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LEADING IN THE DIGITAL AGE: A MULTI-CASE STUDY OF LEADING DIGITAL CITIZENSHIP

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LEADING IN THE DIGITAL AGE: A MULTI-CASE STUDY OF LEADING
DIGITAL CITIZENSHIP

DISSERTATION

A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy in the
College of Education
at the University of Kentucky

By

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2021

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ABSTRACT OF DISSERTATION

LEADING IN THE DIGITAL AGE: A MULTI CASE STUDY OF LEADING DIGITAL CITIZENSHIP

This study explored how school leaders make sense of and address digital citizenship as defined by Ribble (2011), and investigated what successes and challenges school leaders experienced while implementing digital citizenship programs in large Southeastern technology-rich schools. This bounded cross-case study, undergirded by Weick's (1995) Theory of Sensemaking, is also designed to explore how school leaders implement digital citizenship programs at technology-rich schools in a large, 1:1, Southeastern public-school district, and how they view their role as producers of digital citizens.

Findings indicated that an influx of computer technology caused school leaders to make sense of digital citizenship and address it in their school. Additionally, behavior described by leaders while making sense of digital citizenship was consistent with Weick's Theory of Sensemaking. Strategies implemented by elementary school leaders were more preventative in nature and varied from those more reactive strategies implemented by secondary leaders. Leaders shared common strategies to include curated lessons, teachable moments, infused curriculum, leveraging specialists, Internet filtering, policy, expectations, and leveraging community. Additionally, leaders experienced challenges related to addressing digital citizenship to include lack of knowledge, time, and sensemaking. Further, leaders experienced success when digital citizenship was a priority, relevant, and addressed school-wide.

KEYWORDS: Digital Citizenship, School Technology Leadership, Mixed-Methods Research

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03/11/2021

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DEDICATION

*This dissertation is dedicated to a fellow educator, confidant, and supporter, my wife
Tamara Schubart who embodies the philosophy that all kids matter.*

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CHAPTER 1

INTRODUCTION

An updated technology plan developed by the Office of Educational Technology (OET) (United States Department of Education, 2017) calls for ubiquitous connectivity, persistent access to high speed Internet in and out of school, powerful learning devices, responsible use policies, and guidelines to safeguard students. Large scale 1:1 technology initiatives currently exist across the United States in places like California, Florida, Georgia, Kansas, Louisiana, Maine, Massachusetts, Michigan, New Hampshire, Pennsylvania, South Dakota, Texas, and Virginia (Richardson, Bathon, Flora, & Lewis, 2013). According to Singer (2017), the amount of computer technology being shipped to schools increased by 363 percent from three million devices in 2010 to over 14 million in 2017. Schools and districts continue to implement more 1:1 initiatives by providing access to Internet-connected laptops and tablets for more P-12 students, thus raising behavioral concerns for school leaders.

As access to Internet-enabled technology devices in schools has increased, so too have issues related to the ethical use of those technologies (Ribble, 2015). Cheating (Parks, Lowry, Wigand, Agarwal, & Williams, 2018), cyberbullying (Zhou et al., 2013), distracted driving (Adeola & Gibbons, 2013), hacking (Hazari & Brown, 2013), plagiarism (Comas-Forgas & Oliver-Trobat, 2015), sexting (Gregg, Somers, Pernice, Hillman, & Kernsmith, 2018), social disengagement (Kyriacou & Zuin, 2016), distraction (Aagaard, 2015), and making false threats of violence against schools (Clark, 2016) are just a few examples of online ethical concerns (Assumpcao & Sleiman, 2011) present in schools.

As students leave their digital footprint, it is often difficult to reverse any harmful activity that may result from their digital interactions (Oxley, 2010; Scherer, 2011). Further, incidents related to the consumption and reporting of inaccurate news, development of unhealthy technology-use habits, and inequitable access to Internet-connected devices have also appeared in school settings (Ribble & Bailey, 2004). Moreover, students frequently use educational technologies for off-task activities and multitasking, leading to a decrease in educational performance (Bowman, Levine, Waite, & Gendron, 2010; Fried, 2008; Gaudreau, Miranda, & Gareau, 2014; Hembrooke & Gay, 2003; Junco & Cotten, 2012; Ravizza, Hambrick, & Fenn, 2014; Risko, Buchanan, Medimorec, & Kingstone, 2013; Sana, Weston, & Cepeda, 2013; Wood et al., 2012). With this vast and wide array of issues impacting education, leaders are called to make sense of and consider action. In some cases, this action has involved legislation.

Children's Internet Protection Act

Congress enacted The Children's Internet Protection Act (CIPA) to prevent children from accessing obscene or harmful content through the Internet (Children's Internet Protection Act, 2019). Schools participating in the government subsidized E-rate program are required to have an Internet safety policy, should they wish to receive assistance in obtaining affordable telecommunications and Internet access. According to the FCC, CIPA requires schools to adopt and implement a safety policy that addresses the following:

- Access by minors to inappropriate matter on the Internet;
- The safety and security of minors when using electronic mail, chat rooms and other forms of direct electronic communications;

- Unauthorized access, including “hacking,” and other unlawful activities by minors online;
- Unauthorized disclosure, use, and dissemination of personal information regarding minors; and
- Measures restricting minors' access to materials harmful to them. (para. 4)

Nevertheless, CIPA is merely a baseline of legislation affording school leaders the opportunity for interpretation and implementation. For example, authorized school personnel are permitted to disable the filtering measure for purposes of research or other lawful actions, essentially making school leaders responsible for determining what content is appropriate for student access. Further, CIPA does not mandate school personnel to track Internet use by minors or adults. Therefore, the potential for access to harmful content may be higher in those school systems that choose not to carefully monitor Internet use.

While all schools receiving E-rate program funding must uphold the requirements of the CIPA, most schools meet this requirement through Internet filtering applications and student code of conduct policies. Additionally, and often tangential to meeting CIPA requirements, most school districts articulate their safety policy by requiring parents, along with their students, to read and sign an acceptable use policy (AUP).

AUPs detail how students should use technological devices while in school or on a school distributed device. Additionally, AUPs often outline expected behavior while connected to the school’s network and are designed to address issues raised by CIPA to protect students from the dangers posed while using the Internet.

Although AUPs, commercial filtering software, and close monitoring by teachers offer minimal protection from harmful Internet content, it remains “important to educate students of all ages about how to protect their personal safety” (Schrum & Levin, 2009, p. 155). Further, AUPs do not teach students how to become good digital citizens (Bell, 2002; Ribble, 2006; Ribble & Bailey, 2004) and are not a sufficient tool to address appropriate and responsible use of technology. As Ohler (2012) suggested, “The digital age beckons us to usher in a new era of character education, aimed directly at addressing the opportunities and challenges of living a digital lifestyle” (p. 16).

To that end, some schools have implemented a digital citizenship curriculum in addition to the use of an AUP and Internet filtering software. Non-profit organizations along with companies including Brainpop, Common Sense Media, Cyberwise, Digizen, Edudemic, Edutopia, Google, iKeepSafe, InCtrl, and The Teaching Channel have created digital citizenship curriculum resources for educators to use in schools. However, it is unclear if school leaders are aware of these digital citizenship curriculums. Further, little is known about how leaders make sense of digital citizenship, or the extent to which school leaders are addressing digital citizenship in their current roles.

Digital citizenship is far-reaching and presents a myriad of elements for school leaders to consider. Ribble (2011) outlined nine themes of digital citizenship, each representing a unique set of complexities which have implications and consequences, not only for how schools operate, but more importantly how and what students are being taught, their success, and well-being. The themes include access, commerce, communication, literacy, etiquette, law, rights and responsibilities, health and awareness, and security. Given the far-reaching nature of these themes, it is important to learn how

school leaders make sense of digital citizenship and how they address each element in their school.

The concept of digital citizenship represents a new challenge for schools, as the potential for students to misuse and abuse technology increases (Ribble & Bailey, 2004). Further, teachers are often ill prepared to address or model good digital citizenship (Pusey & Sadera, 2012; Sincar, 2011; Sincar, 2013). While school leaders are left to grapple with the decision of whether to assume responsibility for implementing a digital citizenship program at school, or to depend on parents and surrounding communities to take charge at home, Ohler (2012) suggested that addressing digital citizenship should take place in both settings. Addressing such a broad set of issues presents several implications for school leaders including acquiring knowledge, supporting staff with professional development, procuring financial resources to purchase technology, and identifying areas within an already overloaded curriculum in which to address digital citizenship.

The issue of digital citizenship is relevant to school leaders as they are concerned with safety and quality of instruction. Ohler (2010) suggests that with regards to digital citizenship, we need to “ask ourselves not just how we want our kids to behave, but also what we want our educational systems to accomplish” (p. 5). That is, digital citizenship programs can address both unethical uses of computer technology, and potentially transform the culture of learning. The International Society for Technology in Education (ISTE) supports this claim and has developed standards for educational leaders surrounding digital citizenship. ISTE Standard One for Educational Leaders: Equity and Citizenship Advocate (International Society for Technology in Education, 2018) states:

Leaders use technology to increase equity, inclusion, and digital citizenship practices. Education leaders:

- Ensure all students have skilled teachers who actively use technology to meet student learning needs.
- Ensure all students have access to the technology and connectivity necessary to participate in authentic and engaging learning opportunities.
- Model digital citizenship by critically evaluating online resources, engaging in civil discourse online and using digital tools to contribute to positive social change.
- Cultivate responsible online behavior, including the safe, ethical and legal use of technology. (p. 1)

While ISTE has established standards for students, teachers, and administrators regarding digital citizenship, confusion surrounds the question of whether students should be learning right and wrong from teachers or be establishing their own sense of right and wrong as it relates to the morals of their community (Ohler, 2012). Further, Ohler posits that some educators see no connection between their duty to teach and a student's prerogative to exhibit negative digital behavior such as sexting or cyberbullying. This question of responsibility can be traced back to the original purpose of education, and the debate on moral, citizenship, and character education programs. Several elements of digital citizenship (Ribble, 2011) parallel work surrounding character education (Character Education Partnership, 2008; DeRoche & Williams, 1998; Lickona, 1991; Ohler, 2010), and establishing an environment for moral clarification, thus implying that school leaders must make sense of and address digital citizenship.

Problem Statement

With an influx of Internet-connected computer technology in schools, online ethical concerns are appearing more in schools (Assumpcao & Sleiman, 2011; Ribble, 2015). The nature of these ethical concerns threatens important functions of schools to ensure student safety and provide quality instruction (Ohler, 2012; Ribble, 2011). Beyond Internet-filtering and the use of AUPs, it is unknown how school leaders are making sense of and addressing digital citizenship in their schools.

Purpose and Significance

The purpose of this study is to explore how school leaders make sense of and address digital citizenship as defined by Ribble (2011), and to investigate what successes and challenges school leaders have experienced while implementing digital citizenship programs in large Southeastern technology-rich schools. While it is known that leadership has significant effects on student learning, second only to the effects of curriculum quality and teachers' instruction (Leithwood & Riehl, 2003), the gap between knowledge and leadership preparation for digital literacy and citizenship is troublesome for school leaders attempting to prepare students in areas they are not yet familiar with themselves (Ribble & Miller, 2013). As Spreitzer and Cummings (2001) suggested:

An important job of the leader will be to continuously scan the environment and try to make sense of it. Leaders who find comfort and security in stability will have difficulty in surviving. Instead, tomorrow's leaders must find comfort in the mantra, 'Change is constant.' (p. 242)

Researchers have explored several aspects of school technology leadership including vision, culture, professional learning, and systemic improvement. However, a

study conducted by Richardson et al. (2013) found a lack of scholarly research on digital citizenship and further suggests that “an increase in scholarly literature in these areas could foster not only effective and efficient growth of technology in schools, but also more responsible use of these tools as we seek to improve student learning outcomes for all students” (p.150). Framed by Weick’s (1995) Theory of Sensemaking and Fullan’s (2001) Framework for Leadership, this study is designed to explore how school leaders make sense of digital citizenship and how they address digital citizenship in their schools.

Research Questions

This study aims to answer the following research questions:

1. How do school leaders in a technology-rich, 1:1, Southeastern United States school district, make sense (Weick, 1995) of digital citizenship as defined by Ribble’s (2011) Nine Elements?
2. How do school leaders in a technology-rich, 1:1, Southeastern United States school district, address digital citizenship?
3. What challenges have school leaders in a technology-rich, 1:1, Southeastern United States school district experienced while implementing a digital citizenship program?
4. What successes have school leaders in a technology-rich, 1:1, Southeastern United States school district experienced while implementing a digital citizenship program?

Definition of Key Terms

Several key terms will be referenced throughout subsequent chapters. To provide a clear understanding of the study, and the philosophical underpinnings on which the study is based, key terms are defined in Table 1.1.

Table 1.1

Definition of Key Terms

Term	Definition	Source
Digital citizenship	“The norms of appropriate, responsible, behavior with regard to technology use to include digital access, commerce, communication, literacy, etiquette, law, rights and responsibilities, health and wellness, and security, or self-protection” (p. 10).	Ribble (2011)
Distributed leadership	“A distributed perspective on leadership involves two aspects: the leader-plus aspect and the practice aspect. While the leader-plus aspect [the concept that leaders accomplish leadership with and through other co-leaders] is vital, it is insufficient on its own. The leadership practice aspect moves the focus from aggregating the actions of individual leaders to the interactions among leaders, followers, and their situation” (p. 12).	Spillane (2006)
Knowing organization	An organization with the ability to understand the environment in which it operates, therefore placing itself in a position to anticipate and adapt early to change	Choo (2006)
Organizational learning	“The acquiring, sustaining, or changing of intersubjective meanings through the artefactual vehicles of their expression and transmission and the collective actions of the group” (p. 376).	Shafritz, Ott, and Jang (2005)
Sensemaking	"The ongoing retrospective development of plausible images that rationalize what people are doing" (p. 409).	Weick, Sutcliffe, and Obstfield (2005)

Summary

This chapter presented an overview of issues surrounding an increase of computer technology in schools and digital citizenship and serves as the foundation for this study. Additionally, this chapter includes the purpose and significance of this multi-site case study of how principals make sense of and address digital citizenship in their schools. Further, the research questions guiding this study are presented and key terms were defined.

Literature to support this study is provided in the subsequent chapter. Literature topics include citizenship education, character education, and digital citizenship. In addition, attention will be given to several forms of leadership, including change leadership, distributed leadership, and school technology leadership through the lens of the Ontario Leadership Framework (OLF) (Leithwood, 2013).

CHAPTER 2

LITERATURE REVIEW

The goal of this study is to answer the question: *How do school leaders in technology-rich schools make sense of and address digital citizenship?* In the first chapter, I provided a summary and context of the research problem along with the research questions guiding this study. This chapter will include important theoretical and empirical literature relevant to this study.

Books, organization websites, electronic databases, including Educational Resources Information Center (ERIC), Google Scholar, and ProQuest were used to conduct the literature search. Search descriptors included “citizenship education,” “character education,” “digital citizenship,” “school technology leadership,” “school leadership,” “distributed leadership,” “framework for leadership,” and “sensemaking.” Further, references from the literature were reviewed to determine significance to the study.

This literature review begins by exploring the concept of citizenship education and its connection to digital citizenship education. A historical account of education and its purpose describes the evolution of citizenship education to character education, and most recently, the relatively new concept of digital citizenship curriculum. Next, the role of school technology leaders is described and connected to distributed leadership. The review concludes by situating school technology leadership within the Ontario Leadership Framework (OLF) for educational leadership. This review includes definitions based in scholarly research along with empirical findings from studies related to the aforementioned topics.

Citizenship Education

Historically, the purpose of education in the United States has evolved to meet the needs of society. One primary function of the education system has been to produce “competent and responsible citizens” (Carnegie & CIRCLE, 2003, p. 6). However, conflicting models and approaches exist within the field of citizenship education (Davison, 2009; Evans, 2006; Hughes & Sears, 2008; Molina-Giron, 2012; Osler, Starkey, & Gearon, 2014; Schugurensky & Myers, 2003; Sears, 1996a). These approaches range from neo-conservative (Giroux, 2005), or the study of democracy and how the government operates, to social reconstructionist (Brameld, 2000), an approach that focuses on learning through experience with real world problems and taking social action. Likewise, citizenship education has been defined in several different manners.

Citizenship Education Defined

Many scholars agree that citizenship education involves the teaching of civic equality, democracy, politics, power, social action, and social justice (Banks, 2007; Evans, 2008; Giroux, 2005; Molina-Giron, 2012; Westheimer & Kahne, 2004). Through a mixed-methods case study, Heathcote (2017) surveyed 1246 English students and conducted in-depth interviews with 35 of them to conclude that attributes of good citizenship include being caring, an active community member, knowledgeable about democracy, exercising the right to vote, embracing and tolerating diversity, obeying laws, and participating in the community through charitable work.

The term civics, or civic education has been synonymously used when referring to citizenship education. Hauser (2004) posited that the purpose of civic education is to prepare one for the public performance of citizenship. Hoge (2002) added that citizenship

education included instructional strategies designed to promote democratic thinking ultimately leading to active civic behaviors. Althof and Berkowitz (2006) proposed that it is the implementation of different learning activities designed to explore public issues and engage in simulated government activities. Kerr (2003) echoed this approach, describing citizenship education as “a complex enterprise which involves a variety of citizenship dimensions (knowledge, skills, concepts and attitudes) in a range of educational approaches and opportunities for young people, both in and out of school” (p. 16). Further, Campbell (2006) characterized citizenship education as being student-centered with an emphasis on class discussions and cooperative activities.

Some scholars have developed frameworks to organize the broad range of definitions offered for citizenship education. After reviewing literature specific to citizenship education in P-12 classrooms, Lin (2015) categorized citizenship education into three forms as a conceptual framework: (1) character education programs, (2) political simulations, and (3) service-learning programs. Character education programs focus on promoting ethical values to students (Althof & Berkowitz, 2006), while political simulations help students learn about how the political process works. Service-learning programs are designed to helping students become participatory citizens by assigning students to various service projects addressing community needs (Brandell & Hinck, 1997). This typically takes place in government or other social studies courses.

