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Supporting 21st century skill development calls for necessary changes in teaching practices to encourage contemporary learning outcomes. Research points toward technology integration as a catalyst for supporting shifting pedagogies necessary to enhance learning. As many Catholic educators and leaders are attempting to re-shape Catholic school learning for the 21st century, the Catholic school context provides a unique opportunity to understand technology integration and teaching practices. To address the need of understanding the development of teaching practices of Catholic educators in a digital age, this qualitative multiple-case study examines teaching practices of four middle-level Catholic school educators during a one-to-one technology initiative. Individual and cross-case analysis of the data revealed two considerable themes with regard to technology and 21st century thinking and enactment: shifting classroom dynamics influenced pedagogical approaches; and content played a central role in technology integration and instruction.

Keywords: 21st century education, technology, Catholic education

Technology provides access to information, the ability to communicate, and opportunities to collaborate on a universal scale unparalleled to prior decades. Preparing students to become active and effective contributors in this knowledge-based, connected world requires a fundamental change in educational pedagogies (Fullan & Langworthy, 2014). Technology initiatives in education are becoming the standard, with teacher and student access to devices doubling over the past two years (Daniels, Jacobsen, Varnhagen, & Friesen, 2014; Speak Up, 2013). The commonly cited goal of supporting and enhancing 21st century skill development (Argueta, Huff, Tingen, & Corn, 2011; Johnson, Adams Becker, Estrada, & Freeman, 2014; Muir, 2007) calls for necessary changes in teaching practices to encourage such contemporary learning skills (Sauers & McLeod, 2012; Shapley, Sheehan, Maloney, & Caranikas-Walker, 2009). The definitions of, and relationships among, those changing characteristics are often explored through various 21st century teach-

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ing and learning frameworks, with common themes such as creativity, collaboration, and critical thinking, supported through increased innovation and digital literacy (Anderson & Krathwohl, 2001; Churches, 2009; Dede, 2010; Fullan & Langworthy, 2014; Munzenmaier & Rubin, 2013; Pacific Policy Research Center, 2012; Partnership for 21st Century Learning, 2015). However, research has revealed little evidence of actual shifts in teaching practices that support 21st century skill development (Cuban, 2006; Daniels et al., 2014; Galla, 2010; Gibbs, Dosen, & Guerrero, 2008; Gunn & Hollingsworth, 2013; Weston & Bain, 2010). As research continues to focus on schools and teachers that support innovative educational practices, the distinctions and intricacies between different teaching contexts and school environments is changing continuously, and focused inquiry on context is an ongoing need (Angeli & Valanides, 2009; Ertmer & Ottenbreit-Leftwich, 2010; Koehler et al., 2014).

The Catholic school provides a unique context and opportunity to understand technology integration and teaching practices. Families that seek private schooling often look for alternatives to secular education (Hunt & Carper, 2012); of the 5.5 million students enrolled in K-12 private education, nearly half are enrolled in Catholic schools (Center for Education Reform, 2014; NCEA, 2013). Nuzzi, Frabutt, and Holter (2012) recognized the importance of Catholic education by highlighting the strong reputation of academic scholarship, community contributions, and student growth in conscience and faith.

As many Catholic educators and leaders are attempting to re-shape Catholic school learning for the 21st century (Kennedy, 2013; Nuzzi et al., 2012), minimal research has been completed on the complexities of Catholic education in a digital age (Tellez, 2013; Zukowski, 2012). While technology allows for the innovation, connections, and collaborations called for by researchers such as Kennedy (2013), O'Keefe and Goldschmidt (2014), and Zukowski (2012), understanding the growing need for technology integration in support of 21st century skill development, and how that melds with the philosophy and purpose of Catholic education, emerges as an important issue as schools move forward with technology initiatives. To address the need of understanding the development of teaching practices of Catholic educators in a digital age, I explored classroom instruction of middle-level Catholic educators during the first year of a technology integration initiative at a K-8 Catholic school. Framed within this inquiry, I focused on two questions to guide the study: (a) How do the teachers' instructional practices align with Catholic educational goals? (b) How does the integration of technology influence instructional practices?

Theoretical Framework

As the context of this research was situated within a Catholic school, I first focused on frameworks that addressed and outlined the purpose of Catholic education. To further understand the influence of technology on teaching practices, I explored a broader perspective of technology integration in the 21st century.

