridge to do so. He routinely created lessons that allowed students to use the technology; however, he was selective in his choices. Without prompting, Antonio stated, "I don't use technology for technology's sake." Instead, he employed technology with consideration given to ensure the proper fit for the social studies content to be learned (context).

He used a wide array of technologies, from a publishing software program for students to develop brochures on countries they were studying to digital stories developed by students who traveled abroad (pedagogical elaboration). He indicated that he used technologies that would allow him to "interact with the students." Antonio seemed to have a strong grasp of mediating content and technology for his students.

During his in-service teaching, he moved into the reorientation phase of technology use in which the focus was on student learning rather than delivery of content. Antonio felt that his use of technology was not an option because of the place technology has in his students' lives:

> ...the kids know so much more about the computer than I could ever know. Their whole lives seem so centered around text messaging and that helps them. When I was in high school the teacher stood there and talked and we wrote down everything. The kids today can't handle that. They don't do it. It's kind of like getting into the medium. They are used to seeing stuff up there. They are used to seeing graphics and pictures. They are used to seeing more stuff. (context)

His views of technology, after 5 years of teaching, can be summed up: "It *(technology)* better allows the students to understand the content of the material. It makes it more sensitive to what they are used to and it makes them more comfortable. The more comfortable they are in the learning atmosphere, the more it *(the content)* will stick..."

Ted

Ted has been an active educator and is dedicated to his students. In 2009, he was a recipient of the local university's Excellence in Teaching Technology in a Content Field award. Ted grew up in the community in which the university he attended is located. He has strong ties to his community and state. At the conclusion of this study, Ted had begun the masters program in social studies education at his undergraduate institution.

In Ted's preservice program, he did not seem to demonstrate the same level of enthusiasm about technology as Antonio. However, Ted wrote that "technology is a vital part of educating today's students." Ted noted that social studies can be a "new and exciting experience using technology" and described technology as "extremely essential" for the social studies classroom.

While participating in his methods block clinical placement, Ted was placed in a school that lacked equipment and support. His assisting teacher in the placement tried to motivate her students with a variety of methods (e.g., simulations, writing activities, and art projects). However, she did not encourage technology use at the 50-year-old school, as the electrical wiring was insufficient to support additional computer hardware and projectors in its classrooms. During this time period, Ted's use of technology was limited to his assignments for the electronic portfolio or activities engaged in for the teacher education program. At this point in his development, Ted's use of technology fell somewhere between familiarization (how-to) and utilization (trying to) of the technology, which was surprising given his assertion that "technology is a vital part of educating today's students."

While in his student teaching placement, he worked with the Clinical Master Teacher who was known as the "go-to" technology teacher at the school. Although the teacher was knowledgeable about technology, the rural school lacked up-to-date technology hardware and connectivity. Ted found that implementing the digitized resources or Internet activities he wanted to use was practically impossible, even though technology on wheels bundles were available for checkout from the university. As a result, despite his feelings that technology implementation was essential, he was not able to overcome the barriers (delimiting) presented in his clinical experiences (context) to provide opportunities for his students to use technology.

Prior to graduating, Ted was hired to teach at an urban, high poverty school, which was located 2 miles from his university's campus. Throughout his in-service teaching, Ted had numerous professional development opportunities where he could learn new technologies and the how and why to implement them in his teaching. For instance, the district provided technology support through a funded professional development

program. Ted also served as a Master Technology Teacher (MTT) for his school. The MTT program was a partnership between the university and two school districts that supported technology integration and provided sustainable professional development. In addition, Ted participated in the Teaching American History Program, mentored clinical students from the university, and served as coordinator of the International Baccalaureate Program at his school. He explained, "We are in a unique situation because we have a lot of opportunities." When he was presented with an idea, he tried it. He remarked, "When someone tells me it works really well, I'll use it."

Ted has been teaching at one school throughout his career, and he was well aware of the digital divide at his high poverty school (context): "We have to use alternative methods for them [the students] to gain access to technology outside their homes and their communities." He discussed partnerships with local churches which supplied computers. He spoke of teachers who set up weekend labs in order for the students to have access to technology (delimiting). Ted viewed technology as a method of transportation, commenting, "you don't have to go anywhere except where there is technology."

He employed a variety of technology activities, such as digital stories and digital primary documents (pedagogical elaboration), which led to his technology categorization of being student centered at the integration category in our earlier study (Wilson & Wright, 2007). During the course of the study, his school was moved to a different location into a new building, which alleviated some of his initial access problems. In addition to new computers in the new school, the social studies department received several projectors provided by a publishing company after textbook adoption.