Westheimer and Kahne (2004) examined the various conceptions of what kind of citizen is needed to support an effective democratic society and developed an empirical citizenship education framework to illustrate the wide array of visions guiding democratic citizenship education. They suggested three kinds of citizens to include (1)

personally responsible, (2) participatory, and (3) justice oriented. A personally responsible citizen is described by Westheimer and Kahne as one who acts responsibly within the community, abides by laws, recycles, is employed, and volunteers during a crisis while they define participatory citizens as those who are active members of community organizations, organize efforts to care for those in need, promote economic development, and may help keep the environment clean. Personally responsible citizens understand how government agencies function and are skillful in accomplishing collective tasks. Justice-oriented citizens critically examine social, political, and economic structures as they seek to address areas of injustice. They are often aligned with democratic social movements and understand how to evoke systemic change. Nevertheless, there has been great debate regarding which conceptions of citizenship would best promote democracy (Kaestle, 2000; Schudson, 1998; Smith, 1997).

Purpose of Citizenship Education

While there are opposing and diverging paradigms, methods and pedagogies across the citizenship education field (Davison, 2009; Evans, 2006, 2008; Hughes & Sears, 2008; Schugurensky & Myers, 2003; Sears, 1996a, 1996b; Westheimer & Kahne, 2004), the primary purpose for educators and policymakers with regards to citizenship education is to promote and strengthen democracy through civic education, service learning and additional pedagogies (Westheimer & Kahne, 2004). Supporters of citizenship education are concerned that citizens understand their roles and duties for the well-functioning of the state (Heater, 1992; Parker, 2003; Schugurensky & Myers, 2003), but also advocate for active participation within their society (Banks, 2007; Evans, 2008;

Giroux, 2005; Molina-Giron, 2012; Westheimer & Kahne, 2004), thus focusing on equality and social justice amongst different groups living within said society.

Origin of Citizenship Education

The ancient Greek philosopher Plato (1943) described the idea of citizenship in his book *The Republic*. Plato suggested that all good citizens were virtuous and contributed positively to their community. Further, he believed the best way to develop good citizens was through education. After the fall of the Roman empire and the onset of the “Dark Ages,” the concept of citizenship disappeared until the Age of Enlightenment beginning in the 17th century (Plato, 1943). Ohler (2010) noted that during this period, philosophers including Rousseau and Locke approached the idea of citizenship as individual rights and privileges rather than a civic duty. The American Revolution, Civil War, and Civil Rights Movement all continued to redefine the rights, roles, and responsibilities of citizens (Ohler, 2010). In the 20th century, John Dewey (1916) posited that schools served as mini-polities or public spaces for collective action to occur. He saw experience rather than curriculum as instrumental in developing good citizenship.

Today, scholars agree that citizenship is interconnected and cannot be taught in isolation. For example, citizenship education has strong origins in curriculum related to social, personal, and health education (Gearon, 2008). Further, it has been suggested that schools should build on informal citizenship education taking place beyond the school building (Osler & Starkey, 2003). Nevertheless, 42 states require at least one course related to civics education and 32 states articulate that “preparation for capable citizenship is the primary or a primary purpose of the education clause of their state

constitutions” (Rebell, 2018, p. 19). Section § 22.1-208.01 of the Code of Virginia (2013) states

Each school board shall establish, within its existing programs or as a separate program, a character education program in its schools, which may occur during the regular school year, during the summer in a youth development academy offered by the school division, or both” (p. 1).

Additionally, the Virginia Department of Education website states that “civics and civics education are at the core of Virginia’s public school mission” (Virginia Department of Education, 2019, p. 1).

Conversely, a report prepared in 2012 by the U.S. Department of Education indicated that citizenship education was no longer a priority in most school curriculums, as the focus began to shift to preparation for math, English, and overall college-readiness (United States Department of Education, 2012). This conclusion is consistent with Cotton’s (1996) literature review based on 93 documents of civic education research and practices between 1982 and 1996 that posited a lack of relevance for students, focusing merely on passive learning and text-based instruction. Further, Hahn (1999) discovered through a mixed-methods comparative study of students aged 14-19 in England, Germany, Denmark, the Netherlands, and the United States that secondary schools in Germany and the United States, while likely to have student councils and curricular offerings designed specifically to prepare students for their roles as citizens in a democracy, did not provide robust student experiences when compared to the remaining countries included in the study. Additionally, it was noted that social studies instruction

in United States' schools was often dominated by teacher lecture and student recitation (Hahn, 1999).

Though pedagogical choices detract from the lesson in some cases, the importance of civic and citizenship education is well supported by educators and society alike. Zaman, Bickel, and William (2006) studied teacher perceptions in the United States, England, and Hong Kong and found a strong consensus amongst teachers in all three countries that citizenship education is important. Further, Zaman and Bickel found that the primary method for teaching students about citizenship was through indirect teacher-centered methods. Although there are varying definitions of what it means to be a good citizen and how to go about developing good citizens, there does appear to be an impact related to citizenship education. For example, Milligan, Moretti, and Oreopoulos (2004) examined voting data from the National Election Studies (NES) from 1948 to 2000 and found a strong relationship between citizenship education and voting in the United States. This is significant as economist, educators and politicians generally believe that “an educated electorate enhances the quality of the democracy” (Milligan et al., 2004, p. 1). However, citizenship education consists of more than just teaching students about how the political system works.

Lin (2015) described citizenship education as taking three forms to include political simulation, service learning, and character education. Further, Halstead and Taylor (2000) highlighted several links between citizenship and values education. For the purposes of this study, the following section will include a review of literature related to character education as it serves as a fitting foundation for digital citizenship education (Ohler, 2010).

Character Education

There have been several school-based reforms to promote ethical values to students (Althof & Berkowitz, 2006). Developing citizenship is thought to take place both through a social studies curriculum (Hahn, 2005) and through experiences outside the formal educational system (Osler & Starkey, 2003). However, as Westheimer and Kahne (2004) posited, an emphasis on “personal responsibility, volunteerism, and character education” (p. 244) although not necessarily contributing to participation in governmental procedures such as voting, or engagement in national politics, may be a more significant aspect of citizenship education in the larger society. Although consensus on what should be included in citizenship education curriculum is lacking, morals, values, or character education are likely to be considered. For example, McLaughlin (1992) identified virtues as one of the four main aspects of citizenship, while DeJaeghere (2008) distinguished shared values and morals as one of the four main concepts of citizenship.

Character Education Defined

Similar to citizenship education, there are conflicting models and approaches to character education (Berkowitz & Bier, 2004; Davis, 2006; Hall, 2000; Leming, 1993; Lickona, 1996; McGrath, 2018). Character Education Partnership defined character education as “deliberate efforts by schools, families, and communities to help young people understand, care about, and act upon core ethical values” (Lickona, 1996, p. 93). Hoge (2002) shares that “character education involves a conscious effort to influence the development of desirable individual qualities or traits. There are widely shared core ethical values that schools must explicitly encourage” (p. 104). Further he added that this

knowledge includes the core values of our democracy. Lockwood (1997) identified character education as “any school-initiated program, designed in cooperation with other community institutions, to shape directly and systematically the behavior of young people by influencing explicitly the non-relativistic values believed directly to bring about that behavior” (p. 6). In the same vein, Althof and Birkowitz (2006) suggested character education is "the intentional attempt in schools to foster the development of students' psychological characteristics that motivate and enable them to act in ethical, democratic, and socially effective and productive ways" (p. 72). However, Lickona (1993) challenged the notion that character education is school based, suggesting that community-based activities, peer groups and families can also serve as venues for learning positive character traits. An examination of the origin and evolution of character education will provide further context to the aforementioned definitions.

Origin of Character Education

Origins of character education can be traced from as early as the times of Greek philosophers Plato, Socrates and Aristotle, who sought to teach children about the virtues of being a good human being (Carr, 2007; Murphy, 1998; Nash, 1997). Philosophers believed that virtuous traits of character include wisdom, bravery, temperance, and justice, including both a behavioral and psychological aspect guiding actions and motives (Nash, 1997). According to Groce (2009), “character education is so basic and essential that it dates back to our founding fathers and their emphasis on citizens participating in a democracy that promotes the common good” (p. 117).

Benjamin Franklin (1749) saw the connection between morality and education and proposed the importance to “fix in the minds of youth deep impressions of the beauty

and usefulness of virtue of all kinds, public spirit, fortitude, etc.” (p. 20). Further, Franklin (1749) suggested morals be taught within the context of history. The intimate nature of colonial schools allowed for parental influence to mold the core values within the educational culture (Mulkey, 1997). In 1776, the primary function of school was to teach students to be productive citizens within the community by following moral and religious principles from a predominantly religious-based curriculum (Gailbraith, 1977).

Nineteenth century. Similar sentiments were echoed throughout the 19th century as most teachers were required to attend church and serve as pillars of the community (Threlkeld, 1930). Moreover, school officials and citizens believed teaching virtues and morals would be “most effective only when offered in a school which itself as a whole is pointed right for character education” (Threlkeld, 1930, p. 223). Horace Mann (1849), Secretary of the Massachusetts Board of Education, advocated for moral education in schools. Mann (1849), while resistant to associating a specific denominational affiliation with schools, highly supported the adoption of Christian principles within the character education curriculum. Such curriculum included the use of McGuffey Readers, which infused Presbyterian Calvinist beliefs such as salvation, honesty, and piety into vocabulary, spelling, and public speaking lessons (Smith, 2008). Nevertheless, an introduction of the Young Men’s Christian Association (YMCA) and the Boy Scouts of America (BSA) to the United States signaled the growing lack of faith in schools to effectively instill morals and virtues (Macleod, 1983). The Industrial Revolution, along with a declining religious base in schools paved the way for the YMCA and BSA to provide character education. The YMCA and BSA both aimed to cultivate the mental, social, physical and religious aspects of American youth (Macleod, 1983).

Twentieth century. Leading up to the 20th century, a primary focus for education remained to develop youth into moral people (Doyle, 1997; Lickona, 1991). Teachers were required to instruct upon character education as part of their lesson; specifically, about how to address particular moral situations in a definitive way (Hopkins, 1930). Education reformer John Dewey (1964) believed schools should focus on the growth and development of students both intellectually and morally. However, in 1937, leaders in New York City began to scrutinize the role religion played in its public schools. While children often learned moral values and virtues through Bible lessons, recited the Lord's Prayer, and were asked to reflect upon their own sins prior to the 1960s, change was imminent (Leming, 1993; Reese, 2008).

A 1962 United States Supreme Court decision outlawed prayer and bible reading in schools, further articulating a separation between church and state (Feiler, 2005). Dewey (1964) criticized the removal of moral based curriculum as he saw the acquisition of knowledge and growth of character as conjoined. Nevertheless, "the American Educational System soon began to focus on academic learning as opposed to advancing the needs of the entire community" (Eder, 2010, p. 8). The prevalence of character education programs resurged during World War II, as the nation began to regain a moral consensus (Lickona, 1996). However, the approach shifted again in the 1970s as Kohlberg's (1975) cognitive approach to moral education model became popular. Schools restructured character education curriculum to focus on helping students determine for themselves which values are more important rather than teaching specific values (Lickona, 1993).

Kohlberg's stages of moral development. Kohlberg (1975) posited that an individual experiences three levels of moral development to include the preconventional, conventional, and postconventional levels. Within each level, Kohlberg (1975) describes two stages. In the preconventional level, including stage one and two, a person is unable to see beyond their own needs and desires. During stage one, *Heteronomous Morality*, one adheres to rules to avoid consequences that might bring harm to their person or property. In stage two, *Individualism, Instrumental Purpose, and Exchange*, one acts in a manner that will bring immediate reciprocation of a deed. Within the conventional level, including stage three and four, individuals recognize they are part of a larger community. In stage three, *Mutual Interpersonal Expectations, Relationships, and Interpersonal Conformity*, one attempts to live up to the expectations of those for whom they have relationships. During stage four, *Social System and Conscience*, individuals respect the institutional rules to uphold the law and order of the system in which they live. In the post conventional level, including stage five and six, individuals become more concerned about the principles upon which any good society is based. During stage five, *Social Contract* one does not consider the rules of their society as the final authority but rather because they have agreed along to enter a social contract with other members. In stage six, *Universal Ethical Principles*, the individual moves away from a social contract towards basing decisions on universal moral principles such as human rights. Kohlberg's work provides a context for how children come to develop morality, but also presents an argument against teaching specific values.

Resurgence of character education. While some in the United States supported the new approach to character education as it avoided Christian values, others argued the

absence of such values caused schools to become plagued with drugs, violence, disrespect, and declining test scores, therefore sparking a large increase in the number of private Christian schools forming throughout the 1960s, 1970s, and 1980s (Reese, 2008). Further, many Americans blamed the reduction in character education programs over the past century for the moral decline in youth (Britzman, 2005; Williams, 2000). During the 1980s, President Reagan addressed this concern by securing funding for character education in schools (Watz, 2011). A resurgence of character education programs directly addressing values and character traits continued in the 1990s, as societal issues such as youth violence continued to increase (Murphy, 1998).

In 1997, President Clinton presented reform to have character education in every school (Watz, 2011). President George W. Bush, furthered Reagan's and Clinton's efforts by asking to increase funding for character education at the turn of the century (Watz, 2011). Further, the United States Congress has demonstrated support for character education by adopting the Partnerships in Character Education Act with the intentions of developing curriculum, providing teacher training, involving parents (United States Department of Education, 2011). The Partnership in Character Education Act incorporates six elements of character to include caring, civic virtue and citizenship, justice, fairness, respect, responsibility, and trustworthiness.

Today several character education organizations continue to operate in both a commercial and non-profit capacity including, Character.org, CharacterPlus.com, and The Character Project. (Francom, 2013). Further, school leaders continue to serve as implementers of character education initiatives to counter negative student behavior with the intentions of improving academic outcomes and school climate (Battistich, 2008;

United States Department of Education, 2012). As character education programs became more prevalent, so too did the body of empirical research.

Empirical Research on Character Education

The majority of empirical research conducted on character education focuses on the benefits, effectiveness, and critical elements of such programs. This section will highlight empirical research conducted in these three areas.

Benefits. Benefits of quality designed character education programs include a reduction in negative youth behaviors (Battistich, 2003). Further, such programs have been linked to improved academic performance, improved school climate, and contributed to an overall positive community culture (Battistich, 2003; Battistich, Schaps, & Wilson, 2004, Benninga et al., 2003; Berkowitz & Bier, 2004; Lickona, 1993). Moreover, Prince, Ho, and Hansen (2010) hypothesized that living skills programs designed to improve adaptive school behavior and social abilities would improve social interactions, increase positive social participation among peers, and improve teacher actions and classroom environments when examining the effects of such programs among elementary school children. The researchers concluded that participants exhibited improved school behavior and social abilities.

Additionally, researchers have posited that school-based character education provides a quality foundation for lifelong skills to include the ability for students to make social and ethical decisions, behave positively in a social setting, and maintain a positive outlook, all useful skills throughout an individual's life (Beets et al., 2009; Institute of Education Sciences, Allen, & Doolittle, 2010; Lee, Pan, Liao, Chen, & Walters, 2013). Similarly, Hawkins, Guo, Hill, Battin-Pearson, and Abbott (2001) found that elementary

school-based social development interventions improve the sense of belonging and allegiance towards their school examined the long-term effects of the Seattle social development intervention on school bonding trajectories. To analyze the trajectory in school bonding, researchers employed a hierarchical linear modeling method. Results indicated that the full intervention group scored significantly higher than the control group on bonding which suggest that elementary school-based social development interventions have positive long-term effects on school bonding trajectories.

Program effectiveness. While some researchers have examined the benefits of character education programs, others have focused on the programs' effectiveness. Berkowitz and Bier (2007) examined an existing child development initiative and concluded "that the effects of character education last beyond the school years in which they are experienced" (p. 42). Miller, Kraus, and Veltkamp (2005) assessed the effectiveness of a comprehensive, school-based program aimed at reducing defiant behavior. Researchers found that among the 303 fourth-grade students participating in the study, those exposed to the program, improved their social competence and literacy when compared to the control group. Their findings suggest a curriculum including character education could assist students in self-regulation. Benninga, Berkowitz, Kuehn, and Smith (2003) explored the relationship between character education implementation and academic achievement in elementary schools in California and discovered a positive relationship. The authors call for an increase in character education implementation strategies and further research on how these strategies could assist students with self-regulation.

Critical elements. Still other scholars have sought to identify specific elements that lead to an effective character education program. “One of the most critical factors in the effectiveness of character education is the faithfulness with which it is implemented” (Berkowitz & Bier, 2004, p. 75). Described as central to the success of any character education initiative, leaders are often responsible for implementing such programs (Berkowitz, 2011). As Lickona (1991) suggested “find a school with a healthy moral environment and a program for teaching good values and you’ll find a principal who is leading the way or supporting someone else who is” (p. 325). Just as leaders play a major role in the successful implementation of a character education program, scholars also argue that poor leadership can contribute to its failure. Findings revealed that program failure is often caused by poor planning (Berkowitz, 2011), and a lack of understanding (Berkowitz, 2011; DeRoche, 2001) of the complexities associated with implanting character education initiatives. In the same vein, character education programs may also fail due to inadequate training of staff and administrators (Berkowitz & Bier, 2004).