Foundations of a Catholic School

Miller (2006) detailed five elements of a Catholic school as necessary to maintaining and strengthening its identity, which comprised the fundamental purpose and mission of Catholic schools. First, Miller pointed out that a Catholic school must be inspired by a supernatural vision. Education must be more than an "instrument for the acquisition of information that will improve the chances of worldly success" (p. 178). Second, a Catholic school must be founded on a Christian anthropology, and to be worthy of the Catholic school name, it must be founded on Jesus Christ. He (Christ) must be the center of a school's mission, and the gospel of Jesus Christ should "inspire and guide the Catholic school in every dimension of its life and activity" (p. 208). Miller acknowledged that many Catholic schools fall "into the trap of secular academic success" (p. 224) and emphasized Jesus Christ as a school's vital principle. Third, a Catholic school must be animated by communion, and emphasize school as a community. A Catholic school must be true to its identity, and "express physically and visibly the external signs of Catholic culture" (p. 336). Additionally, prayer must be a normal part of the school day, and acts of religion should be perceived in every school. Fourth, a Catholic school should be imbued with a Catholic worldview and the "spirit of Catholicism should permeate the entire curriculum" (p. 336). A Catholic school must educate the whole person, therefore all instruction, not just religion, must be authentically Catholic in content and methodology. And fifth, a Catholic school must be sustained by gospel; that is teachers and administrators are responsible for creating a Catholic school climate. "Catholic educators are expected to be models for their students by bearing transparent witness to Christ and to the beauty of gospel." (p. 478). I used Miller's detailed elements of a Catholic school as a primary coding framework in the data analysis to explore and understand the Catholic identity of the school and participants.

Understanding the pressures Catholic schools are facing in the 21st century, Cook and Simonds (2011) provided a new framework to help Catho-

lic schools remain relevant and competitive in today's educational environment. They acknowledged the importance of Church documents as elements of inspiration and guidance, but noted that the practical application of such documents to modern educational structures is a challenge. Therefore, Cook and Simonds' framework (Figure 1) "offers a coherent and relevant way of looking at Catholic identity and charism in contemporary schools" (p. 321).

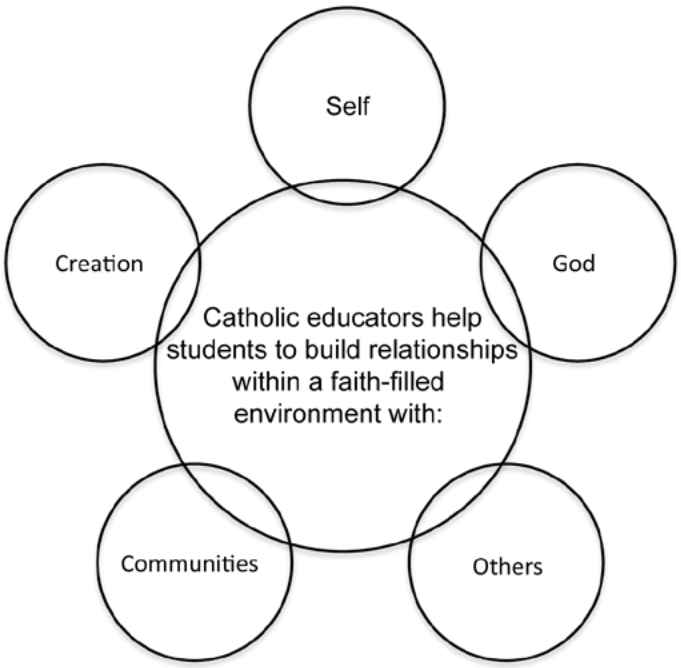

Figure 1. Adapted from *A Framework for the Renewal of Catholic Schools* (Cook & Simonds, 2011)

Built upon a culture of relationships, this model has the potential to help students understand the modern complexities between culture and faith. Furthermore, Cook and Simonds proposed that the application of the framework could help Catholic schools "clarify what sets them apart from all other schools, more effectively recruit students, and enable their graduates to change the world by building relationships instead of fences" (p. 330). I used Cook and Simonds' framework, in addition to Miller's (2006), as another coding structure in the data analysis. The focus on relationships helped to

highlight specific elements of the school's mission and the participants' opinions of the purpose of Catholic education.

Twenty-First Century Education and Technology

The design of 20th century teaching emphasized time-based memorization and retelling of facts. Students were passive learners of content knowledge, and demonstrated understanding through routine summative assessment. This construct of teaching and learning supported 20th century educational goals through student preparation in the use of routine skills (Pacific Policy Research Center, 2012) for jobs that consisted of procedural cognitive work and labor (Dede, 2010). Dede (2010) suggested the 21st century "has seen a dramatic shift in the economic model for industrialized countries" (p. 2), and the successful worker, therefore, needs skills that support creativity, flexibility, and fluency in information and communication technologies. Therefore, the primary challenge for education is "to align curriculum and learning to new economic and governance models based both on a global, knowledge-based workplace" (Dede, 2010 p. 4), in order to prepare students for future work and life that emphasizes information and knowledge construction opposed to standardized systems and manufacturing. Fullan and Langworthy (2014) compared "old and new pedagogies" and highlighted old pedagogies that focused on technology use, pedagogical capacity, and content knowledge to achieve the primary goal of content mastery (p. 3). In contrast, new pedagogies modeled teacher-student partnerships in the learning process (Fullan & Langworthy, 2014). New pedagogies are "used to discover and master content knowledge and to enable the deep learning goals of creating and using new knowledge in the world" (Fullan & Langworthy, 2014, p. 3).