Ted's greatest concern about teaching was meeting the needs of his students. Teaching at a high poverty school with the majority of students on free or reduced lunch, Ted continuously sought ways to meet the needs of his students (context). He explained,

> Kids are different. Everybody's needs are different and I try to build lessons and activities that go along with the students' needs more consistently and integrate technology more in the classroom so they can get a better grasp of the information.

To support his social studies content, Ted used seamless inquiry-based instruction that integrated technology through Internet research projects, Internet field trips, electronic slideshows (teacher- and student-created), digital stories (teacher- and student-created), digital documents and images, and wikis that promoted a collaborative analysis of primary documents.

Ted's lessons were likely to start off with a digital story, followed by a multimedia slideshow with music, and enhanced with digital primary documents for whole-class discussion throughout the lesson (pedagogical elaboration). Ted was student centered in his teaching and said he was "willing to stretch and take on different things" in his effort to engage his students. Ted thought using technology "can enhance and inspire." His goal was to find ways to motivate his students to learn. He hoped that using emerging technologies would stimulate their desire to learn and viewed technology as a seamless necessity, noting, "You wouldn't be taking teaching out of the classroom." The underpinning rationale for his social studies teaching is to teach students to become better citizens and to become more involved in what is going on around them locally, as well as to understand things internationally, and "to grow as individuals."

Discussion

The two teachers in our study took very different paths to arrive at TPACK. As we considered their journeys from their preservice programs into their own classrooms, we considered why and how they demonstrated their beliefs and practices regarding technology, content, and pedagogy. Ted developed and presented meaningful instruction with technology integrated into his daily routine. Antonio used technology less regularly but with meaningful instruction as well. An issue that arose as we began this analysis was noted by Lee (2008); each of the three levels of the framework intersects with the others, which makes it difficult to discuss one without the other.

We found that technology integration provides great possibilities for teachers and students while, at the same time, posing "wicked problems" (Koehler & Mishra, 2008). Through these two teachers, we saw many examples of the interplay of TPACK. However, as we viewed the context for how the teachers used technology and how they negotiated the affordances and constraints, we noted differences and similarities in how the teachers enacted technology as part of their pedagogical practices for social studies. Next is a summary of how these phases of engagement, context, delimiting, and pedagogical elaboration interwove in our teachers' development of TPACK.

Context

For both Antonio and Ted, the context (technology) of their teaching situations affected how they viewed and considered technology, but in very different ways. Initially, as a preservice teacher, Antonio wanted to implement most of the technologies that he had learned in his teacher education program. However, he was confronted with obstacles or wicked problems (e.g., access, electrical support, and mentoring teachers) presented by the context in which he taught. He found ways (e.g., consultation with methods professor) or reasons (his students) to overcome them. During Antonio's in-service teaching, he examined possible technologies and wanted to employ them, only if there was a fit between the technology and the content. He would not use technology for technology's sake.

Ted, on the other hand, seemed to allow his early experiences during methods block and student teaching to limit his technology use. During both phases, he did not incorporate technology into his teaching unless it was required as part of the teacher education program. It seems that he allowed the barriers (e.g., assisting teacher, facility issues, and lack of hardware) to deter him from making technology an essential part of the classroom as he had hoped at the beginning of the methods block semester. However, once he began his teaching career, the context took him in a different direction. The digital divide he witnessed made him more determined to provide opportunities for his students to engage in meaningful technology experiences and to ensure that the students were prepared to become active citizens.

Delimiting

The process of delimiting resulted in the accepting or rejecting of certain technologies (Lee, 2008). What is important is how and why the delimiting occurred. At the beginning of the methods block, Antonio did not seem to engage in delimiting technologies. He hoped to incorporate everything he learned about technology into his teaching; his early statements indicated an eagerness to show his future students everything that was available. However, by the end, he had selected two applications (websites and PowerPoints) that he planned to use in this teaching. Perhaps the limitations he

confronted led to his selectivity. Once in his own classroom, he continued to be selective. Antonio was not affected by the time and effort involved with preparation, only whether the technology was valuable to his students (delimiting-content). He often contacted his methods faculty to discuss new technologies and ask for their opinions of the new technologies (e.g., wikis) to be incorporated into Antonio's classroom (pedagogical elaboration).