In addition to strong leadership and quality professional development, Lickona (1991) suggested a comprehensive approach to character education. That is:

Comprehensive character education asserts that effective character education must encompass the total moral life of the classroom and school. A comprehensive approach recognizes that all interactions in the school—the way adults treat students, the way students treat adults, the way students are permitted to treat each other, the way the administration treats staff and parents, and the way sports are conducted, conflicts resolved, and grades given—send moral messages and affect students’ developing character. Both explicit moral instruction (such as

explanation, exhortation, and curriculum-based lessons in virtue) and implicit moral teaching (through processes such as modeling, discipline, and cooperative learning) are part of the moral life of the school. (p. 70)

Character education should encompass how all stakeholders in the school relate to each other to reinforce character development.

Berkowitz and Bier (2007) conducted a meta-analysis and identified several characteristics of effective character education programs. Characteristics include:

- Direct teaching and training,
- Explicit agendas,
- Family and/or community involvement,
- Integration into the academic curriculum,
- Model and mentor usage,
- Multi-strategic approach,
- Peer interaction, and
- Professional development.

These characteristics were present in some or all of the effective character education initiatives included in the meta-analysis. For example, Berkowitz and Bier (2007) found that using children's literature is a reliable method for implementing character education principles as it exposes children to positive, modeled behaviors.

Lickona and Davidson (2005) created a database of literature after visiting 24 well-performing high schools in the United States and conducting grounded theory research. As a result, the researchers identified five principles that should serve as the foundation for developing a high school based on excellence and ethics.

1. Character and moral development should serve as the cornerstone of the school's mission and identity. Moral character should include eight specific strengths to include (1) lifelong learner and critical thinker, (2) diligent and capable performer, (3) socially and emotionally skilled, (4) ethical thinker, (5) respectful and responsible moral agent, (6) self-disciplined, (7) contributing community member and democratic citizen, (8) spiritual person seeking a life of noble purpose.
2. Work to create conditions that support a strong high school vision to include strong leadership, adequate school size, period for reflection, safe and orderly environment, quality relationships, supportive scheduling, and adequate financial resources.
3. Emphasize the idea that each person contributes to the development of character and morality of all students.
4. Develop an ethical learning community to serve as a partnership of all stakeholders.
5. Create a professional ethical learning community; a network of professionals to include faculty, staff and administration with the purpose of developing ethical learning.

According to the researchers, these principles were developed through empirical evidence, relevance, face validity, and the testimony of credible sources.

The aforementioned research on character education reveals the benefits, effectiveness, and the critical elements of character education initiatives. However, it is important to note that a review of the literature on character education initiatives and

programs yields numerous variations of what is meant by that term (Francom, 2013). The lack of consensus on what constitutes a character education program, which values should be taught, the manner in which they should be taught, and who should be responsible for implementing them, must be considered when situating said research within a context. This is especially significant when attempting to connect the body of literature on citizenship education and character education with digital citizenship.

Digital Citizenship

While definitions and interpretations of virtues and morals may vary, the primary focus of citizenship and character education initiatives has been to help students to “do what is right and responsible within a given social context” (Ohler, 2010, p. 2). However, as Internet technology continues to create new communities of globally connected citizens, those social contexts have changed. Ohler (2010) uses the example of being taught to be silent and afraid in a high school library. While this may have been acceptable behavior decades ago, many high school libraries have now transformed into learning hubs where students communicate and collaborate in non-traditional ways. Simply stated, one must consider “whether our notion of citizenship accurately reflects our needs” (p. 2). Moreover, citizenship has taken on a new meaning that is global in nature (Ribble, 2011). Nevertheless, character education can serve as the base for a great digital citizenship program (Ohler, 2017).

The ensuing section will outline the definition, origin, purpose, of digital citizenship. Further, this section will include a summary of empirical research conducted in the field of digital citizenship.

Digital Citizenship Defined

Traditionally, “four concepts are often used to define citizenship, and by implication, citizenship education: (1) membership, (2) community, (3) rights and responsibilities, and (4) shared values or morals” (DeJaeghere, 2008, p. 359). However, citizenship is being redefined as new capabilities allow citizens to consume from networks of information beyond physical borders and engage in online civic activities (Banaji & Buckingham, 2013; Kahn, Richard, Douglas, & Kellner, 2004; Smith, 2013). This new form of citizenship connected to Internet and technology in which people participate in an online society has been termed digital citizenship (Choi, 2016; Mossberger, Tolbert, & McNeal, 2008, Ohler, 2011; Ribble, 2015). The digital citizenship movement can be traced to the United Kingdom where educators constructed a framework to outline the elements of good citizenship (Villano, 2008).

In the United States, digital citizenship has been defined as the ethical, social, and cultural awareness of issues related to technology (Ribble, Bailey, & Ross, 2004). Hobbs and Jensen (2009) describe digital citizenship as “the skills and knowledge needed to be effective in the increasingly social media environment” (p. 5). Further, digital citizenship embodies acceptable online behavior, responsible technology use, and suitable norms for online actions (Gazi, 2016; Ohler, 2011; Ribble & Bailey, 2007; Ribble, 2011; Ribble & Miller (2013).

For the purposes of the current study, Ribble’s (2011) Nine Elements of Digital Citizenship will be used as a framework for understanding how school leaders make sense of digital citizenship. Ribble proposes nine essential elements of digital citizenship to include digital access, digital commerce, digital communication, digital literacy, digital

etiquette, digital law, digital rights and responsibilities, digital health and wellness, and digital security. The following section will define and outline the framework for digital citizenship as described by Ribble.

Nine Elements of Digital Citizenship

To provide clarity to a vast and complex topic, Ribble (2011) identifies a framework of nine elements that encompass digital citizenship. The nine elements were derived from Ribble's review of articles, books, and news broadcasts related to both benefits and problems related to the use of technology. The framework addresses "appropriate, responsible behavior with regard to technology use" by all involved parties including students, teachers, parents and school leaders (Ribble, 2011, p. 10). These nine elements have been categorized into three areas to include respect, educate, and protect.

The respect category includes digital access, digital etiquette, and digital law and primarily associates with equality, appropriate conduct, and honoring digital work, identity and property. The educate category is comprised of digital communication, digital literacy, and digital commerce and is focused on teaching students how to behave in a digital environment with regards to sharing and consuming information and products in a digital economy. Digital rights and responsibilities, digital safety and security, and digital health and wellness encompass the protect category, and relates to how digital technology users can prevent breeches to their private information and assets, along with physical and psychological conditions that may be caused by digital technology use. Additionally, the protect category relates to the basic rights and privileges afforded to digital citizens. A detailed description of each element is provided below.

Digital access. Ribble (2011) defines access as the “full electronic participation in society” (p. 16). As schools continue to experience a transformation caused by the digital revolution (Collins & Halverson, 2009), they must ensure that all students have the same opportunities. A recent study conducted by Horrigan and Dugan (2015) from the Pew Research Center found that home broadband access plateaued at 67% in 2015, representing a decrease from 70% in 2013. African Americans represented the largest decrease dropping 8% from 62% in 2013 to 54% in 2015 (Horrigan & Dugan, 2015). However, the study also notes an increase in smartphone usage, suggesting that Americans are accessing the Internet through their smartphones in lieu of a home computer or laptop. Varying levels of access and functionality have implications for how instruction is delivered and consumed by students, and therefore must be considered when making decisions about teaching and learning with technology.

While access to digital devices and broadband connectivity are crucial at home, there are also inequities amongst schools and school divisions. Large scale 1:1 computer technology initiatives exist throughout the United States (Richardson et al., 2013; Singer, 2017). While the true impact of 1:1 initiatives in schools may not be fully realized, it has become apparent that some division policies to provide all students with a personal learning device are problematic, particularly in large school divisions serving over 50,000 students.

School divisions in Los Angeles (CA), Miami-Dade County (FL), Fort Bend (TX), Baldwin (KS), Clark County (NV), Guilford County (NC) and New York (NY) lacked the infrastructure needed to support 1:1 initiatives and experienced multiple setbacks that are attributed to a lack of vision, infrastructure, financial stability,

professional development, stakeholder communication, and effective policy (Blazer, 2014).

An additional component of equitable access to consider is assistive technology for students with special needs. School leaders have been charged with providing students with equitable access to digital learning tools (Dyal, Carpenter, & James, 2009; Kowch, 2009) including those with special needs (Lankutis, 2004) and amongst diverse (Gorman, 2015) populations.

Digital etiquette. Ribble (2011) defines digital etiquette as “the electronic standards of conduct or procedure” (p. 29). The rapid infiltration of new technological devices has left society to establish new social norms. In addition, as adults use technology inappropriately, they set a bad example for children (Ribble, 2011). Schools are often the place where students encounter, and must navigate through, the use of electronic devices, Internet access and social interactions. Further, students spend most of their waking hours in a school setting. Thus raising the question, “Who will own this challenge of guiding students toward productive and safe technological society” (Hollandsworth, Dowdy, & Donovan, 2011, p. 39)?

Digital law. Ribble (2011) defines digital law as “the electronic responsibility for actions and deeds” (p. 31). A Google search using the keywords student, arrested, social and media yields nearly 1.85 million results for stories about students using technology inappropriately, thus resulting in an arrest. Technology has made it easier to violate copyright and fair use laws, gain access to private information, steal money through wire fraud and ransomware from the privacy of one’s own home. Phone cameras have led to numerous child pornography violations, as the process of sharing pictures has become

simple and instant. With a stroke of a few keys, students can find themselves in serious legal trouble, seemingly without notice. What are considered by some students as harmless pranks, become federal investigations as students use *anonymous* social media apps to communicate threats and false information.

Digital communication. Ribble (2011) defines digital communication as the “electronic exchange of information” (p. 23). According to a recent survey conducted by the Pew Research Center, 88% of teens have access to a cellular phone, with 73% of those teens having access to a smartphone (Zickuhr, 2014). In many cases, parents provide their children with phones so that they may reach them at any time (Selingo, 2004). This phenomenon has left educators to tend with the dilemma of managing thousands of devices in an instructional setting. Ribble (2011) identifies several digital communication mediums including email, cell phones, personal video calls, instant messaging, text messaging, blogs, wikis and social networking. With these mediums, there are several appropriate uses for technology in schools, including sharing ideas about the curriculum through blogs and social media applications, using blogs to inform parents about classroom activities or back channeling during the lesson to clarify thoughts and develop new ideas (Ribble, 2011). However, there are also opportunities for students to communicate inappropriately through technology mediums.

Digital literacy. Ribble (2011) defines digital literacy as “the process of teaching and learning about technology and the use of technology” (p. 26). Studies have explored the effective use of technology in schools including teacher pre-service programs (Baylor & Kim, 2009), and self-efficacy (Avens & Shapiro, 1993). However, only recently have researchers challenged the assumption that all students are considered digital natives

(Wang, Hsu, Campbell, Coster, & Longhurst, 2014). As students interact with information using new digital technologies, both at home and in school, School leaders must consider the implications.

Schools districts continue to move towards effective technology integration while several educational technology companies have developed technology education courses, online courses, and coding initiatives, and education applications. School leaders are faced with informing and fostering pedagogical decisions in their own schools.

Digital commerce. Ribble (2011) defines digital commerce as the “electronic buying and selling of goods” (p. 16). According to a study conducted by Lenhart, Purcell, Smith, and Zickuhr (2010) for the Pew Research Center in 2010, 48% of students reported purchasing goods and services using the Internet. Online behavior can have implications for financial health and credit ratings, identity theft, business etiquette, fraud and criminal involvement and physical safety.

Digital rights and responsibilities. Ribble (2011) defines digital rights and responsibilities as “those requirements and freedoms extended to everyone in a digital world” (p. 35). Schools have attempted to address this element using acceptable use policies (AUPs). Acceptable use policies define the rights and responsibilities associated with the use of technology while under the supervision of the school and are often determined by local school boards (Cramer & Hayes, 2010). Established digital rights and responsibilities provide structure and consequences to help maintain an orderly educational setting while protecting the safety and security of students.

Digital health and wellness. Ribble (2011) defines digital health and wellness as the “physical and psychological well-being in a digital technology world” (p. 38).

Currently, children spend on average over six hours per day interacting with television, video games, the Internet, instant messaging, email, and other media. Nearly two-thirds of high school students in the United States report using their tablet computers for more than four hours per day (Sommerich, Ward, Sikdar, Payne, & Herman, 2007). This is more time than they spend in school or with friends, and almost as much time as they spend sleeping (Collins & Halverson, 2009). Several studies have attempted to gain a better understanding of the physiological, cognitive and behavioral effects related to significant use of technological devices and screen time as it relates to school-aged children (Woo, White, & Lai, 2016) including musculoskeletal disorders (Ellahi, Khalil, & Akram, 2011), poor sleep quality (Owens et al., 1999; Spinks, 2002), behavior problems (Parent, Sanders, & Forehand, 2016) poor academic performance (Grover, Pecor, Malkowski, & Kang, 2016), cyberbullying (Patchin & Hinduja, 2016), depression (Kremer, Elshaug, & Leslie, 2014), decreased sensitivity to emotional cues (Uhis & Michikyan, 2014) and safe driving (Hamilton, Arnold, & Tefft, 2013); (Durbin, McGehee, Fisher, & McCartt, 2014). There is still much to learn about how technology impacts students, thus making it critical for school leaders to understand implications for their role in leading tech-rich schools.

Digital security. Ribble (2011) defines digital security as “the electronic precautions to guarantee safety” (p. 40). Too often, young people view the Internet as a place to meet new friends (Gross, 2009). School divisions install network filters and virus protection to guard against equipment damage, confidentiality breaches and financial loss. However, many students own or have access to devices before they truly understand

the importance of protecting their private information. The threat is not physically present and therefore remains unnoticed by naive students.

Gorman (2003) advises that “for every major achievement of humanity that the Web has made possible..., there are thousands of manifestations of greed, prurience, lunacy, violence, vacuity, and crassness” (p. 53). Researchers have found significant negative impacts associated with the misuse of Internet connected technology such as cyberbullying (Beran & Li, 2005; Campfield, 2008; Hummell, 2007; Koslosky, 2009), cyber harassment (Miller, 2006), copyright infringement (Lenhart & Madden, 2003; Madden & Reainie, 2005), plagiarism (Al Saffar, 2006; Bradinova, 2006; Embleton & Helfer, 2007; Ma, 2005; Ramim, 2007), cybercrime (Edgar, 2003; Elias, 2007; Holt, 2005) and leaving a negative digital footprint (Richardson, 2008; Tewari, 2009; Weaver & Gahegan, 2007).

A study conducted by Lenhart (2015) for the Pew Research Center found that 88% of teens have access to a cellular phone, with 73% of those teens having access to a smartphone. Students are connected more now than at any other time in history. With increased connectedness comes a wide array of issues impacting students and the communities they serve, including access to appropriate digital tools, modeling positive ethical, and safe behaviors, and developing a shared culture using digital technologies. As issues related to Internet connected devices become more prevalent, parents and educators have come to believe that cyber safety education is important for all students. Therefore, schools should set rules for technology use and these behaviors should be modeled by adults (Mark, 2014). To that end, school systems have developed acceptable-use policies in response to a “myriad of complex issues...to regulate mobile phone and

social media use” (Cramer & Hayes, 2010, p. 37). Further, the federal government has also attempted to address cyber safety.

Empirical Research on Digital Citizenship

Richardson et al. (2013) found a lack of scholarly research on digital citizenship and further suggested that “an increase in scholarly literature in these areas could foster not only effective and efficient growth of technology in schools, but also more responsible use of these tools as we seek to improve student learning outcomes for all students” (p. 150). Further, Ribble and Miller (2013) noted a gap in technology knowledge and leadership preparation related to digital literacy for school environments and proposed a digital citizenship model for leaders to consider as they prepare their schools for the digital future. Since 2013, a minute number of studies have addressed this gap in the literature, focused on digital citizenship and leadership. A search of ERIC and ProQuest databases for peer reviewed literature using the keywords “digital citizenship,” and “leadership,” yielded sixteen studies. However, only six of the studies specifically focused on the relationship between leadership and digital citizenship. As such, in this section, I will detail the empirical literature that is at the nexus of school leadership and digital citizenship.

Leadership. In a quasi-experimental quantitative study, Metcalf and LaFrance (2013) found that principals perceived they were most prepared to address digital citizenship and least prepared for visionary leadership when asked to rate their preparedness across the five NETS-A themes also including digital age culture, excellence in professional practice, and systemic improvement.

A study conducted by Beytekin (2014) revealed that high school administrators perceived their preparedness to be the lowest in digital citizenship, amongst the ISTE standards for administrators. Moyle (2014) noted the opportunity to include digital citizenship, as Australian school leaders incorporate technology in their schools to implement a curriculum that emphasizes an importance of democratic values. Yorulmaz and Can (2016) found a significant correlation between participating in a technology leadership in-service training and a school leader's competency in digital citizenship using a t-test and one-way ANOVA. Akcil, Aksal, Mukhametzyanova, and Gazi (2017) found through multiple regression analyses that technology acceptance and self-efficacy in technological leadership positively influences digital citizenship at medium level, and digital citizenship also positively influences open leadership. A survey of 74 elementary school educators conducted by Walters (2018) showed that most participants considered themselves to be highly knowledgeable about digital citizenship concepts with the exception of digital law.

Suppo (2013) surveyed 125 superintendents and found that while leaders cited digital rights and responsibilities to be the most important element of digital citizenship, there was no relationship between beliefs and methods used to address digital citizenship in their schools. Moreover, he found a negative relationship between leaders' beliefs about the importance of addressing digital citizenship and the actual frequency in which it was being addressed in the leaders' schools. Suppo (2013) posited that school leaders were often more concerned with traditional school matters rather than those relating to digital citizenship.

Digital citizenship programs. Additional studies have explored the effectiveness of digital citizenship programs and student behaviors. For example, Boyle (2010) and Mark (2014) both found that exposing students to a digital citizenship curriculum increases their knowledge of those concepts. Lindsey (2015) found that infusing digital citizenship into the existing curriculum was effective thus suggesting that digital citizenship does not have to be taught as a standalone course. Chou, Block, and Jesness (2015) discovered that students are more engaged in appropriate online behavior practices when educators emphasize digital citizenship concepts in the educational setting. While these studies suggest an increase in student knowledge when exposed to a digital citizenship curriculum in school, there is little research on whether students actually behave differently as a result of becoming more aware of appropriate digital behavior.