Various studies of technology integration highlighted the necessary shift in teaching and learning strategies toward dynamic learning environments (Sauers & McLeod, 2013; Shapley et al., 2009). However, many technology rich environments do not develop pedagogy suitable for dynamic learning (Daniels et al., 2014; Galla, 2010; Gibbs et al., 2008), with technology utilized as a modern learning tool but content delivery remaining in a 20th century model (Cuban, 2006; Gunn & Hollingsworth, 2013; Weston & Bain, 2010). Research on technology in education indicated undeniable use in classrooms, but yielded diverse perspectives on actual effectiveness in consideration of the deeper teaching and learning goals and outcomes of 21st century education (Gunn & Hollingsworth, 2013). With new standards replacing basic skill competencies (Pacific Policy Research Center, 2012), schools are tasked with

shifting curriculum and teaching to support the broad idea of 21st century learning and future work preparation (Dede, 2010).

The International Society for Technology in Education (ISTE) aims to empower learners and improve teaching and learning in a 21st century connected world (ISTE, 2014). In addition to contributing a teaching perspective to 21st century education, the ISTE Standards for Teachers emphasize technology in teacher practice (Parker, Allred, Martin, Ndoye, & Reid-Griffin, 2009). The ISTE Standards for Teachers follow the previously developed ISTE Standards for Students situated in the context of 21st century learning, and provide a framework for educators to shift and align teaching practices with desired 21st century student outcomes. In this study I emphasized the first two ISTE Standards for Teachers:

1. Facilitate and inspire student learning and creativity: Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity and innovation in both face-to-face and virtual environments
2. Design and develop digital age learning experiences and assessments: Teachers design, develop, and evaluate learning experiences and assessments incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the Standards for Students

While the ISTE Standards for Teachers provide a guiding framework for educators to develop necessary 21st century teaching knowledge, and are widely adopted across teacher learning and technology professional development programs (Haynes, Baylen, An, Bradford, & d' Alba, 2014; Morris, 2013), there is limited research on the relationships between the standards and teachers' classroom practice (Sam, 2011). Therefore, I chose to apply the ISTE standards as a framework to further understand the use and influence of technology in teaching practices.

Method

Research Design

This study began when a Catholic K-8 school, Saint Stephen's, received funding for a three-year teaching and technology initiative. Saint Stephen's entered into a university partnership and middle level (grades 6-8) faculty were provided professional development, leadership and planning, and edu-

cational technology (for teachers and students). The partnership yielded a unique opportunity to research changing pedagogies to support teaching and learning with technology within the context of Catholic education. Thus, to further understand the development of pedagogical practices of Catholic educators in a digital age, I used qualitative inquiry to explore and understand individual teacher experiences (Creswell, 2014). I used multiple-case study to develop an in-depth analysis of each teacher, and to explore a series of *how* questions (Creswell, 2014; Yin, 2014); and applied cross and individual case analysis to deepen the awareness and insight of the relationships between teaching and technology integration (Miles & Huberman, 1994).

Site and Participants

In order to determine teacher participants, I first identified Saint Stephen's as a site based on its identity as a Catholic school and its recent adoption of a technology initiative. Prior to the partnership, Saint Stephen's middle level teachers and students had access to a shared computer lab with desktops. In the second year of the partnership, Saint Stephen's implemented a middle level one-to-one initiative through which all teachers and students were provided an internet-capable device for continuous use at school and home. New technologies introduced included individual teacher laptops, classroom TVs, and individual teacher and student tablets. Four middle level teachers (out of five possible educators) agreed to be part of this study. Table 1 presents selected demographics of the four participating teachers.

Table 1

Participants

Case	Content	Age (range)	Years Teaching (range)
Mary	French, Religion	>50	>20
Sharon	English, Religion	>50	>20
Johanna	Science, Math	>50	5-9
Scott	English, Social Studies, Religion	30-39	5-9

Data Collection and Analysis

Data were collected from October of 2013 through November of 2014. Consistent with qualitative case study design, I preserved multiple characteristics of qualitative inquiry throughout the data gathering process (Creswell, 2014; Marshall & Rossman, 2011). First, all data were collected in the natural

setting of the participants, namely, the school. Second, I played a key role in the research process; I personally collected and analyzed all data. Last, I used multiple sources of data. Interviews allowed for detailed descriptions of the experiences and of the participants (Crowe et al., 2011); observation provided deeper insight of teachers' teaching methods, and helped to "gain insider views and subjective data" (Creswell, 2013, p. 167); historical documents and field evidence (e.g. mission statement, school iconography, classroom set up, teacher reflections, teacher created photographs and videos of lessons, email correspondence, teacher blogs or websites, and informal teacher conversations) were collected from the physical and social environment to deepen my knowledge and understanding of context (Yin, 2014).