Ted, on the other hand, while selective in his instructional choices, was much more likely to implement technology into his classroom than Antonio. Ted was driven by the needs of students and their own lack of resources. Ted and his colleagues found ways to provide their students with what they needed to learn. His goal as a social studies teacher was to provide his students with tools (both with and without technology) that he felt they needed to be better citizens. However, during his preservice program, Ted made few attempts to overcome the barriers of accessibility and support he confronted.

Pedagogical Elaboration

Both teachers engaged in pedagogical elaboration to support the learning of their students. This process, which built on the work of Shulman (1986) and Lee (2008), illustrated how they thought about and decided to employ the technologies to teach the content to their students. Throughout the study, Antonio believed that technology was so integrated into the lives of his students that they expected it to be used in their classrooms. Antonio considered ease of use for his students, student expectations, and whether or not the technology was the best way to facilitate the students' learning. He would not use technology for technology's sake.

In his preservice program, Ted did not choose to incorporate technology into his pedagogy. However, in his own social studies classroom, situated in a school with multiple barriers (lack of resources within the school and in students' homes), he saw technology as an opportunity to bring the world to his students, commenting, "You don't have to go anywhere except where there is technology." Although Ted had to teach the technology before he could begin the process of teaching the content, he felt that using the technology was vital to motivating the students to learn the content. Although Ted's decisions to offer technology were very different from Antonio's decisions to use technology, both teachers chose technology to enhance the content (as in Fairey et al., 2000) while being willing to reconfigure their approach in their use of technology, pedagogy, and content (as in Mishra & Koehler, 2006).

Conclusions and Implications

Examining the technology use of teachers over time (from initial teacher education preparation to a few years into teacher induction) can assist social studies teacher educators in advancing how we further shape technology as a partner both in context and in fostering development and opportunities for future social studies teachers. Teacher educators can learn some lessons when considering the paths taken by each of these social studies teachers. The overarching lesson we have learned over the course of this study is that technology integration is truly complex (as asserted by Mishra & Koehler, 2006).

Clearly, technology was vital to promoting social studies content and pedagogy in both classrooms. Yet, each teacher differed in why and how he used technology. As they each learned technologies during their teacher education program, their reasons for using or not using technology were different. Responding to how each delimited their instruction,

we considered Doolittle and Hick's (2003) call to understand why and how teachers employ technology to provide meaningful and challenging social studies instruction. When Antonio became a classroom teacher, he became more selective and thoughtful in his technology integration. Ted's primary reason for examining and selecting technologies was to provide opportunity for his students. Both of these teachers felt that technology was a natural way to present content to their students, but they had different pedagogical aims (as described by Manfra & Hammond, 2008-2009).

As we examined how Antonio and Ted viewed, negotiated, and enacted the complexities of social studies and technology for social studies teaching and learning, we saw the differences in their approach to and application of technology. Teacher educators should not take a cookie-cutter approach to preparing preservice teachers. As Shulman (1987) noted,

> The goal of teacher education is not to indoctrinate or train teachers to behave in prescribed ways, but to educate teachers to reason soundly about their teaching as well as to perform skillfully. Sound reasoning requires both a process of thinking about what they are doing and an adequate base of facts, principles and experiences from which to reason. (p. 13)

When considering technology, Mishra and Koehler (2006) asserted that the connection of technology, pedagogy, and content are essential. Preservice teachers must be prepared to navigate a journey that merges meaningful and challenging social studies content, pedagogy, and technology (Swan et al., 2007) through careful, critical analysis, reflection, and design. Antonio and Ted were able to see the importance and the value of technology and to make the connections between technology, content, and pedagogy as they carefully selected and implemented technology that complemented their social studies instruction.

This research study has given us many "ah ha" moments. Our teaching has been further informed, and we have discussed goals for future mentoring opportunities for our teacher candidates and graduates. In preparing this manuscript, we reflected on the two teachers included in this study and realized the ongoing parallels to their being teachers who possessed TPACK. The two teachers in this study have continued participation in professional development opportunities and have maintained relationships with their teacher education faculty.

Antonio lives in another state, but has continued to "stay in touch" with his former college professors and recently made a visit to the campus. During that visit, he learned how the teacher education program was currently using wikis. Within a week after he returned to his school, he shared his first wiki with his former professors and asked for feedback. Ted has become the proclaimed "technology teacher leader" at his school and most recently received an award for an outstanding lesson plan, which integrated technology in the content field. He is scheduled to present his work at an upcoming statewide social studies conference.

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