Online behavior. The narrow range of studies examining online behavior of teens does not appear to be consistent with the assumptions that young people will behave improperly, dishonestly, and unsafely online. For example, Hill (2014) found that the majority of teen girls are honest in their portrayal of their online selves when compared to their offline selves. Boyd (2014) discovered that most teens use networked spaces to connect with friends when obstacles would not permit a face to face meeting. Further, he found that teens often used this networked space to navigate social norms, shape and portray their identity, and showcase their artistic creations. However, Lyons, Burner, Kerry, Lewis, and Wayne (2012) posited that as students progressed to higher grades, parent involvement decreased, and digital citizenship abuse increased. Further, he found that abuse amongst males was greater than amongst females. As parent involvement

decreases, the burden of teaching students' appropriate digital behavior appears to shift to the schools. Mark (2014), discovered that parents and educators believe cyber safety education is important for all students. Further, parents and educators believe that schools should set rules for technology use and these behaviors should be modeled by adults. As previously mentioned, there is a lack of scholarly literature on the relationship between school leaders and digital citizenship. Further, digital citizenship is thought to play a crucial role in the development and societal integration of youth. To that end, it is important to examine how educational leaders make sense of digital citizenship, how they address digital citizenship in their schools, and what challenges and successes they experience.

Leadership

As outlined previously, the role of schools with regards to producing upstanding, moral, citizens, has shifted throughout history. That coupled with the influx of computer technology in schools across the United States calls for an exploration of how leadership engages in this phenomenon of producing good citizens. To best define leadership for the purposes of this study, I considered the rigorous processes employed by Rost (1991) who analyzed definitions of leadership from 587 sources over six decades from 1931-1991. Based on the findings of this study, Rost (1991) suggested that, a definition must contain several properties if it is to be useful to both scholars and practitioners. First, it must be clearly worded and convey specific messages as to what makes up the reality being defined. Further, a definition must spell out specific criteria for people to use while deciphering between similar realities. It must also contain all the essential criteria if it is to be considered the actual defined reality. Additionally, it must be operable by both

practitioners and scholars alike. Lastly, it must be transferable to present situations, as to allow researchers and practitioners to collect and analyze data within the constraints set by the definition. Because of this process, Rost (1991) defined leadership as "...an influence relationship among leaders and followers who intend real changes that reflect their mutual purposes" (Rost, 1991, p. 145). To that end, I will employ for this study the idea that leadership is the ability for a leader in the organization, both formal and informal, to cause change that results in progress toward accomplishing the mission of said organization.

Components for Leading Change

Fullan (2001) developed the Framework for Leadership to help leaders navigate in a culture of change. The framework can be applied when examining change within a school setting, as represented by the introduction of 1:1 technology. This framework was selected, as it does not provide a structured checklist for causing change, but rather provides a structure for the leader to work within to cause "more good things to happen" and "fewer bad things to happen" (p. 4). The framework contains five components that work together to evoke change.

The first component, moral purpose, is described by Fullan (2001) as the underlying core values that serve as the organization's foundation. Further, Fullan describes moral purpose as both an end and a mean, meaning that it is just as important to be ethical in your goal as it is in achieving it. Moral purpose extends throughout all five components of leadership and will only flourish if leaders cultivate it (Fullan, 2001).

The second, is the need for leaders to understand change (Fullan, 2001). Leaders must remain focused on the essential goal which is not to innovate the most (Fullan,

2001) or have the best ideas, but rather to accomplish meaningful change needed by the organization. Fullan (2001) also noted that early difficulties may afford opportunities to try something new and it may be necessary to redefine resistors as a potential positive force. While change is complex, culture is the key to sustaining meaningful change.

A third component is a leader's ability to build relationships. Goleman (1995, 1998, 2000) suggests that the ability to build relationships outweighs intelligence and personal motivation. That is, all things considered equal, it is more likely that a leader will fail when lacking a high emotional quotient (EQ) rather than a low intelligence quotient (IQ). Goleman (1995, 1998, 2000) found that most leaders who failed in their job were high in expertise and IQ but low in EQ.

The fourth component is knowledge creation and sharing. This component is important to the entire organization, as leaders possessing all knowledge for the organization do not move said organization forward. Further, information only becomes knowledge when it is communicated and acted upon (Brown & Duguid, 2000).

Additionally, leaders in a culture of change realize that accessing tacit knowledge is crucial and that such access cannot be mandated (Fullan, 2001, p. 87). Leaders cannot keep the knowledge locked up and controlled, rather, they must give up control of the knowledge creation (Von Krogh, Ichijo, & Nonaka, 2000).

Fullan (2001) also proposed the notion of coherence making. This fifth, and final component refers to the ability for organizations to function even in the presence of complexity and messiness that comes with change. He noted that "creative ideas and novel solutions are often generated when status quo is disrupted. "Living on the edge means simultaneously letting go and reining in" (p. 107). Further, he referred to the

metaphor of a living system (Pascale, Milleman, & Gioja, 2000), describing the dangers of living in equilibrium, and becoming less responsive to change, while developing new solutions and self-organizing after emerging from turmoil.

Distributed Leadership

Australian psychologist Gibb (1954) suggested that leadership should be considered a group function or shared tasks amongst individuals. Levin and Schrum (2013) describe effective distributed leadership in schools as “a set of direction-setting and influence practices potentially enacted by people at all levels rather than a set of personal characteristics and attributes located in people at the top” (p. 97). Administrators and staff can share and distribute leadership responsibilities in an effort to increase student achievement, reform technology usage, and improve the overall success of schools (Hulpia & Devos, 2010; Levin & Schrum, 2013).

The influx of technology in schools requires school leaders to adjust the scope of their traditional roles to include fostering effective technology integration thus causing them redistribute leadership roles to other staff members (Angelle, 2010; Davies, 2010; Klar, Brewer, & Whitehouse, 2013). For example, Ronnkvist, Becker, and Dexter (2000) noted that approximately 80% of schools in the United States have technology leadership teams comprised of two or three members to include the principal and a technology coordinator.

Distributed leadership model. Spillane (2005) separated distributed leadership from shared and democratic leadership and is viewed as a product of interactions amongst school leaders, followers, and the situation they are interacting within. Spillane defined leadership as the process by which various members of the staff contribute to

leadership functions in the school. Further, he described three components of distributed leadership including (1) leaderships and tasks, (2) task enactment, and (3) social and situational distribution of task enactment. Leadership and tasks refer to the leadership functions that are distributed and how they are dispersed (Spillane & Healey, 2010). Task enactment encompasses the idea that leaders emerge when it becomes necessary for specific tasks to take place. That is, while anyone can take part in leading, not everyone is involved in leading at one time (Spillane & Healey, 2010). Social and situational distribution of task enactment refers to the specific situations and contexts under which leaders emerge.

The current study will explore how school leaders address digital citizenship while understanding that both formal and informal leaders may be involved. Further, it is understood that specific situations, interactions, and contexts may cause different staff members to emerge in leadership roles.

Distributed leadership situations. Leadership appears differently in different schools (Archer, 2004; Spillane, 2012). However, Spillane (2005) describes three types of distribution situations that often occur in schools to include collaborated, coordinated, and collective. In a collaborated distribution, the leader and followers work together to enact a leadership task. Collective distribution is described as one where individuals work separately yet interdependently to enact a leadership task. A coordinated distribution involves two or more individuals working in a sequence to complete a leadership task. No matter the type of leadership distribution, the responsibility of leadership includes multiple leaders and is dependent on the routine and subject area (Gronn, 2002; Harris, 2003; Spillane, 2012).

Empirical research on distributed leadership. The majority of research on distributed leadership has shown to contribute positively to schools. Specifically, it lessens the workload of principals, empowers teachers, and increase student achievement (Harris, 2003, 2004; Spillane, 2003; Spillane, 2012). Further, distributed leadership has been found to improve multiple aspects of school environments to include an increase in positive culture, teacher morale, efficacy, and pedagogy (Bierly, Doyle, & Smith, 2016; Elmore, 2004; Harris, 2003). Moreover, DeMatthews (2014) posits that when principals work with teachers, make shared decisions, share knowledge, and engage in leadership activities alongside teachers, they “enhance their community’s ability to meet the needs of all students” (p. 183).

While most research points to positive outcomes of distributed leadership, some literature suggests potential barriers. For example, Mayrowetz (2008) found that an increase in distributed leadership has been associated with lower levels of student engagement. These findings suggest that when teachers are heavily involved in leadership tasks, they are not focused on their responsibilities in their classrooms (Marks & Louis, 1997; Mayrowetz, 2008). Further, Mayrowitz discovered that distributed leadership is more taxing on the principal, as it creates more work for them. Mayrowitz suggests that this may be because not all teachers tasked with leadership responsibilities are effective leaders. Additionally, Ingersoll (2003) suggests that distributed leadership can cause a decentralized structure within the school organization, thus allowing teachers to have a greater influence over their own work and the administrative decisions made within the school. Nevertheless, school leaders exist outside of formal positions and at multiple levels, therefore contributing to the strength of the organization (Fullan, 2001; Manz &

Sims, 1987; Spillane & Diamond, 2007). A field where this is particularly true is that of school technology leadership.

School Technology Leadership

Leadership is significant to developing effective and innovative schools such as those that have integrated technology to transform learning (Anderson & Dexter, 2005; Byrom & Bingham, 2001; Levin & Schrum, 2013; Tondeur et al., 2012). School leaders who effectively support a culture of technology integration are considered to possess four characteristics to include: (1) inspire others and create shared visions; (2) demonstrate effective uses of technology in the areas of learning and teaching; (3) incorporate as they support, manage, and operate the school, and (4) actively involve themselves in the assessment and evaluation of technology in the school (Afshari, Bakar, Luan, Samah, & Fooi, 2008). Similar characteristics are identified within the International Society for Technology's (ISTE) Standards for Administrators including visionary leadership, digital age learning culture, excellence in professional practice, systemic improvement, and digital citizenship (International Society for Technology in Education, 2018).

Vision

Setting a vision is a crucial element of effective leadership (Leithwood, 2013; Louis et al., 2010) and often inherent of leaders considered to be change agents (Al Sharija & Watters, 2012). Further, vision is considered to be a key element to successful integration of technology (Chang, 2003; Lai, Trewern, & Pratt, 2002; Levin & Schrum, 2013; Ng & Ho, 2012; Schiller, 2002). However, the majority of administrators believe they are average in their ability to create and execute a technology-centered vision (Hamzah, Juraime, Hamid, Nordin, & Attan, 2014).

Nevertheless, further training aligned with the ISTE Standards for Administrators, yields a shift in leadership visions centered more on technology integration (Richardson et al., 2013). This is significant, as any pedagogical change involving instructional technology is heavily dependent on a school leader's vision (Yuen, Law, & Wong, 2003).

Richardson et al. (2013) analyzed the content of articles published between 1997 and 2010, related to technology leadership using the National Educational Technology Standard for Administrators (NETS-A) to understand the scope to which school technology leadership was being researched. The researchers discovered six quantitative studies related to Standard 1: Visionary Leadership. With regards to setting a vision, the review of literature supported the importance of setting a vision and strategies for leaders to consider. Riedl, Smith, Ware, Wark, and Yount (1998) shared the significance of setting, communicating, executing, and supporting a technology vision. Lecklider, Britten, and Clausen (2009) posited that being a visionary leader is important when considering technology initiatives. Moreover, Zaccaro and Banks (2001) noted that creating, sharing, and believing in a vision is a crucial function of an administrator's job.

However, leading a technology initiative may be met with numerous challenges (Levin & Schrum, 2013). Therefore, principals, administrators, and other school leaders should rely on promising strategies and reassurances described in the literature. For example, some researchers suggest that leaders should be patient and expect failure at first, knowing that they will have more time to develop visions as they become more familiar with the new technologies (Afshari et al., 2008). Further, they should seek collaborative institutes (Alghadi & Prestridge, 2015), and the ability to share experiences of leading technology change (Ehrlich, Spote, & Sebring, 2013) as they can be helpful

when leaders attempt to create a vision for technology implementation. Additionally, leaders should consider that when implementing and funding new technology initiatives, it may become necessary to adjust their vision and include stakeholders and community members (O'Reilly, 2016). Further, there is evidence that leaders are doing just that, as Hohlfeld, Ritzhaupt, Barron, and Kemker (2008) found a significant increase in involving stakeholders in the visioning process after surveying 2,482 K-12 teachers in Florida over a two-year period.

Professional Practice

Professional practice encompasses a leader's actions. ISTE (2018) describes a leader demonstrating excellence in professional practice as one who fosters an environment of professional growth and innovation, allocates resources and professional learning opportunities, models the effective use of digital tools, and maintains an awareness of current research related to new technologies. This section will outline the empirical research related how leaders incorporate innovation, resources, and professional learning as part of their professional practice.

Innovation. Leadership, at its core, encompasses the ability to move from the status quo to new territory (Leithwood, 2013). Innovation has been identified as a key role, characteristic, or dimension of leading technology-rich schools (Levin & Schrum, 2013; Yee, 2000). Further, innovativeness is strongly correlated and is a catalyst for technology integration. Leaders for whom innovation is considered a strength often employ an element of risk taking in their decision-making process (McLeod, Richardson, & Sauers, 2015). Moreover, technology-savvy leaders often value the importance of organization risk-taking (McLeod et al., 2015)

Resources. A leader's ability to align resources with priorities is essential to successfully integrating technology in a school setting (Al Sharija & Watters, 2012; Leithwood, 2013). Leaders in technology-rich schools are often required to make decisions about equitable access to technological devices and internet (Badia, Meneses, & Sigales, 2013; Yee, 2000). Further, they must consider the provision for essential training and infrastructure required to support said technological devices, all under the constraints of an often-limited budget (Chang, 2003; Lai et al., 2002; Tondeur et al., 2012). A leader's ability to provide realistic, sustainable funding sources for technology, along with providing quality technical support for teachers is one key element for successful school technology integration (Levin & Schrum, 2013; McLeod et al., 2015).

Professional learning. It is important for administrators to provide professional development based on technology integration at all levels of K-12 education (Kopcha, 2012; Martin et al., 2010; Ronkvist et al., 2000). A school technology leader's role is two-fold with regards to professional development, as they must stay abreast of the latest research in the field to enhance their own knowledge, while also considering the professional development of their staff (Lai et al., 2002; Yuen et al., 2003). While there is a correlation between computer use and computer competency (Afshari et al., 2008), a leader's own professional development is crucial to their ability to both integrate technology and model (Stuart et al., 2009) for their employees (Levin & Schrum, 2013; McLeod et al., 2015; Richardson & McLeod, 2011). Further, a school technology leader's ability to provide access to essential trainings has been identified as a key element to successful technology integration in schools (Leithwood, 2013). Additionally, interpersonal communication (Chang, 2003), collaborative culture (Levin & Schrum,

2013), and partnerships (Yee, 2000) can contribute to the overall professional learning for staff members attempting to integrate technology in their school.

Effective leaders not only provide essential professional learning opportunities, they sustain the learning by creating a culture of professional learning when integrating school technology (Leithwood, 2013). Further, technology savvy leaders value professional development as a necessary strategy for leading technology-rich schools (McLeod et al., 2015), and place a higher priority on professional development than other aspects of the implementation of a technology program (Lecklider et al., 2009). Moreover, leaders realize that a lack of professional development opportunities can present obstacles for schools attempting to integrate technology (Lai et al., 2002).

Monitoring progress. Monitoring progress is described as the ability of technology leaders to “assess and evaluate the role of academic and administrative uses of technology and make decisions from those data” (Anderson & Dexter, p. 52). A leader’s effectiveness in monitoring progress is key, as it is a necessary function to determine which strategies are working and which are ineffective (Chang, 2003; Leithwood, 2013; Schiller, 2002; Yee, 2000). Additionally, Afshari et al. (2008) lists assessment and evaluation of technology as one of four characteristics of leaders who support technology integration in schools. Further, the National Educational Technology Standards for Administrators (NETS-A) included the use of technology-based methods to monitor progress of technology integration (International Society for Technology in Education, 2009). School technology leaders should also monitor data including the professional development needs of staff members prior to providing opportunities and other resources (Dempsey, 1999).

Empirical Research on School Technology Leadership

Several researchers have posited that principals are the primary influence for student learning and school success (Edmonds , 1979; Fullan, 2001; Hallinger & Heck, 1996; Leithwood & Riehl, 2003; Louis, 1994). However, the majority of school leaders lack the knowledge and training to confidently deal with technology (Stuart et al., 2009). With an increase of technologies in schools worldwide (Lim, Zhao, Tondeur, Chai, & Tsai, 2013; Schrum & Levin, 2009), school principals must make sense of and lead a new learning environment that includes digital technologies (Richardson et al., 2013). However, if a school principal lacks understanding of trends in educational technology, they will not be prepared to lead with modern digital technologies (Richardson et al., 2013). These findings are further supported by empirical research.

Anderson and Dexter (2005) surveyed 898 public, private, and parochial schools to “leadership characteristics and their effect on indicators of technology outcomes” (p. 49). They found that technology leadership influenced technology outcomes more than technology resources. Levin and Schrum (2013) examined school leaders of eight technology-rich schools and found the role of principals as essential to implementing a school-wide technology integration program. Further, Levin and Schrum (2013) pointed to a clear vision as the foundation for success.

It is critical for leaders to (a) stay abreast of research-based leadership practices, (b) implement key leadership tactics, and (c) examine leadership theories in order to address the changes that are occurring in education (Leithwood, Harris, & Hopkins, 2008; Louis et al., 2010). Multiple studies have suggested that beyond classroom teachers, building administrators have the greatest impact on student learning (Leithwood

& Riehl, 2003; Marzano & Waters, 2009; Vitaska, 2008). As an influx of digital technologies has integrated into schools, school leaders are asked to make sense of a new digital learning environment (Richardson et al., 2013).