I interviewed teachers first individually, then in focus groups. Each interview lasted approximately 60 minutes. Questions addressed teachers' background, content, pedagogy, technology use, beliefs and understandings of education, personal educational values, and interpretation of school philosophy. I was an active participant at the school; therefore observation took two different forms. First, I formally observed teachers in their classrooms and recorded data without direct involvement with the teachers or students. I observed teachers twice for 50 minutes per observation. Second, I was an active contributor to teachers' lesson planning and classroom activities. I worked directly with teachers on learning how to personally use the new devises, and co-facilitated professional development meetings on educational technology. At this level of participant observation, I was involved with each teacher approximately four times per month for 14 months. Third, I used historical documents to reduce the issue of reflexivity; that is, these data were created for reasons beyond the research inquiry thus not influenced by the study itself (Yin, 2014). I collected field evidence to gather additional individual teacher data on classroom practices and environmental context.

Data were first analyzed following a general inductive approach through the emergence of themes embedded in frameworks. I used a priori coding based on Miller's (2006) elements of a Catholic school, and Cook and Simonds' (2011) framework for the renewal of Catholic schools. I developed additional codes and themes on the basis of emerging information collected through the various data sources (Creswell, 2014) (see Figure 2). To gain a deeper understanding of technology in teaching, I used Yin's (2009) case-oriented approach to conduct a second data analysis applying the first two standards of the ISTE Standards for Teachers framework to illuminate teaching practices with technology.

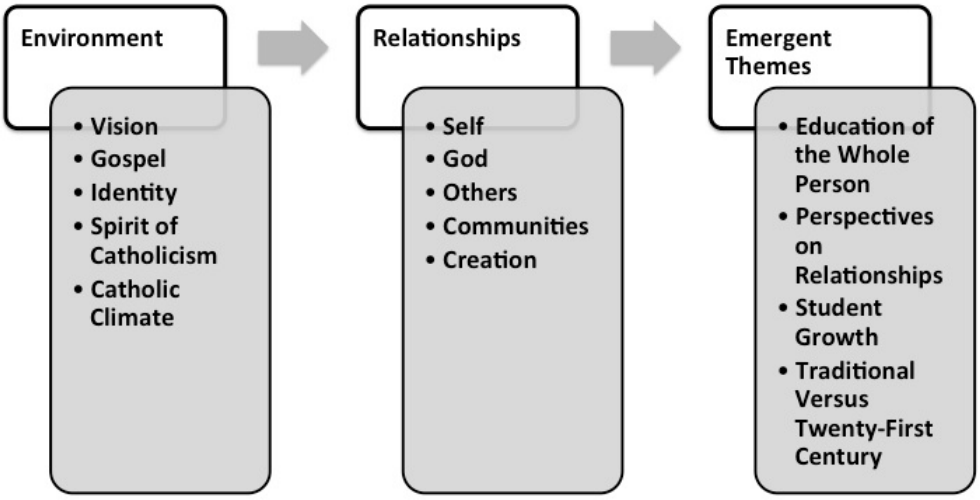

Figure 2. First Coding Framework

Findings

To explore the development of Catholic educators' pedagogies in a digital age, I first sought to understand teachers' instructional practices as they related to Catholic education. To gain an understanding of the influence of technology on teaching, I asked specific questions related to technology in education and used the accompanying data to highlight technology and instruction. Participants were asked to reflect on the school mission statement and their personal instruction. Data from observations, and evidence from the physical and social environment provided additional detail to understand teacher practices through the lens of the previously described frameworks. As such, findings are presented by the research inquiry's guiding questions.

How Do the Teachers' Instructional Practices Align with Catholic Educational Goals?

Individual and cross-case analysis of the data revealed four dominant themes within teacher practice: education of the whole person; perspectives on relationships; student growth; and traditional versus 21st century teaching.

Education of the whole person. Johanna valued the connection between her content (math and science) and Catholic teachings and felt it her responsibility that students were aware of the relationship between the two. As an

example, she continued to reference the school's educational philosophy as "whole person body and soul." In other words, it was her duty to promote awareness between conflicting teachings or messages. She referenced teaching evolution in science and the complex questions that the students ask. Johanna explained that she invites the Saint Stephen's parish priest to talk to the students about the differences between the Bible and the science text, and follows up these conversations by explaining "you can have stories and things that tell you about the Truth without being factually true... And making the distinction between that—this is an amazing plan laid out by God." Johanna felt that, by integrating more technology into her practice, she would be able to further engage students with the content and "hopefully" to expose them to a greater love of science. "I don't know what happens to little kids who in first grade are born scientists and when they get to high school go right down hill with it. I don't want to be part of that."

Mary spoke about the connection between content and faith, and emphasized that faith is not one part of a student, "it englobes our whole being—we are living it." Mary spoke about her work with colleagues in Faculty Faith Formation; a regular workshop for teachers that focused on embedding Catholic beliefs and values in curriculum and practice. She underlined the need for faculty to embrace and model Saint Stephen's mission in order for students to understand Catholic education from an interdisciplinary perspective and to be able to grow in all areas, not only, for example, in religion. In practice, Mary consistently modeled her opinions. Regardless of the class (religion or French), she put Christ and faith first either through prayer, song, or her interactions with students. She posed questions that asked students to reflect on their actions through the philosophy of the school, and engaged in self-reflection by asking whether or not she was embracing Catholic values.

Perspectives on relationships. Sharon spoke to the education of the whole person, but in doing so she focused on the relationship with God. She defined Saint Stephen's mission by emphasizing dignity of every person and helping students build, and maintain, a personal and spiritual relationship with God. In teaching religion, Sharon spoke about the time she spends in the beginning of each year recognizing the gifts and values of each student and his/her contributions to the class and community. She considered herself the maternal teacher, "we will talk and we will discuss feelings and we will just look at the whole, not just our person; I'll put academics aside if we need to." I asked her to expand, and she described their morning meeting,

> We have our circle of power and respect, we, I spend a lot of time just building our community. And there are times when we, that we will talk about some, whatever, if there's something bothering us, or if we need to address a problem that, yeah we'll put academics on hold and solve the problem.

Sharon felt that allowing space to do this type of relationship building in Religion classes would transfer over to other classes. I observed her teaching English, and I saw similar aspects of relationship and community building. Hanging on her walls were student created words and images of respect and community, with Scripture as a border. Sharon also consistently encouraged conversation and open dialogue with and between students.

Scott discussed different perspectives on Catholic education and values as being central to Saint Stephen's mission. He felt students' reflections on their place and relationship with the "Truth or big idea" was a way to engage them in dialogue while teaching in light of the Catholic faith. He recognized student perspective as a critical element in learning through discovery, and being comfortable exploring personal relationships between opinions and Truth is "what being a Catholic is—a universal understanding." In Religion classes, however, Scott felt bounded by the resources and curriculum provided by the church, but stated, "there should always be a distinction between what the Catholic Church teaches and what are some other ideas." Therefore, he explored these relational elements when teaching English and social studies. He recognized the various religious differences among the students, and aimed to teach from the point of view of history. In his teaching, Scott modeled the perspective of the time. For example, in a lesson on the French revolution, he asked the students their opinions on whether or not the killings of the nobility were justified. He acknowledged that some of his colleagues would be insulted at the question prompt - 'you're killing priests and nuns!' - but he encouraged students to wrestle with their own perspectives. "One of the ways I talk about it," stated Scott, "I'm a Catholic here at this time, I don't know if I would have been—in French revolutionary time."

Student growth. Student growth and development was a common message in Saint Stephen's mission statement, values, and iconography. When I walked through the doors, I was presented with signs and symbols that represented responsibility, respect, and academic excellence. Throughout the data, in both interview and observation, I found similar evidence of commit-

ment to student growth, including personal, academic, and spiritual. Differing from the other themes, however, student growth was most publically illuminated *after* the integration of technology. As digital tools were increasingly integrated into instruction, much of the data pointed toward student growth in, and awareness of, digital citizenship. When Johanna was asked directly how technology might support or challenge the school philosophy or her teaching, she stated, "I keep coming back to digital citizenship." She recognized technology as a way to help students grow from a more global perspective, but embraced the small size of Saint Stephen's and the ability to "keep a lid on things." Mary brought up the issue of a digital footprint. She questioned how to talk to students about the idea of forever. She explained that through confession, God forgives, but in a digital world there is less forgiveness. The issue of "forever" was new to her, and she did not know how to convey that message to students.

In the second year of the study, Sharon, Mary, and Johanna grappled with the issue of student responsibility. Now that the middle school was one-to-one, they wanted students to be able to personalize their individual tablets but were concerned about appropriateness. They all recognized that for students to grow in maturity and responsibility, they needed to let them "loose" a little with the devices. After a 20 minute conversation about potential new policies, the teachers brought the conversation back around to grounding any rules in their already established community guidelines. This was one of the first observed moments that they did not consider technology separate from their practice; it was now part of the school and decisions regarding technology should fall under the same guidelines. "We already encourage and embrace respect," stated Johanna, "that shouldn't be any different just because we are talking about a tablet."