While there is a lack of research on how principals effectively support technology integration in their schools (Levin & Schrum, 2013; Macleod, 1983; Richardson et al., 2013), researchers have said that “good technology leadership is essentially just good leadership for our digital, global era” (McLeod et al., 2015, p. 25). Therefore, the body of research on how to effectively lead schools can serve as a viable reference when considering promising practices of effective technology integration. Nevertheless, there are further areas for research in this field. Richardson and McLeod (2011) note that of the research existing on school technology, much of the focus is on how tools are used rather than investigating effective technology leadership practices. This study will focus on the actions of school technology leaders, thus aiming to contribute to a lacking body of research.

Summary

In this chapter, I have discussed relevant literature regarding citizenship education, character education, digital citizenship, leadership, school technology leadership and distributed leadership. Through a review of this literature one can conclude that good digital citizenship is good citizenship and good school technology leadership is good leadership. Chapter 3 will include a conceptual framework and describe the methodology used to conduct this study.

CHAPTER 3

METHODOLOGY

As school leaders continue to experience an influx of computer technology in their schools, they will be asked to navigate change and make sense of new phenomenon. How school leaders of technology-rich schools in a large, 1:1, Southeastern public school district make sense and address digital citizenship programs was examined in this study. Findings from this study may aid in exploring how school leaders address digital citizenship in their schools and the challenges they experienced as a result of said implementation. I begin this chapter by posing the research questions guiding this study, followed by the conceptual framework. This chapter then outlines the study design, data collection, and data analysis procedures.

A lack of scholarly research on how leaders of technology-rich school district make sense of and address digital citizenship programs in their schools exists. This study employed Weick's (1995) Theory of Sensemaking to interpret how school leaders implement digital citizenship programs at technology-rich schools in a large Southeastern public school district to explore how they view their role as producers of digital citizens and their knowledge of Ribble's (2011) Nine Elements of Digital Citizenship. Weick's theory (1995) serves as a suitable framework for this study as it focuses more on the details of action rather than the intricacies of planning. Further, his approach is frequently used when examining organizations addressing uncertain or ambiguous situations (Weick et al., 2005; Weick, 1988). The following research questions guided the study that was conducted in a technology-rich, 1:1, Southeastern United States school district:

1. How do school leaders make sense (Weick, 1995) of digital citizenship as defined by Ribble's (2011) Nine Elements?
2. How do these school leaders address digital citizenship?
3. What challenges have these school leaders experienced while implementing a digital citizenship program?
4. What successes have these school leaders experienced while implementing a digital citizenship program?

Conceptual and Theoretical Framework

This study is undergirded by Weick's (1995) Theory of Sensemaking and by and The Nine Elements of Digital Citizenship outlined by Ribble (2011). In the literature review, Fullan's (2001) Framework for Leadership was outlined. In principle, his framework is analogous with Weick's (1995) Theory of Sensemaking. As an ecological change occurs within an organization, members of the organization are moved to make meaning of the differences (Choo, 2006). As members attempt to make sense of the change, they engage in a three-step sensemaking process (Weick, 1995).

Weick et al. (2005) described the act of sensemaking as "the ongoing retrospective development of plausible images that rationalize what people are doing" (p. 409). According to Weick's (1995) Theory of Sensemaking, information is processed in three stages:

- 1) Enactment – The subject defines the situation and scope of the information.
- 2) Selection – The subject determines what information to use and what to discard.

- 3) Retention – The subject determines what meaning will be retained for future use.

Additionally, Weick identifies seven properties that interact and intertwine as individuals interpret events to include identity, social context, retrospect, salient cues, ongoing event, plausibility, and enactment. The properties are described in Table 3.1.

Table 3.1

Seven Properties of Sensemaking (Weick, 1995)

Property	Definition
Identity	The individual’s perception of what role they play amongst the group in the environment influences what they will enact and how they will interpret events (Weick et al., 2005).
Social context	Sensemaking is a social activity, thus the outcome incorporates the influence from the presence of others both actual and implied.
Retrospect	Individuals make meaning of experiences by reflecting on the event.
Salient cues	An individual seeks out more noticeable or important signals to interpret what has occurred rather than attempting to understand all of the information.
Ongoing event	Sensemaking is an ongoing process that continues to influence or be influenced by context.
Plausibility	Individuals prefer an interpretation that is reasonable or probable over one that is accurate.
Enactment	When people act, they bring structures and events into existence and set them into action (Weick, 1988).

Weick (1995) described the interconnectivity of these seven properties by summarizing that

Once people begin to act (enactment), they generate tangible outcomes (cues) in some context (social), and this helps them discover (retrospect) what is occurring (ongoing), what needs to be explained (plausibility), and what should be done next (identity enhancement). (p. 55)

During the enactment process, members of the organization arrange information in ways that make sense to them while relying on social context and identity construction (Choo, 2006). Further, members create new features that help them make sense of the environment through the use of salient cues, similar to knowledge creation and coherence making as described by Fullan (2001). During the selection step, members of the organization seek to determine what is happening based on how they have organized information during the enactment step. They reference past experiences with new information to develop interpretations that are plausible to develop a “reasonable scheme of interpretation (Choo, 2006, p. 6). In the retention step, successful interpretations are preserved for future use. Weick (1979) describes a product of sensemaking as “a sensible rendering of previous events stored in the form of casual assertions and made binding on some current enactment and/or selection” (p. 166). Sensemaking is ongoing as new information becomes available, members of the organization continue to adjust previous interpretations (Choo, 2006).

Leadership as a Sensemaking Activity

When school leaders encounter external factors or phenomena impacting their school, they must make sense of the change and decide what action is appropriate. They may also determine that no action is warranted. In short, a stimulus causes leaders to internally process, make sense of, and determine a path of action.

Weick’s (1995) Theory of Sensemaking serves as the foundation for the conceptual framework undergirding this study. As an example, school leaders in technology-rich schools have experienced an influx in computer technology. This serves as one external factor for which school leaders must make sense. During the three stages

of sensemaking, school leaders will begin to organize what they know about computer technology by looking at context and making connections to their own previous knowledge. Next, they will determine what is happening as a result of the influx of computer technology in their school. In the final stage of the Sensemaking process, the school leader will decide whether to respond. Should a response be necessary, the leader must determine the appropriate response.

In this example, not only do school leaders need to make sense of the influx of technology in their schools, but also the concept of digital citizenship. It is important to note that school leaders may not be familiar with the term digital citizenship, although they recognize the importance of digital citizenship components; educate, protect, and respect (Ribble, 2011). Therefore, school leaders are not only making sense of how an influx of computer technology is impacting their school, but they are also making sense of what digital citizenship is and if it should be addressed. Further, should school leaders wish to address digital citizenship in their schools, they must make sense of their school context and how it should be addressed. School leaders will engage in multiple sensemaking cycles as they determine the effects caused by an influx of computer technology, how digital citizenship relates to this change, and the need to address any or all of the digital citizenship categories.

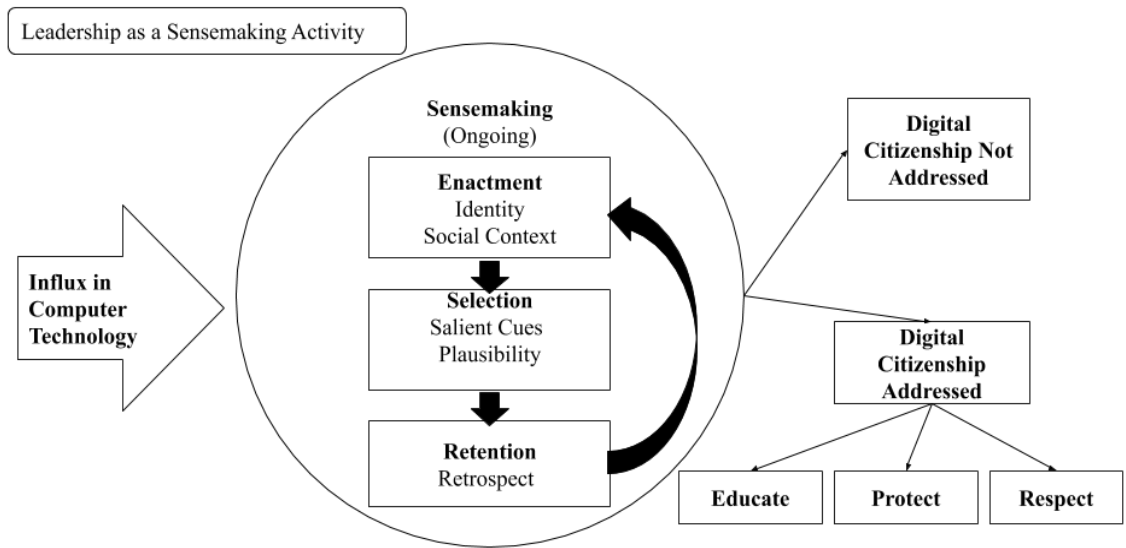


Figure 3.1. Conceptual Framework. Leaders of technology rich schools make sense of how to address Digital Citizenship.

Study Design

I selected a mixed-method, multi-site case study methodological approach because it supports the pursuit of “insight, discovery and interpretation” of how and why a phenomenon is occurring (Merriam, 2009, p. 42). The cases are bounded by their designation as a model school for implementing a 1:1 computer technology program within a Southeastern Virginia school district. Further, the cases meet Merriam’s (2009) description as a “single entity, a unit around which there are boundaries” (p. 40). The structure of this multi-site case study required me to analyze each individual case separately and then compare findings from each study collectively to form a clearer understanding of the phenomenon. This bounded multi-site case study thus included schools with varying levels of demographics and characteristics to assure that the diverse collection of cases would yield a “more compelling interpretation” (Merriam, 2009, p. 49).

Although the research design of this study is mixed methods, it relied heavily on qualitative techniques as described by Merriam (2009) and Yin (2014). Taking place in a natural setting (Merriam, 2009), this study utilized the researcher as an instrument to collect data, whose essence is not effectively captured by quantitative approaches. This study implemented qualitative instruments including semi-structured interviews, observations, and document analysis informed through surveys.

The study was conducted in four phases as illustrated in Figure 3.2. Several qualitative research approaches were employed within each phase as described by Merriam (2009). The phases include (1) document analysis, (2) principal interviews, (3) staff interviews, and (4) principal follow-up interviews.

Phase One: Document Analysis

I examined documents that contained information or insights relevant to the research questions guiding this study consistent with Merriam's (2009) suggestions for conducting qualitative research. School district documents related to digital citizenship were analyzed. Ribble's (2011) Nine Elements of Digital Citizenship were used to develop a codebook. Descriptive notes were logged and organized by theme in an electronic database.

Phase Two: Principal Interviews

Principals from the fourteen 1:1 schools received a request to participate in a one hour-long, semi-structured interview (see Appendix C). Limited research has been conducted on how school leaders make sense of digital citizenship. Therefore, an interview protocol was created and piloted for this study. The interview protocol was designed to capture the sensemaking process by eliciting the knowledge and cognitions

that are used to make sense of the organization (Weick et al., 2005). Further, in addition to the Nine Elements of Digital Citizenship (Ribble, 2011), seven properties and three stages of sensemaking (Weick, 1995) were considered when constructing the questions for the semi-structured interview. Questions were aimed at gaining a social context and exploring the identity of the interviewees. Questions also elicited storytelling and reflection about previous decisions the interviewees had made related to digital citizenship. Principals of these school were purposefully selected for this study as they were most likely to know about a digital citizenship initiative taking place in their school. Additionally, they were most likely be informed of other staff members involved in work related to digital citizenship. Two elementary schools and two secondary schools were selected based on their willingness to participate in the survey and semi-structured interviews. Through semi-structured interviews, I collected data on how school leaders made sense of and addressed digital citizenship in their schools. Additionally, I collected data on what challenges and successes school leaders experienced as a result of addressing digital citizenship in their schools.

During the interview, participants were provided with a reference sheet that contained definitions for Ribble's (2011) Nine Elements of Digital Citizenship to ensure clarity (see Appendix D). While every attempt was made to conduct the interviews in person, some interviews were conducted via video conferencing to accommodate scheduling limitations. All interviews were recorded via multiple audio recorders to prevent the potential loss of valuable data.

Upon completing my analysis of the principal interviews, I conducted member checks as described by Merriam (2009). All participants had an opportunity to provide

comments on my analysis of their interview responses to ensure I accurately represented their thoughts. All digital files were stored on a password protected cloud drive and a password protected removable drive to ensure security and protect against loss of data. Notes recorded during the interview were digitally transcribed and stored along with the interview recordings. All data was cataloged using a spreadsheet to organize participants, timelines, and all associated data. All names appearing in the interview transcriptions was codified to ensure anonymity.

Phase Three: Formal and Informal Leader Interviews

While traditional school leaders include principals and assistant principals, other school staff also serve in leadership roles as defined by the concept of distributed leadership (Spillane, 2006). Principals were asked to purposefully (Merriam, 2009) identify school technology leaders both formal and informal in title and position that have been significantly involved in the 1:1 implementation at their school. Leaders were asked to participate in a semi-structured interview (see Appendix C). In some cases, a survey participant declined to be interviewed and an alternate participant was not available. Therefore, the interview was not conducted. Two school leaders were interviewed at School A and School B, while three school leaders were interviewed at both School C and School D.

School-leader interviews were conducted in the same manner as principal interviews, described in the previous phase. A reference sheet that defined the Nine Elements of Digital Citizenship was provided to ensure clarity (see Appendix D). An attempt was made to conduct the interviews in person. However, some interviews took place via video conferencing to accommodate scheduling limitations. All interviews

conducted were recorded via multiple audio recorders to prevent the potential loss of valuable data.

Upon completing my analysis of the staff interviews, I again conducted member checks as described by Merriam (2009). All participants had an opportunity to provide comments on my analysis of their interview to ensure I accurately represented their responses. Digital files were stored on a password protected cloud drive and a password protected removable drive to ensure security and protect against loss of data. Field notes recorded during the interview were digitally transcribed and stored along with the interview recordings. All data was cataloged using a spreadsheet to organize participants, timelines, and all associated data. Any names appearing in the interview transcriptions were codified to ensure anonymity.

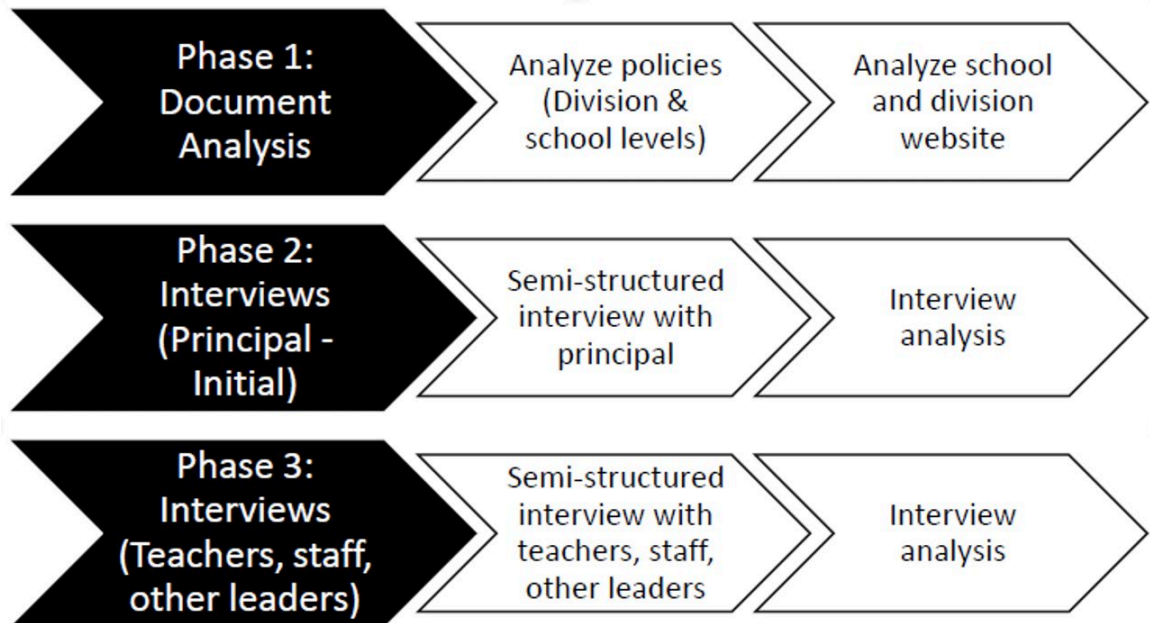


Figure 3.2. Schematic of each phase and the processes that will take place within each phase. Each phase informed the subsequent phase. The phases and activities within each phase are based on qualitative methods described by Merriam (2009).

Research Setting

This study was conducted in a large school district located near the Southeastern coast of Virginia, serving a population of over 70,000 students in over 80 schools. This school district previously operated under a bring your own device (BYOD) policy that allowed individual teachers to determine when the use of personal devices is appropriate in their classrooms. Each selected school formed a digital learning leadership team comprised of the principal and teachers. Principals and teachers were encouraged to blog about their experiences and share ideas that work with their colleagues. The teams met together in the summer of 2015 along with members of the division's senior leadership team to provide guidance and receive support for the initiative. The 14 schools modeled seven devices to determine which devices were most suitable for the school district's needs. The devices included Hewlett Packard ProBooks, Chromebooks, Dell laptops, Asus tablets, and Apple iPads.

The school district boasted 100% accreditation for two consecutive years with a focus on ensuring that every student was challenged and supported to reach his or her full potential. The district's strategic plan outlined four goals including high academic expectations, multiple pathways, social-emotional development, and a culture of growth and excellence. Further, the district introduced a graduate profile designed to make students future ready. The graduate profile was comprised of eight characteristics that all students should by the time they earn a diploma to include knowledgeable, problem solvers and value creators, resiliency, cross-culturally competent, personally and socially responsible, thinkers and inquirers, balanced, and communicators and collaborators.