Traditional or 21st century teaching. Data revealed many references to "traditional" and "twenty-first century," and these were terms that I did not use in the interview protocol. Although not explicitly stated in the Saint Stephen's mission statement, Scott and Johanna repeatedly referenced a general approach to teaching and curriculum as "traditional". When prompted for more explanation, they both referred to textbooks, desks in rows, and paper and pencil note taking. Johanna emphasized her overall traditional approach to teaching as she referenced lecture as an effective way for students to learn content. She was confident that her instructional methods aligned with school academic goals and values and was nervous about the "twenty-

first century push" for student involvement and voice. "Show me the evidence. The jury is out on all this stuff. Let's be careful about not just going with the fad. Let's make sure we are improving learning outcomes. Not just going with the latest things."

Scott speculated about perceived tensions among teachers when thinking about changing teaching practices because of technology. He specifically referenced a "new" mission statement: one that focused on 21st century learning.

> I guess one of the tensions we've found is, or at least this is more of my perspective, one of the tensions is the way the mission statement is worded is it talks about the best of traditional, and then it talks about twenty-first century skills, and I don't know what the best of traditional education represents.

He believed that 21st century education should incorporate the best of traditional education, but questioned whether Catholic education could be outside of what was considered traditional. While he hoped that it could, he could not envision what it would look like in the classroom.

Interview data from Sharon also revealed comparisons between traditional and 21st century teaching, but it was in observation and her classroom environment that the contrast was most evident. Initially, Sharon's classroom was set up with desks in a V-formation facing the front of the classroom. At the front was a chalkboard, but the focal point was the prayer table (with candles and a Bible) and a Crucifix hanging on the wall. Often, there was Scripture written on the board. After new technologies were introduced, Sharon rearranged her classroom to face the sidewall; the desks were still in a V-formation, but they now faced a large television screen. The prayer table was in the back corner, and the Crucifix was no longer visible when students looked forward. I engaged in a conversation with Sharon about the change, and she admitted that she was struggling with the balance between wanting students to see or experience the new technology, but maintaining the Catholic culture as the "heart" of the room. I asked her which was more important to her educational goals, and the next week the room was back to its traditional set up.

How Does the Integration of Technology Influence Instructional Practices?

The ISTE Standards for Teachers served as the framework to understand the skills, knowledge, and instructional practices participants described and demonstrated in their teaching. With a primary focus on classroom instruction, I applied the first two standards to the data as each standard specifically addresses teaching and learning with technology. I used a case-oriented approach; therefore, I organized findings by participant.

Mary. Among the teachers, Mary expressed the most concern about integrating too much technology. She had questions such as, "is time figuring out technology sacrificing other learning or activity time?" Additionally she questioned "filling classrooms with artificial or mechanical devices" as authentic means of communication. However, observation of her French class revealed that her facilitation of student learning experiences provided opportunities for student expression and creativity. She focused on student academic outcomes, reflection, and collaboration as primary goals for using technology; and if those goals were not being met, she allowed space for students to express their opinions on how to make their learning experiences better. For example, Mary admitted that teaching prepositions in French was not "the students' most favorite activity." Learning vocabulary was a process of memorization. However, Mary wanted to further engage the students and provide an opportunity for them to learn from each other. Instead of copying words from a text, in collaborative groups students created videos depicting different prepositions. Each group shared their video with the class, and students individually provided feedback on a shared digital document. Each student received comments on how well the video helped other students remember prepositions, and Mary received feedback on the use of video in learning.

Mary was excited about increased technology in her Religion classroom. She acknowledged that too often religion was a "different sphere" in students' lives and was hopeful that by integrating technology, something of interest to students, she would be able to bridge a gap between religion and students' other interests. She believed that to educate a whole child, she needed to help integrate the two; "Religion needs to be there in order for it not to be something externalized but brought into their everyday world." However, throughout the time of data collection, there was no evidence of Mary using technology in Religion classes.

Sharon. Sharon consistently questioned her abilities and her effectiveness of using technology both personally and in the classroom. However, Sharon's personal descriptions and knowledge of technology contrasted with observa-

tions and review of her lesson plans. She regularly integrated technology in most of her teaching, especially in English. During one week of observations, I watched Sharon teach the process of narrative writing. Students completed assignments at home, and class time was used for peer feedback. Students wrote their narratives using their tablets, and then shared them digitally with their feedback partners. Sharon utilized the Google Classroom workflow system, which allowed her to also provide regular feedback. She wanted to experiment with digital conferencing, and encouraged students to use different built-in features of the writing tools to allow for that task. "The cyber-conference," explained Sharon, "is a way for me to be involved in every student-student conversation. Conferencing digitally provides a conversation record. I can look at these conversations outside of class." In a follow up interview, Sharon expressed her desire to take this type of writing unit further. She wanted help students set up blogs so they could engage in dialogue with students from a sister school. A few weeks later, I asked Sharon if she had started this process. She admitted that she still had not figured out the best way to start a class blog, but stated, "it didn't matter. The students just figured it out." In subsequent observations, the process of "students figuring it out" manifested in daily classroom activities. Sharon exhibited a noticeable change in her interactions with students; she no longer stood at the front of the classroom, and students were consistently working in small groups on varied activities. As opposed to delivering whole group instruction, Sharon's time was spent facilitating conversations, providing personalized feedback, and asking students for suggestions on what digital tools or applications to use.

Johanna. Johanna referred to herself as a "gadget geek," and her personal love of technology aligned with her opinions of technology in the science classroom. She considered technology as a teaching and learning motivator; it allowed for increased access, exposure, and engagement. "That said," stated Johanna, "I also believe in balance. Tech is about engagement; if I'm bored with something the kids are definitely bored." Balance was a common theme in all of Johanna's interviews, as well as science class observations. There were elements of technology integration in every class, but if something was not working, either technically or in terms of learning outcomes, Johanna was flexible in making quick changes. For example, during a lab students used shared digital documents and spreadsheets to collect and analyze data. One group of students wanted to do it by hand. Johanna simply stated, "do what works best for you." She explained to me that she is mostly concerned about the learning outcome; if some students "get there differently, that is okay."

This significantly differed from Johanna's opinion on the use of technology in teaching and learning math. In teaching math, Johanna felt a need to prepare students for a high school honors track. "I have so much to get through; I am very much setting a foundation. I don't do anybody any favors if we only get half-way through the book." She described her mathematics instruction as very "traditional–lecture, pencil, and paper." While she talked about a few software programs that assisted students with reviewing material, Johanna was adamant that using more technology would not increase or maximize content learning. "Tech helps target kids that are having difficulty, and helps plug holes, but we can't stop. You have to stay on board. If you fall off the wagon in October, you are not going to get back on."

Although Johanna regularly exposed students to different learning opportunities supported with technology, she expressed a concern with "plateauing" in terms of teaching. "I'm still doing the same things I've always done, just now with technology." This was an ongoing consideration of Johanna's; throughout the informal observations she consistently asked, "what can I do differently?"

Scott. In English and Social Studies classes, Scott was excited about the new opportunities for learning that technology would allow for, "blogging, video, just different ways for students to write and express themselves." In practice, Scott tried to bring in as many different forms of material as possible. He emphasized student creativity in the writing process; while there was a linear procedure that he wanted students to know, he encouraged them to go through each step using their own methods of expression. He supported students in using digital tools for communication and collaboration, and emphasized the degree to which technology could allow for more personalized approaches to content knowledge. For example, some students used collaborative digital tools to provide feedback and edit, while others students used different brainstorming techniques such as digital storyboarding. Scott highlighted the importance of learning outcomes, "but how those outcomes are achieved can differ for each student."

Observations of Scott teaching Religion, and conversations about Religion, drastically contrasted with his other classes. Scott did not see Religion as a class in which he would use technology, and data revealed that he in fact did not. There was a standard curriculum for Religion, and he felt that bringing in digital resources would go against what was expected from him as a Religion teacher. He continuously referenced his opinions of "traditional" education and felt that Religion had an established place in that traditional domain. That is, he was not going to change his teaching approach in a class that had specific guidelines established by the church and school.

Discussion

In exploring the developing practices of Catholic educators during the technology initiative, analysis and reflection of the data yielded two considerable themes with regard to 21st century thinking and enactment: shifting classroom dynamics influenced pedagogical approaches; and content played a central role in technology integration and instruction.

Shifting Classroom Dynamics

The ISTE Standards for Teachers emphasize teacher goals and outcomes to support 21st century student learning (ISTE, 2014). In rethinking teaching approaches in education, Anderson and Krathwohl (2001) promoted the creativity element from Bloom's (1956) taxonomy of educational objectives to be the most complex cognitive process in learning (Morphew, 2012). Other researchers proposed that inquiry-oriented, or constructivist, approaches to teaching fostered student creativity (Morphew, 2012; White & Fredericksen, 1998). Morphew (2012) further suggested that collaborative experiences between teachers and students, acknowledging both as important contributing members to the learning environment, could enhance creativity. This requires a shift in traditional teacher-student classroom roles, and a greater emphasis on new pedagogical approaches to the facilitation of teaching and learning (Fullan & Langworthy, 2014).