Prior to conducting the study, I contacted the school district's accountability office to obtain permission to conduct research within the school district. I requested and received an approval letter for this study contingent on communicating updated approval from the University of Kentucky's Institutional Review Board (IRB). Further, the approval was contingent on the understanding that the study will not specifically identify names of participants, schools, or the school district in any potential reports.

Research Sample

Four schools were purposefully selected from a population of 14 for this bounded case study, based on ease of access, diversity of school characteristics, and likeliness to reflect phenomenon regarding digital citizenship. The cadre of 14 schools represents a model program for 1:1 technology implementation. These schools were to serve as a model for implementing a district-wide 1:1 initiative. Therefore, it was more likely that digital citizenship would be addressed in schools that provide Internet-connected devices to all students.

Two elementary and two secondary schools, depicted in Table 3.2, were selected from a group of fourteen 1:1 computer technology model schools to participate in this study based on their survey responses and willingness to participate in a semi-structured interview. Two different levels were included as Ribble (2011) noted potential differences in how digital citizenship applied to children of different ages. Further, Yin (2014) noted that selecting multiple cases provided an opportunity to pattern match and reduce skepticism of findings associated with selecting a single case study design. In phase one of this study, principals were asked to identify the names of school technology leaders working in their school through an electronic survey. Principals identified

assistant principals, instructional technology specialists (ITS), and library media specialists (LMS) to participate in interviews based on their roles and responsibilities in leading school technology initiatives and addressing digital citizenship. The identities of the schools and leaders participating have been protected as a condition for access in this study.

Schools

The schools selected for this study began a 1:1 digital learning program during the 2016-2017 school year to support the school district’s strategic framework. Two elementary schools and two secondary schools were selected for this study. Schools were randomly assigned letters (School A - School D) that are used to present the findings from individual interviews.

Table 3. 2

Attributes of Participating Schools

School Name	Grade Level	Student Population	Student: Teacher Ratio	Teacher Average Years of Experience
School A	P-5	537	23:1	15
School B	P-5	395	18:1	12
School C	9-12	1824	22:1	15
School D	6-8	1556	22:1	16

School A. Situated in a middle-class suburban neighborhood, Elementary School A serves grades K-5 with a total population of 537 students. The professional and support staff include 2 administrators, 22 classified staff members, and 33 instructional staff members (88% female, 12% male). Teachers have an average of 15 years of teaching experience and the average pupil to teacher ratio is 23:1. 86% of students in grades K-3 are reading on grade level.

School B. Elementary School B serves a K-5 population of 395 students, of which 65% are economically disadvantaged. The student population includes 41% African-American, 22% Caucasian, 17% Hispanic, 11% multiracial, and 9% Asian children. The school is led by two administrators, 41 instructional staff members, and 28 classified employees. The average years of teaching experience is 12, and females account for 93% of the staff. The average pupil to teacher ratio is 18:1. 85% of students in grades K-3 are reading on grade level.

School C. High School C is situated in a suburban neighborhood and serves 1824 students in Grade 9 through 12. Within the student population, 55% were identified as economically disadvantaged. The ethnicity of the student population is 46% African-American, 28% Caucasian, 11% Hispanic, 8% multiracial, and 6% Asian. The school is led by 6 administrators, 131 instructional staff, and 46 classified employees. Sixty-three percent of the staff members are female, and the average years of teaching experience is 15. The average class size is 21 students, with 65% of students are reading on grade level.

School D. Middle School D serves a population of 1556 students in Grades 6 through 8. Within the student population, 56% are identified as economically disadvantaged. Additionally, the student population includes the following ethnic groups: 36% African American, 30% Caucasian, 16% Hispanic, 10% multiracial, and 6% Asian. The school is led by 5 administrators and includes 104 instructional staff members and 52 classified employees of which 74% are female. The average class size is 26 students, with 60% in the school reading on grade level.

School Leaders at Case Sites

Participants in this study included the school principal and school technology leaders identified by the principal. Survey data were used to select the participants for this study. School technology leaders included instructional technology specialists (ITS), library media specialists (LMS), and assistant principals.

The school leaders are a part of a team charged with modeling a 1:1 computer technology program and serve as model digital learning schools within the division. Profiles for each of the 10 school leaders participating in this study are presented and include a description of each leader, their current role in the school, and their previous experiences with technology leadership. The 10 leaders at the four schools are referenced by their title and corresponding school letter randomly assigned to ensure anonymity.

Principal A. Principal A is a White female who has served in her role for five and a half years. In the middle of the school year and also this study, she was promoted to the director of instructional technology position for the same school district. Her responsibilities as principal included reviewing and ensuring proper implementation of curriculum, social and emotional learning, positive behavior interventions and supports, hiring and maintaining staff members. In her new role, her perspective had broadened to K-12, as she examines software and equipment designed to support digital learning. She also supervises all LMSs and ITSs in the school district.

Principal A holds a doctor of philosophy degree in curriculum and instruction with a focus on instructional technology. She began her work in the current school district as a computer resource specialist, a position that combined both instruction and technical aspects of school technologies. The jobs were separated in 2015, thus creating

the ITS position, which focused on instruction and eliminated the technical repair aspect. She also wrote curriculum and served as an assistant principal before her tenure as a principal and now director of instructional technology.

Instructional technology specialist A. ITS A is a White female who has served in her role for the past three years. Prior to that, she worked as a third-grade teacher and was one of the original members of the model team for School A to model digital learning. She worked closely with Principal A to try new approaches including making her classroom look more like an internet café and experimenting with new learning programs and curriculums to see how they worked.

Principal B. Principal B is a White female who has been the principal at School B for seven years and supervised the initial implementation of the 1:1 model program. Prior to her current position, she served as an assistant principal and an elementary school teacher. Principal B has attended several technology conferences and other school district designed professional development on 1:1 technology.

Instructional technology specialist B. ITS B is a White female who has also served in her role for the entire span of the 1:1 model program. She was employed as a computer resource specialist (CRS) for two years and her title changed to ITS as the 1:1 model program came online. She is responsible for helping teacher infuse technology into their teaching. Additionally, she has worked with elements of digital citizenship in her role.

Principal C. Principal C is a White male who has served in his current role for 11 years. He admittedly was not very strong with digital technology use but acknowledged the need to become more familiar with the devices and software when his school became

a model for the 1:1 program. He participated in several professional development opportunities as a member of the cadre of schools selected for the 1:1 model program. Principal C has over 30 years of experience in education.

Assistant principal C. Assistant Principal C is a Black male and has been an educator for 26 years. He is currently in his second year at School C. He oversees professional development for teachers, the instructional leadership team and is a member of the 1:1 technology model team. In his previous roles in other school districts, he has served on committees to implement 1:1 technology.

Instructional technology specialist C. ITS C is a White male and one of two ITSs serving school C. He is currently splitting his work responsibilities between another secondary school in the district. He is serving in his third year at School C. His responsibilities are focused on facilitating individual and small group professional development for teachers seeking to integrate technology into their lessons. He serves on the 1:1 technology model team for his school.

Principal D. Principal D is an Asian male serving in his second year as the principal of School D. Prior to his current role, Principal D served as the principal of a different middle school in the school district for eight years, and led a vanguard initiative for technology use prior to the 1:1 model program. He has also served as an assistant principal of a high school and as a high school social studies teacher. In his roles, he has supervised professional learning programs focused on integrating technology in the classroom and transforming the learning experience by taking a more personalized approach.

Library media specialist D1. Library media specialist (LMS) D1 is a White female and has been a teacher since 2003. After teaching sixth grade science for 15 years, she recently made the switch to the LMS position in 2018. While she does not consider herself to have been specifically trained in school technology leadership. She has master's degree, and an endorsement in library media sciences.

Library media specialist D2. LMS D2 is a White female and has served in her current role for 9 years and has been present through the entire 1:1 technology model program. She describes her position as having many roles including leading, collaborating, and teaching. She has done work with exploring technology applications that work best in the classroom through the American Association of School Librarians and has also worked with digital citizenship at School D.

Data Collection Procedures

For this mixed-method multi-case study, data were collected via surveys and semi-structured interviews. Principals from each of the 14 schools were contacted via telephone or email to identify two other leaders to receive the survey. These participants were considered by the principal as someone who served in a leadership role related to implementing the 1:1 computer technology integration. Surveys were sent out via email to the principal and two additional staff members that he or she identified.

Each participant was invited to respond to the initial survey (see Appendix B), by rating their perceived knowledge of Ribble's (2011) Nine Elements of Digital Citizenship and their perceived responsibility to educate students about said elements. I reviewed the survey results and selected respondents from two elementary and two secondary schools to participate in semi-structured interviews and be identified as bounded cases for this

study. While 25 school leaders responded to the survey, only leaders from four schools agreed to participate in the semi-structured interviews. Those leaders that agreed to participate in the interviews represented two elementary and two secondary schools. Therefore, those schools were selected as the cases for the study. An in-depth description of each school selected to participate in this study included in the research sample.

While interviews served as the primary data collection instrument, I also conducted a document analysis for each case. The available documents were produced at the district level and thus did not provide data that was specific to any one case examined in this study. Nevertheless, the documents had been desementated to the principals in each school and therefore were available for reference when determing how to address digital citizenship. Further, the analysis provided context for the school district in which the four cases set. The ensuing section will include the process for employing each data collection for this study.

Pilot Survey

Prior to employing the survey, I piloted the instrument with another school within the same school district that has implemented a 1:1 technology program. The principal and two additional staff members identified by the principal responded to the survey and were provided with an opportunity to critique the instrument. In addition, I clarified with the pilot participants the intentions for each question to ensure that the survey questions were clear and promoted the participants to share information that would help answer the research questions posed for this study. Minor adjustments were made to include a list of definitions for Ribble's Nine Elements of Digital Citizenship. This addition provided a

reference for participants and reduced the possibility for misinterpreting the interview questions.

Surveys

Once the survey instrument was piloted, surveys were disseminated electronically via Qualtrics to the principals of all 14 schools identified for the study. In addition, two staff members identified by the principal as serving in a leadership role with regards to educating students about elements of digital citizenship were also surveyed (see Appendix A for the consent form). In total, 44 school leaders that included assistant principals, library media specialists, instructional technology specialists, and lead teachers received the survey. Twenty-seven school leaders responded to a Likert-style survey (see Appendix B) that recorded perceptions about their knowledge and level of responsibility they assumed for each of the Nine Elements of Digital Citizenship within their respective school. While basic information was recorded to identify participants in each case, all identifiable information was coded to protect the participants' anonymity. Survey results were stored on a password protected server only accessible to me. Survey data were used to triangulate qualitative data collected in semi-structured interviews and observations when possible. Nevertheless, the quantitative methodology implemented in this study informed the qualitative methods.

Interviews

After reviewing the responses from the 27 school leaders, 10 were identified as potential interviewees at 4 schools (See Appendix A). Personnel at these four schools were selected to participate in interviews because it was perceived they could provide data to answer fully the research questions. Hour-long, semi-structured interviews were

conducted individually with the each of the 10 school leaders. Initial attempts were made to conduct the interviews in person. However, in some cases a video interview using Skype was necessary based on the availability of the participant. Audio from each interview was recorded to assist with accurate transcription.

Data Analysis

After each phase of data collection, all data were organized in an electronic database similar to those described by Yin (2014) and analyzed via Dedoose, a qualitative research analysis tool. The database was organized for easily accessibility during the analysis phase. Further, the database was organized in a manner that easily allowed comparison of data from other cases included in the study. Cases were defined as an individual school selected to participate in the study.

Data analysis of interview responses took place in two stages as described by Merriam (2009). In the first stage, comments were analyzed for each individual interviewed. Data analysis was conducted for each case separately followed by an exploration of similarities and differences across the cases, a process that Yin (2014) described as pattern matching. Once the data from each of the selected cases was individually analyzed, further analysis was conducted in a second stage using a process called by Merriam (2009) as cross-case analysis. As a result, an attempt to build a general explanation that will fit individual cases was made (Yin, 2014).

During the first analysis stage, interview transcriptions were analyzed using open coding (Merriam, 2009), a process of creating initial codes to develop categories within each individual case. Next, categories were compared to those included in Weick's (1995) Theory of Sensemaking and Ribble's (2011) Nine Elements of Digital

Citizenship. The categories included enactment, selection, retention, identity, social context, plausibility, salient cues, ongoing, retrospect, access, rights and responsibilities, law, etiquette, commerce, literacy, health and wellness, security and privacy, and communication. Additionally, categories from each of the cases were compared to explore general patterns across the cases as described by Yin (2014). Individual code lists were merged into a master list to reflect recurring regularities or patterns in the study (Merriam, 2009).

In the second analysis stage, a comparison of codes, categories, and emerging themes amongst all cases took place. A second round of analysis was conducted to find additional themes while considering all cases involved in the study.

Once all data had been analyzed, any connections discovered from the study were incorporated into Weick's (1995) Theory of Sensemaking and Ribble's (2011) Nine Elements of Digital Citizenship to expand the original theoretical framework. The augmented framework was used to respond to the four research questions guiding this study. Additionally, general statements were constructed, using the data collected, to address each of the research questions. The following section outlines the role of the researcher and describes how the researcher addressed objectivity and reliability.

Role of the Researcher

I am a doctoral student from the University of Kentucky seeking a Doctorate of Philosophy degree in Educational Sciences with a certificate in Educational Leadership and School Technology Leadership. My elective curriculum consists of courses designed considering the NETS-A published by ISTE (2009). In addition to my knowledge of the NETS-A, I have also served as high school assistant principal for eight years, in the same

school district where the study will take place. I also served as a social studies teacher at another high school in the school district for eight years.

While I am not employed at a model school, I do work within the same school system and am known by many principals who lead the model schools in this study. Further, my experiences with school technology leadership, while helpful to the study, may also present several preconceived notions about how schools operate and the significance of digital citizenship. I have been responsible for making decisions about technology resource allocations, professional development, and integration within the curriculum. Further, I have handled several disciplinary cases involving students who have violated laws, and school codes of conduct using technological devices, both school and student owned.

As a constructivist thinker, who believes that knowledge is constructed based on my personal experiences and hypotheses of the environment, I take a different perspective than that of a positivist who believes there is one scientific truth. My research philosophy causes me to gravitate towards asking research questions that are explored through qualitative methodologies, allowing me to explore natural phenomena and construct my own understanding of the world. I bring my own personal values into this study, explore the context of the setting of the participants, and seek to create an agenda for change and reform through collaboration with the participants.

Objectivity and Reliability

I used several strategies, outlined by Merriam (2009) and Yin (2014), to maintain a high level of reliability. Strategies included the use of a digital audit trail, triangulation

of data, thick and rich descriptions, and multiple cases. The following sections will highlight the details of the strategies used to preserve objectivity and reliability.

Digital audit trails. I maintained a digital audit trail (Lincoln & Guba, 1985; Merriam, 2009) to record all research decisions with regards to data collection, category derivation, and decision making throughout the inquiry. The audit trail took the form of a research journal, containing memos as described by Merriam (2009). Further, the journal included a running account, for the reader, of my interactions with the data to provide a detailed account of how I conducted the study.

Triangulation of data. In addition, I triangulated the data from survey results and interview transcripts when possible, along with document analysis and observation when available. Specifically, I employed the Likert-style survey results to report the extent to which school leaders believed they were responsible for implementing each of the Nine Elements of Digital Citizenship (Ribble, 2011) and compared their responses to interview responses and job descriptions. However, the primary purpose of the survey was to identify school leaders with knowledge of and experience in addressing digital citizenship to interview for the next phase of the study.

Thick and rich descriptions. Merriam (2009) noted that “although generalizability in the statistical sense cannot occur in qualitative research, that’s not to say that nothing can be learned from a qualitative study” (p. 224). I included a thick and rich description, described by Merriam (2009) as a “highly descriptive, detailed presentation of the setting and in particular, the findings of the study” by using memos, field notes, and recordings, to capture specific details to include in the final report of the study (p. 225).

Use of multiple cases. Additionally, the inclusion of multi-sites or cases increased the likelihood that a reader could relate to a portion of the case study, as it includes findings from an array of settings and participants. Also, a collection of cases is more likely to yield additional categories or themes to be considered. Further, those themes are further validated when they emerge from a diverse group of cases. While all efforts were made to protect objectivity and reliability, the researcher recognizes the limitations of the selected methodologies.

Summary

The purpose of this study was to explore the level of knowledge school leaders possess about the Nine Elements of Digital Citizenship as outlined by Ribble (2011). Further, this study aims to explore how school leaders implement digital citizenship programs at technology-rich schools in a large Southeastern public school district to better understand how they view their role as producers of digital citizens. I used Fullan's (2001) Framework for Leadership to understand and interpret this study's findings to highlight consistencies and discrepancies, thus expanding the literature. A review of literature on digital citizenship and leadership yielded minimal studies.

This mixed-method, cross-case study included qualitative instruments, including interviews, and document analysis. Data were analyzed within each case and then across all cases to identify general patterns as described by Yin (2014). Patterns were used to further expand Weick's (1995) Theory of Sensemaking as it relates to leaders addressing Ribble's (2011) Nine Elements of Digital Citizenship in technology rich schools.

Recognizing potential bias and influence on the data, I employed strategies recommended by Merriam (2009) and Yin (2014) to address reliability. The strategies

employed included developing an audit trail, writing detailed field notes and memos, implementing multiple data collection instruments, framing the report as multi-site cases, and presenting thick rich descriptions,. All data collection and analysis took place under the guidance of the purposes set forth in the research questions for this study.