Sharon and Mary demonstrated this shift, highlighting instances when students solved problems. As Sharon stated, she did not need to figure out how to set up a blog because the students did it instead. Although this was an example of a distinct problem, Sharon stressed that allowing students to solve problems independently on a "smaller tech scale" enhanced their ability to collaborate and solve problems across a larger spectrum. As students became increasingly aware of their abilities to co-facilitate technological knowledge acquisition or dissemination, that process carried over to content development. Students began looking to their peers for help or feedback before asking Sharon—an experience that she had not had prior to integrating technology in her class. Mary followed a similar approach. Although in French she was indisputably the authority in content knowledge, she proclaimed the students the experts in the technologies she used to deliver content. In turn, Mary described a role-reversal; she would describe learning outcomes and students would show her various tools to enhance those outcomes.

As educators, and in this context as Catholic educators, look to shift teaching to support goals of 21st century education, technology can support a

collaborative and communicative learning environment, but teachers need to allow space for teacher-student learning partnerships. Versatility in teaching promotes a dynamic learning environment; as Mary stated, "you can't think of everything on your own, and exchanges with students are so enriching."

Content

While teachers regarded technology integration as a natural way to enhance Saint Stephen's educational program, interview and observation data did not support this opinion across all content areas. The inconsistencies of technology integration in Johanna's teaching of science and math highlighted a dichotomy of her practice. In Science classes, she saw technology as a tool to increase communication and collaboration among students, a central goal of contemporary education (Partnership for 21st Century Learning, 2015). However, she resisted technology in Math for fear of not being able to cover all of the material. In this instance, Johanna was less concerned with responding to the, as she put it, "twenty-first century push", and focused on her role as the teacher: to deliver content. However contrasting in this case, data illuminated stronger content differences in cases where a participant taught multiple subjects where one was Religion. For example, Scott embraced technology in his English and Social Studies classes, but had trouble envisioning its usefulness in Religion. He was held to specific guidelines within the domains of the content, and the opportunities he saw for technology in English, for example, did not apply to Religion. Similarly, although Mary initially expressed excitement about technology potentially bridging a gap between students' religious practices and other interests, it was in her French classes that she was most often observed using digital tools to enhance students' educational experiences.

At the turn of the century, Boland (2000) outlined a blueprint for Catholic schools for a successful transition into 21st century teaching and learning. I drew from Boland's suggestions and recognized that teachers at Saint Stephen's incorporated purpose and reality by integrating the school mission with academic and technological advances. However, the element of technology was not evident in Religion class, a core component of the academic program. Boland suggested moving away from the practice of memorization to more student examination of faith and personal application to life in the Religion class. Scott encouraged high levels of personal inquiry, but not in Religion. Furthermore, he questioned the place of Religion outside of what he considered traditional education; Scott believed that 21st century educa-

tion should incorporate the best of traditional education, but Religion precluded that opinion. Sharon espoused Boland's suggested practices as she facilitated student reflection and relationship building in Religion, but that was absent of technology. However, in her English class she was able to cultivate a similar environment while at the same time integrating technological tools.

Conclusion

Looking across various 21st century education and teaching with technology frameworks, accentuated themes focused on dynamic and flexible teaching and learning environments that support knowledge creation and application from a creative and collaborative perspective (Anderson & Krathwohl, 2001; Churches, 2009; Dede, 2010; Fullan & Langworthy, 2014; Munzenmaier & Rubin, 2013; Pacific Policy Research Center, 2012; Partnership for 21st Century Learning, 2015). Furthermore, such knowledge development is supported and enabled by consistent digital access and technology use in and out of school environments (Fullan & Langworthy, 2014). Data in this study revealed evolving pedagogy supported by technology that did enhance desired teaching and learning for this century. However, this was confounded in the Religion classroom. My interpretation of the place of Religion at Saint Stephen's was not a class meant to be taught in isolation, but one that served as a base for all other aspects of school life. This assertion was clearly evident in looking at the data from the perspective of understanding pedagogy separate from technology. Therefore, the drastic differences in approaches to teaching Religion, as compared to other classes, was surprising—especially when it was often the same teacher under consideration. Boland's (2000) turn of the century claim that within general and religious Catholic curriculum "technology will be the backdrop for the complete education of the child in the 21st century" (p. 519) did not entirely hold true at Saint Stephen's. The subject of using—and, more accurately, not using—technology in Religion was approached in three different ways: purposeful avoidance (Scott), excitement but non-use (Mary), and indifference (Sharon). It would be simiplistic to contribute this occurance to the individual, however as discussed, each teacher demonstrated changes in instruction influenced by the use of technology. That is, these teachers were not averse to technology use, they just did not use it in Religion. Technology integration and Religion curriculum need not be at odds. Fullan and Langworthy (2014) emphasized the allowances technology provides in the development of new pedagogies; they underscored the creation and use of new knowledge, and the learning

process as the focal point. Sharon and Mary approached Religion as a class where students were able to develop their knowledge of faith from a personal perspecitive and contextualize that knowledge through their own intepretations. However lacking in apparent use of technological tools, such practice emulates the saught after goals of 21st century education.

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