CHAPTER 4

FINDINGS

The purpose of this multi-site case study was to explore how school leaders make sense of and address digital citizenship as defined by Ribble (2011) and to investigate what successes and challenges school leaders experienced while implementing digital citizenship programs in large technology-rich schools in the Southeastern United States. This chapter includes findings from an analysis of school district documents related to digital citizenship, followed by the findings from the four cases within that district where leaders experienced and influx of computer technology for student use. Findings from the document analysis are organized by document while the findings from the four cases are guided by four research questions.

Document Analysis

Three documents were identified as being relevant including the Acceptable Use Policy, Code of Student Conduct, and a social media campaign website. The documents were created and communicated at the district level and apply to all model schools and non-model schools. Each document was analyzed using Ribble's (2011) Nine Elements of Digital Citizenship as codes for the deductive analysis. Because the documents were relevant to the entire school district, the principal from each school examined in the current study received the documents and could reference them when determining whether to address digital citizenship in their school. However, because the documents were disseminated at the district level, the documents did not provide data specific to the individual cases examined in this study. Document analysis provided a background to the

school district in which the cases in this study are located. As illustrated in Table 4.1 several elements of digital citizenship were addressed within the district-wide documents.

Table 4.1

Elements of Digital Citizenship Referenced in School District Documents

Element of Digital Citizenship	Acceptable Use Policy	Code of Student Conduct	Social Media Campaign Website
Digital access	X		X
Digital commerce		X	
Digital communication	X	X	X
Digital literacy			X
Digital etiquette		X	X
Digital law	X	X	X
Digital rights and responsibilities	X	X	X
Digital health and wellness			X
Digital security	X	X	X

Acceptable Use Policy

Excerpts from the acceptable policy were directly related to five elements of digital citizenship including digital access, communication, law, rights and responsibilities, and security. For example, the document acknowledged digital communication by suggesting that the School Board provides computer systems to “promote educational excellence, resources sharing, innovative instruction and communication, and to prepare students to live, collaborate and work in the 21st century” (Acceptable Use Policy, 2015, p. 1). The document also references digital access by stating that “Access to the School Division computer systems is granted as a privilege, not a right” (Acceptable Use Policy, 2015, p. 1).

Digital law, rights and responsibilities, and security are mentioned in policy that states the superintendent is required to establish regulations that contain appropriate uses

of “ethics and protocols for computer systems” to include “measures to prevent students from accessing information that the School Division determines is harmful or inappropriate to students” (Acceptable Use Policy, 2015, p. 1). The document further noted that failure to comply with policies and regulations could result in a loss of access and system privileges and that consequences for such violations could result in termination for employees and discipline in accordance with the Code of Student Conduct for students. Rights and responsibilities were articulated that the School Board denies all responsibility for lost or damaged property or any charges or fees resulting from the use of the computer systems

Code of Student Conduct

The Code of Student Conduct relates to six elements of digital citizenship including digital commerce, communication, etiquette, law, rights and responsibilities, and security. Specifically, the document references behavior related to technology under the five categories to include inappropriate property, profanity/obscenity, unauthorized use of computer technology, false fire alarms/bomb threats/911 calls/threats against persons/hoaxes and bullying and cyberbullying. However, offenses related to technology are also implied in five additional categories including disruption, disrespectful Behavior, insubordination, gambling and theft/attempted theft. The document also included a statement to address cyberbullying noting “how emotionally painful bullying and cyberbullying can be to a child, the school district’s staff remain committed to preventing this type of harmful activity during the school day and at school-related activities” (Code of Conduct, 2020, P. 5). The Code of Student Conduct also included the Acceptable Use Policy.

Social Media Campaign Website

The social media campaign website contained content that relates to eight elements of digital citizenship, but the document did not reference digital commerce. The campaign website contains six buttons including information about the campaign, social media impacts on a career, social media impacts on college, parent resources, reporting online threats, and facing consequences. The goal of the campaign is to “help our students and families understand what it means to be responsible digital citizens and to realize that social media posts and their impact exist forever, regardless of whether they are deleted or not” (Social Media Campaign, 2015 p. 1).

The section dedicated to the impacts of social media on a career contains a link to studies conducted on how employers screen potential employees. The site reports statistics about the number of candidates posting inappropriate photographs or videos, using drugs and alcohol, making discriminatory comments related to gender, race, or religion, making negative comments about a previous employer, falsifying qualifications, or demonstrating unprofessional behavior or poor communications skills. The site encourages students and staff members to remove themselves from negative and aggressive situations and reminds them that posts can “live forever online” (Social Media Campaign, 2015, p. 2).

The campaign website also includes a blurb to inform students that 35% of college admissions officers view applicants' social media posts. Additionally, the site informs students that they may lose scholarship funds for inappropriate posts. The site references a blog about how college recruiters use social media to get a “better picture of

the kids they are considering” (Social Media Campaign, 2015, p. 2). However, the link appeared to be broken at the time of access.

A section providing parent resources includes information on how to manage their child’s use of social media. The site includes a quick guide of how students can be social, smart, and safe using social media. It explains the benefits of social media, and precautions that should take place to include being mindful of one’s digital footprint, being aware that actions have similar consequences in virtual spaces as they do in reality, and remaining positive as words can affect others negatively. Additionally, the guide warns about protecting one’s identity and the need to beware of others portraying false identities. The section also includes a link to a guide for parents about social media use developed by Common Sense Media as well as a link to the commonwealth’s attorney webpage. However, at the time of access, both links appeared to be broken.

The sections titled *reporting online threats*, and *facing consequences* allowed students to report threats anonymously to the local police department and included a statement communicating school district’s position on online threats. The section reminds students and parents that social media threats are taken seriously and “can end in a range of disciplinary action, up to and including expulsion from school” (Social Media Campaign, 2015, p. 6). Legal ramifications are also noted in the document.

How School Leaders Make Sense of Digital Citizenship

Findings about digital citizenship collected during the semi-structured interviews were organized by Weick’s (1995) seven properties of sensemaking. Further, the emerged themes encompass how school leaders define their situation, determine what information to use or discard, and retain for future use with regards to digital citizenship.

The cross-case analysis includes a comparison of the elementary sites with secondary sites.

School A

Through semi-structured interviews conducted with school leaders at elementary School A, qualitative data were collected and coded using the seven properties of sensemaking as noted by Weick (1995). All seven properties were present in the data including identity, social context, retrospect, salient cues, ongoing event, plausibility, and enactment.

Identity. School A leaders referenced their own personal experiences when discussing digital citizenship in a school setting. Weick (1995) posited that one's own personal experiences causes them to react differently in a sensemaking position based on their self-perception. Principal A describes her role as a mother and how it impacts her role as a school leader when addressing digital citizenship:

There are many lenses you can put on this. So, I have two daughters, and digital citizenship for me right now with as a parent is trying to teach them that it never goes away. You post something, it's never gone. . . . you can't take it back. Somebody can screenshot it. You could say it and think, oh, I'm going to delete if somebody has it somewhere. And while that doesn't seem like digital citizenship, I need them to know anybody can see that forever. And I don't think our kids get that message. I don't think they understand that.

Further, she recalled a conversation with her own children about posting on social media.

Twitter only allows 140 characters. Your life is not that pretty. I mean, this is the other part that I try to show my own kids. I told them; I'm not tweeting about the laundry. I didn't tweet about the dog getting out. I'm tweeting about the happy things because that's what you want people to see. But that's not real, and how many girls, especially girls are comparing themselves to other girls by what's posted and I'm trying to get self-esteem of two young teenagers to be like, you can't, you're never going to be that and you're real. Be real.

Principal A added that she is also concerned about the content her own children are able to access through technology:

Some of the people I've seen my kids follow and it's, you know, they have 10 million viewers and they think it's so cool they have 10 million viewers and I'm like, what's the message they're sharing? Are you paying attention, you know, that health and wellness and, and how secure are they? Do you really want to be that?

ITS A echoed similar experiences when thinking about how Ribble's (2011) Nine Elements of Digital Citizenship apply to schools.

I have eight kids and I think about their balance and I feel the physical and psychological wellbeing in a digital world is very important. And, I kind of feel like all of these (elements) are important. I think that for elementary ages, buying and selling of goods is way down there. But then I also think of my 10-year-old stepson who thinks his Pokémon cards are going to earn him \$800.

Leaders at School A agreed that experiences with their own children allowed them to gain empathy realize the need for elements of digital citizenship in a school setting.

Social context. The interplay between students, teachers, school leaders, parents, and the community in a school setting serve as the social context as described by Weick (1995). Thus, the school as a setting influences sensemaking. Leaders at School A described their actions as influenced by their social context noting that their primary function as a school was to prepare future ready students and uphold policies that were created to establish and maintain a conducive environment for learning. Further, the grade level served at School A also influenced how they made sense of digital citizenship in their school.

Schools provide large social contexts that through interaction require the need to establish and uphold policies. Leaders at School A often framed elements of digital citizenship by how they intersected with policy. For example, when handling an incident involving the misuse of technology, Principal A recalled

When we started 1:1 that was a big, you know, every child had to have access. And I remember a student had figured out a way to find pornography. You know, a fourth grader and I removed the device and, and the, my predecessor actually said, you can't do that. And I said, Oh, yes, I can. Acceptable Use Policy, school board policy for, you know, code of conduct. This is not appropriate. This is a privilege. It's not a right, this is a privilege. This is an option for you to have.

While she recognized this as access, an element of digital citizenship, she also saw it as a violation of the school policy and addressed it accordingly by calling parents and assigning a consequence. Admittedly, she realized a conflict with her approach but ultimately felt that her actions needed to align with the school policies:

I felt very strongly that as school leaders, we had a responsibility for the acceptable use and code of conduct and to remove a device. And I think there's a little bit of hesitancy because it seems to be such a division initiative and a push. But I still felt like there had to be an opportunity that you make the mistake in elementary school and you suffer and go, I don't want that to happen again. Don't do it on your school device. Not that I want you to do it anywhere, but just don't do it on your school device.

This decision exemplified the process by which Principal A was influenced by her social context and thereby acting based on said influence.

Principal A also offered her approach on addressing students who make inappropriate comments or treat others unkindly through technology by sharing

I just don't think they're old enough to understand really what impact that's having on somebody else's self-esteem or somebody else's. And then to be anonymous about it or to do it through a device that then everybody else is laughing. So, I really tried to be very much by code of conduct and stick to that because when the child makes a bad choice, they have to be accountable for their actions and it isn't just, oh well they're young. No, they have to be accountable. Even at 10, if we're going to put the device in their hand, we have to hold them accountable. But then my second reaction always was, we're not teaching them the right way. What are we doing in kindergarten to teach them what it means to be a good digital citizen?

In severe cases both Principal A and ITS A note that access to the device is often suspended for a period of time in hopes that the student will not continue the behavior when their technology rights are restored. Ultimately, ITS A noted that “I want it to be a

lesson, so they don't do it again. I don't want them to just be punished.” In summary, both Principal A and ITS A indicated that when they observe a behavior involving the misuse of technology, they often try to remove the technology element from the offense and address it with the same standards they would any other type of misconduct. This thought process illustrates the influence of the social context on the school leaders’ sensemaking and ultimately, the decisions they make as a result.

Leaders at School A also noted that students’ grade-level influenced their thought process when considering what role digital citizenship plays in their school and how it is addressed. That is, the interaction with younger students provides a specific social context that influences the sensemaking process. For example, Principal A expressed “some elements are contextual like etiquette or security or communication or law. I think it’s very contextual to what’s happening, or what grade level it is.” Similarly, ITS A echoed “it’s kind of different age-wise, with older kids we’re talking about posting on Instagram and stuff like that. With younger kids, we’re just talking about don’t tell everybody about your password.” Moreover, Principal A and ITS A both perceived that which elements of digital citizenship are addressed and how they are addressed probably varies from elementary, middle and high school settings. For example, Principal A stated, “Go to middle school and I bet the middle school could be very different, you know, I bet they would be all over the place about how they felt about the approach.” Further, ITS A suggested that “in elementary school, it's handled on a case by case basis.” She explains that in the early grades they are always focusing on social norms and so often times a quick conversation or redirect may override a consequence.

ITS A also noted that with the grade-levels K-5 she had to address the age difference:

We did little lessons with the lower grades. We did the silly song with the monsters that they could relate to, and for the older grades we did the slideshows with obviously the older videos and we made activities to go with them all. These examples illustrate how the social context influences the sensemaking of the school leader and therefore, the types of actions that take place as a result.

Retrospect. Weick (1995) noted that sensemaking takes place after the situation that triggered the sensemaking. Leaders at School A shared their reflections on attempts at addressing digital citizenship as a result of the influx of technology associated with the 1:1 initiative. They noted the need for enforcing policies, preventative measures, and also learning when addressing digital citizenship in their school.

When reflecting on a fourth grader who accessed inappropriate photographs, Principal A recalled the struggle in deciding to remove the student's access to a school-issued device. She relied heavily on the student code of conduct, school board policy and the acceptable use policy to make her decision. However, she also recognized the need to provide students access to the digital world. She determined that "It's not a right, this is a privilege. This is an option you have" (Principal A). Further, Principal A reflected that "if he's doing it here, he's doing it at home because he didn't just learn it." She reconciled that while teaching students was her main priority, she also had to enforce the established policies. This was one of the first major incidents that occurred shortly after the introduction of 1:1 technology. Her reflection on this incident allowed her to rationalize decisions as she encountered similar behavior and reinforce her belief that teaching students how to be good digital citizens is important.

Principal A also demonstrated retrospect as she discussed the change in focus as the model program continued:

The first year we went 1:1, my ITS and TST worked a lot in the beginning on handling the device. How do we hold it? How do we take it around, right? Because there's responsibility and just the, the having the device. And then they transitioned into some digital citizenship conversations. I don't think we hit it hard in the beginning because I think we were overwhelmed by just having a 1:1. And then I think we tried to be more intentional each year.

Examples of retrospection were also displayed during the interview process. For example, when asked about what elements of digital citizenship were most relevant, leaders at School A began to reflect aloud in real time. Principal A shared that she would not have initially considered digital commerce as a primary topic for her school to be teaching but saw the relevance once she thought more about it. Similarly, ITS A noted that with regards to Ribble's (2011) Nine Elements of Digital Citizenship they have not talked about buying and selling of goods electronically. Although, she admitted that with many younger students having access to purchase applications on their personal devices, it may be something to consider in the future.

Salient cues. Weick (1995) suggested that during the sensemaking process, one extracts important elements that require action, rather than attempting to gather all information. This process was illustrated as Leaders at School A focused on safety and wellbeing as a primary function of digital citizenship.

Through semi-structured interviews, Leaders at School A expressed the importance of ensuring the safety and wellbeing of their students when shifting to a 1:1 technology model. This sense of responsibility by the leaders to ensure students' safety is linked to their role or identity as described by Weick (1995), but also illustrated the important elements they extracted referred to as salient cues. For example, while

Principal A recognized the regulations associated with the Children’s Online Privacy Protection Act (COPPA) and the Children’s Internet Protection Act (CIPA), she suggested that her school “still would have addressed it through a lens of health and wellbeing, and the appropriate use of your device.” Further, Principal A indicated that “the protection and safety of our students has to be the priority.”

Similarly, ITS A indicated that “safety is the most important one; digital security” when asked to rank the importance of Ribble’s (2011) Nine Elements of Digital Citizenship with regards to addressing the topic with students in school. Further, she added that “physical and psychological wellbeing in a digital world is important.” While leaders at School A admitted they were not expert on the topic of digital citizenship, they interpreted their role as a caretaker and protector for students and interpreted that a primary theme in being a good digital citizen is being safe in a digital environment.

Ongoing events. Sensemaking was described by Weick (1995) as an ongoing process whereby one’s perception of an event changes as a result of the process. School A leaders made references to such change in perception to include learning through sharing experiences amongst colleagues and starting with the basics.

Principal A recalled “in the beginning when we started, by having monthly meetings and almost all of us brought six or seven staff members. And so, there was a lot of networking that we did, and a lot of the discussion was, this happening in my building. Is it happening in yours? And then elementary talking to middle and high school principals.” This series of collaborative meetings illustrated an ongoing process that changed perceptions of how digital citizenship might be addressed in schools. Principal A noted “I don't think we hit it hard in the beginning because I think we were overwhelmed

by just having a 1:1. And then I think we tried to be more intentional each year” (Principal A). Leaders at School A needed time to make sense of what was happening with 1:1 and digital citizenship, addressing those most important needs first to include access and safety.

Plausibility. According to Weick (1995), individuals prefer an interpretation that is reasonable or probable over one that is accurate. School A leaders often made connections to digital citizenship based on their previous knowledge and understanding of similar concepts in the brick and mortar setting. That is, school leaders saw a plausible connection between the intended outcomes of promoting good digital citizenship and the main mission of their school.

Leaders at School A agreed that several of Ribble’s (2011) Nine Elements of Digital Citizenship are valuable and relevant to the educational setting. For example, Principal A noted that digital literacy means being a “critical consumer of information” and represents a crucial skill she wants her students to develop, as it directly relates to literacy, a primary function of elementary schools.

ITS A added that at School A, they saw value in talking about digital health and wellness, and the need to lead a balanced life. She also noted the relevance of being safe and addressing strategies for digital security to include not sharing passwords and sharing personal information online. Further, ITS A saw the relevance in addressing digital law through by teaching students about copyrights and plagiarism. The aspects of digital citizenship that leaders at School A noted as being valuable during the interview process had some connection to the mission of the school. Moreover, leaders at School A often

leveraged that mission when making sense of what aspects of digital citizenship they addressed and those they did not.

Enactment. When people act, they bring structures and events into existence and set them into action (Weick, 1988). Leaders at School A described several examples of enactment while sharing how they addressed digital citizenship in their schools. These structures and events included assigning consequences, delivering curated lessons, establishing a culture, setting expectations, infusing curriculum, and modeling good digital citizenship. Each method initialized by School A leaders to address digital citizenship is described in further detail in a subsequent section dedicated to answering the research question: How do school leaders in a technology-rich, 1:1, Southeastern United States school district, address digital citizenship?

Additionally, leaders at School A also established a structure of distributed leadership to address digital citizenship. Informal leaders were identified as being responsible for elements of digital citizenship in School A. For example, ITS A is not part of the administrative staff. However, she was identified by Principal A as a leader in supporting the elements of digital citizenship for students and teachers at her school because her job was related to instructional technology. When asked who is most responsible for implementing a digital citizenship initiative at School A, Principal A shared

You can't lead the whole thing yourself. I think that's building the buy in with your staff as well. The parents, the relationships. I mean, we talk about that all the time. The relationship piece I think is, is critical, you know, for leading any of those initiatives.

Principal A also noted while she has a background in technology leadership, many principals do not have that luxury. She added “I think it definitely helped to have the

instructional technology specialist. And I know that that's not an, every division doesn't have one in every school, but definitely having that person who was sort of your go-to.”

ITS A agreed that she is able to work with students and teachers on elements of digital citizenship when the opportunity arises. However, she also noted that leadership extends to the classroom teacher because “I can't see your kids three times in the year and be expected that they were all there, that they were all listening, that they all got it. It's not a hit it and then it's over. It's a continual thing.” That is, digital citizenship is viewed as a process, not just one lesson that requires leadership from multiple areas.

School B

Through semi-structured interviews conducted with school leaders at School B, qualitative data was collected and coded using the seven properties of sensemaking as noted by Weick (1995). All seven properties were present in the data including identity, social context, retrospect, salient cues, ongoing event, plausibility, and enactment.

Identity. School B leaders referenced their own personal experiences when discussing digital citizenship in a school setting. Those personal experiences influenced their interpretation of events according to Weick (1995). For example, ITS B reflected on her conversations with colleagues about raising their own children in the digital age:

We talk about this; her kids are teenagers. Mine is 25. They are growing up in a different world than we grew up in. They have to be responsible and so it's a whole different thing to teach them than when I was growing up. We didn't have text messaging, you know, you wrote notes, that kind of thing. So, I think its different teaching them how to behave in a digital world, which they are growing up in and they live in.

Her experiences with her own children influence how she thinks her current students should be taught. Additionally, ITS B compared the digital world to her own reference of a face-to-face setting:

Making the right decisions means making the same decisions when using technology that you would make if your mom was sitting beside you. I think they it can be as simple as teaching our kids to make responsible decisions and doing what you know is right. We talk about being a good citizen in the community and in school and it's the same thing online. So, you're following the same guidelines online that you are in person.

Her comments illustrate how her experiences have shaped her thinking on what it means to be a good digital citizen by referencing the values she was taught prior to the expansive availability of technology.

Social context. The interaction with students, teachers, parents, and the community influence the actions of school leaders as part of what Weick (1995) referred to as the social context. Schools have multiple players and policies that work as a system. For example, at School B, leaders reported that often they relied on policy to drive decisions that relate to digital citizenship. Those policies are put in place to protect and promote a conducive learning environment for students and are created with input from multiple members of the school community. Principal B shared that when dealing with incidents involving the misuse of technology, “we use the code of student conduct to make any decisions.” ITS B added that “if it is a referable offense, we send them to the office.” She described an incident where a student had written something inappropriate on a document and was sent the office for not following the student code of conduct:

We did have one last year, and a couple of years ago that ended up in office. It was serious enough that we sent it to administration. We called the parent and made them aware of it because it was concerning.

School leaders are making decisions to uphold school policy because other members of the organization rely upon and expect said policies to be upheld. Further, Principal B shared that she communicates with students and parents about appropriate use of

technology by referencing those policies within the acceptable use policy and the student code of conduct.

School leaders at School B also referenced their social context by noting that their focus on particular elements of digital citizenship may differ in the elementary school setting when compared to the secondary level. When specifically examining Ribble's (2011) *Nine Elements of Digital Citizenship*, ITS B shared:

I feel like literacy and etiquette are probably our two biggest ones at this grade level, the elementary level, because they don't know. That's kind of the basis of where we need to start with that. And probably digital health and wellness and a little bit of security. We talk about passwords and what they should do and how they shouldn't share their stuff. But again, we are at the elementary level and they're not making their own passwords a lot of times and we're still in charge of what they're doing.

Principal B added:

At this level, we're just trying to teach them to be good digital citizens because they're young and they don't know any better or you know, they don't know any different, they don't know what to do. So, we're just basically providing the foundation that hopefully will build upon that.

She also shared that her main priority at this level is to ensure students are safe.

Principal B and ITS B both agreed that while they address misconduct according to policy, at the elementary level, there is opportunity for restorative discussions to take place. ITS B stated:

It's more of a teaching opportunity and I'm not even really disappointed because they're kids and they don't know at this age. High school, they would know a little more so it may be a little more disappointing.

In the same vein, Principal B noted that "because they are in elementary school, they are young. They are growing, and they are testing boundaries and they may not know or understand why something is inappropriate." Both leaders communicated the importance of patience with younger students.

Retrospect. According to Weick (1995), sensemaking takes place after the situation that triggered the sensemaking. Throughout the semi-structured interview, leaders at School B reflected upon their experiences with digital citizenship. For example, ITS B recalled that her attention to addressing digital citizenship has increased in year five of the model program, admitting that “we really just focused on making sure students had the devices, could use them, and were not being put at risk when we first started.”

Additionally, ITS B reflected “We don't have a full-fledged course where everybody does the same thing. We just get it in there where we can.” Further, she noted “We just realized that teachers don't have the time” recognizing that if time was not an obstacle, “we could do lessons every nine weeks or every month in the different classes” (ITS B). Her reflection led to the conclusion that taking advantage of teachable moments and an infused curriculum may better serve the initiative for teaching students how to be good digital citizenship.

Salient cues. Through semi-structured interviews, leaders at School B noted a focus on safety and wellbeing. This focus is evidence of an element extracted from the concept of digital citizenship, described by Weick (1995) as a salient cue. For example, leaders at School B expressed the importance of ensuring the safety and wellbeing of their students when shifting to a 1:1 technology model. Principal B noted that there is a balance between providing access to technology and ensuring students are safe:

It's a case by case basis I think that we, the pendulum is swinging back a little bit and that we're trying to really balance technology. You know, the amount of time kids are in front of a screen and not in front of the screen.

ITS B echoed that “Health and wellness are definitely addressed at the elementary level.”

Both leaders at School B rely on Securly, a monitoring application that is designed to

keep students safe when accessing the Internet. In the event that a student is accessing or attempting to access inappropriate material, the administrator or the school counselor addresses the incident with the student. While leaders at School B demonstrated knowledge of what it means to be a good digital citizen, safety and wellbeing resonates because it is important and more noticeable given their primary roles as educators.

Ongoing events. Sensemaking as described by Weick (1995) is an ongoing process. Leaders at School B noted this ongoing nature in their responses to how they addressed digital citizenship in their school. For example, Principal B noted that

this being year five, I think we definitely started out a lot stronger with that. And we definitely had a lot more miscues at the beginning. Kids are aware of our values and expectations; we are bringing those values and expectations into our computer use as well.

Further, Principal B noted that “there has been ongoing professional development with the model schools to grow our capacity” when asked about what resources she used when addressing digital citizenship. This ongoing collaboration demonstrates the mindset that further meetings would be necessary to make better decisions about how to make sense of digital citizenship in the school setting and that said meetings may influence further action.

ITS B shared that “it’s a case by case basis I think that the pendulum is swinging back a little bit and that we’re trying to really balance technology.” Her account illustrated that making sense of digital citizenship requires one to constantly reassess the situation and make decisions based on new information, knowing that the landscape may change again in the future.

Plausibility. When asked about the relevance of addressing digital citizenship at School B, leaders considered how digital citizenship added value and was relevant to

their roles and mission. That is, leaders considered the concept of digital citizenship and provided an interpretation that was reasonable to their role as a school leader. For example, Principal B shared that while it has taken time to address the logistics of a 1:1 technology program, she has been able to focus more on digital citizenship as it aligns with their core values:

This being year five, I think we definitely started out a lot stronger with that. And we definitely had a lot more miscues at the beginning. Kids are aware of our values and expectations; we are bringing those values and expectations into our computer use as well.

ITS B expressed “Kids need to hear it more often and they don’t hear it!” Principal B added “we need to provide them with a good foundation.” Both school leaders see the value in addressing small incidents of technology misuse before they become larger school issues. ITS B shared “we do a lot of preventative stuff here and then we just deal with the ones that don't follow directions.” She also noted that it is important to stop and discuss what is appropriate for school as it will often be appropriate for life as well.

Enactment. Weick (1988) posited that when people act, they bring structures and events into existence and set them into action. Leaders at School B described several examples of enactment while sharing how they addressed digital citizenship in their schools. These structures and events included setting expectations, leveraging filtering software, leveraging specialists, and seizing teachable moments. Each method initialized by School B leaders to address digital citizenship is described in further detail in a subsequent section dedicated to answering the research question: How do school leaders in a technology-rich, 1:1, Southeastern United States school district, address digital citizenship?

Leaders at School B also created a structure of distributed leadership, recognizing that addressing digital citizenship required the use of multiple informal leaders. For example, Principal B made several references to taking a team approach to implementing the 1:1 technology initiative in her school. This initiative encompassed elements of digital citizenship:

As model schools, we had meetings before we went 1:1 and then we've had a quarterly meeting maybe every other month. I think the past five years there have been PD ongoing at the division level to continue to grow our capacity as model schools.

The team consists of members of the administrative leadership team, the ITS, and other teachers. Principal B also noted that she relies on her school counselor and other faculty members to assist with students who may be searching inappropriate topics as reported by the Securly application:

Teachers and students know about Securly and that we have the opportunity to view what they access on their devices. My school counselor will conduct random spot checks in Securly to see if there's anything that needs to be addressed. And we just handle it. Often a student may not be on an inappropriate site, but they are not where they're supposed to be, the assistant principal or I will have words with students.

ITS B considers herself to be responsible for leading a digital citizenship initiative but admitted she relies on teachers to carry it out:

I'm kind of the point person for that. We do a lot at the beginning. I offer my services to come into classes and talk about digital citizenship. I'll take the technology support technician with me and we talk about not just the citizenship but care of equipment, which is, you know, still being good digital person. Some teachers take me up on it, some of them just do it themselves. But I think the teachers talk about it, and I share resources with them.

Additionally, ITS B shared that while the principal ultimately leads any initiative in the school, there are supports put in place by central office to support the work of ITSs with regards to 1:1 and digital citizenship.

School C

Through semi-structured interviews conducted with school leaders at School C, qualitative data was collected and coded using the seven properties of sensemaking as noted by Weick (1995). All seven properties were present in the data including identity, social context, retrospect, salient cues, ongoing event, plausibility, and enactment.

Identity. Leaders at School C used their own personal experiences and identities as a point of reference when making sense of how elements of digital citizenship relate to a school setting. ITS C shared that he knows digital citizenship is important because he knows adults who have fallen victim to ransomware attacks where they are forced to pay a large sum of money because someone hacked their computer. Principal C shared similar experiences:

Even grown adults do inappropriate things online all the time. They post messages on social media, send inappropriate emails, text messages, and put their own job on the line without even thinking. So, if adults are acting like this clearly, they could have benefited from some lessons around how to be a good digital citizen.

Assistant Principal C added that his experiences growing up taught him lessons along the way:

They haven't been out in the real world yet. They have not been adults. They don't understand the depth of their engagements that we do as adults. We've been through some things and we've been responsible for things and we've had consequences for making mistakes and they're going through that right now.

The leaders at School C agreed that their personal experiences and roles they serve within the school have influenced their thinking around making sense of digital citizenship in their school.

Social context. Leaders at School C indicated that school policy often drives decisions related to digital citizenship whether it be in addressing misconduct related to

technology misuse or preventing said misconduct. This is consistent with Weick's (1995) theory that the presence of others influences the outcome as policy is created and applied in a social context. For example, Principal C noted that often when he has to meet with a student about breaking school policy, he also references the law:

I've had lots of conversations with lots of students about digital citizenship and being responsible and anything you put online, once you put it online, it's not going away. My office is purposely right across from the school resource officer. There are a lot of times he can hear most of the conversations when my door is open, and he typically knows when to walk over.

Through his conversation with the student he is referencing policy and ultimately leans on it to make his decision. ITS C added that students may also receive disciplinary action if they do not follow the appropriate procedures for taking care of their device. Students who do not store their devices in the appropriate cases could be referred to the office for discipline. Assistant Principal C noted that while students may be referred to the office for offenses such as the unauthorized use of technology, the response may not always result in serious disciplinary action:

Depending on the situation you find yourself in with discipline issues related to for example the unauthorized use of technology, you get into conversations there about expectations. You should have already known, or maybe you shouldn't have already known because you're 1:1 device, might be your first device. Did you have the freedom to use without oversight? Perhaps we just expected you to understand all nine elements of digital citizenship. Sometimes I feel like it's unfair to have a conversation about you should've known if I'm wondering, did you really know. It is a learning process and we got to view it as, okay, you're in my office, this opportunity to teach you this opportunity for you to learn rather than I've got to chastise and reprimand you.

School leaders at School C concur that often discussions around digital citizenship arise because a student was misusing technology thus providing a teachable moment to address proper etiquette and procedures. These interactions are a result of the school leader

processing the information, understanding the social context they are currently in, and then making a decision based on those influences.

Social context was also evident when leaders at School C discussed their need to navigate responsibilities. Leaders at School C revealed that they had to consider functions of their role when determining how to make sense of their responsibilities in addressing digital citizenship. For example, when questioned about who is responsible for addressing elements of digital citizenship Principal C noted “We feed 54% of our students’ lunch and breakfast. If we're, feeding them, we're also going to end up being responsible for the teaching them about digital citizenship.” He went on to share that “everything falls on the school, we have to teach them right from wrong, social skills, and etiquette” (Principal C). ITS C echoed “kids don't know that safety stuff, so if the schools don't do it, no one's going to, and I think it fits.” However, Assistant Principal C proposed “I don't know how we address that as a school because, when you try to promote the rights of some, you have to be careful that you don't infringe upon the rights of others.” He provided an example of what is considered proper cell phone use, noting,

So, if you are at the dinner table, should you put your phone away? Some people think that's very important and that should be a focus in education. Like we should teach kids when it's appropriate to use cell phones. But some people don't focus on it at all. Personally, my family, we don't care. We use our devices. And so it's a norm in our house to eat and have devices out and we're playing with each other, like, Modern Warfare together, you know, and so it's part of us and devices are part of us and so the etiquette is interpreted different depending on one household to another.

Nevertheless, Assistant Principal C conceded that “It's got to be an “us” thing and the “us” goes beyond the building. This is where we look at community partners and parents to help support the efforts of the school.” Leaders at School C agreed that they have a

part to play in addressing digital citizenship but also noted the complexity of incorporating additional stakeholders within the social context.

Retrospect. Leaders at School C shared several reflections on how they made sense of digital citizenship at their school through the lens of assumptions. They noted that said assumptions inhibited their ability to immediately address digital citizenship in their school. For example, Assistant Principal C suggested,

There's this assumption that we're going to kind of transfer those rights and those expectations to the digital realm. I think we struggled with that because anonymity makes people break rules. Because maybe you've always wanted to do this secretly and you can do this because you feel like there's really no consequence because no one knows who you are.

He proposed that not everything transfers when it moves from a face-to-face to a virtual interaction:

When someone writes a computer virus that destroys another person's computer, or erases their data, or steals their money, it is a faceless crime. The perpetrator does not feel bad because they are not aware in many cases of whom they are harming.

Another large assumption according to Principal C is that students are advanced in the area of technology use and therefore understand how to be good digital citizens. He noted,

I do think the fallacy is that everybody has a device and every kid knows how to use the device better than adults. I don't necessarily think that's the case. They might know how to play games, but they don't know how to do their schoolwork in Schoology.

ITS C noted that students using Chromebooks often lack skills in using computers running Microsoft Windows and added “we assume students are coming to us with a set of skills because computers have been around for so long but that just is not the case.”

Further, he suggested that students have access to phones and other electronic devices, but that does not mean they know how to use them appropriately.

Assistant Principal C asserted that society makes assumptions about children and technology, including their ability to access a stable Internet connection. He shared that

some of our kids don't have Internet access at home and you have families at various stages in their socioeconomic status, yet we assume that when we give you an assignment to do at home, you have the necessary resources to do so without experiencing a hardship.

Assistant Principal C added that educators also assume that all students abide by the same code of norms and values. He offered the example of using a cell phone at the dinner table, "Some people think we should teach kids when it's appropriate, but in my family, we use our phones at the table" (Leaders at School C acknowledged that assumptions exist and contribute to their own judgement of how to make sense of digital citizenship. They also agreed that these assumptions create complexity and potential challenges for how to address digital citizenship in their school. Such reflections demonstrate how School C leaders' identities and experiences influence their own sensemaking.

Salient cues. Leaders at School C indicated that ensuring the safety and wellbeing of their students when shifting to a 1:1 technology model was a priority. This thought represents what Weick (1995) referred to as a salient cue, or a more noticeable, important signal that should be addressed. For example, Principal C noted "school safety has to be number one. So, when we talk about digital security and when we talk about digital law, I think it's really important to have those at the top of the list." Additionally, Assistant Principal C shared concern for helping students navigate dangerous situations:

The Internet is wonderful because it connects people so we can make better sense and we can grow our community of knowledge. But it's also very dangerous because people who think maliciously can find each other and be super

dangerous. So, it gives us access to all information, not just the information we think is good, and we have to protect our students from that environment.

He added that students' wellbeing is crucial to academic success and there is a constant battle to "help people feel responsible for hurting or infringing upon somebody's rights or damaging somebody's life in one way or another" (Assistant Principal C). ITS C also commented that "as a school, we are concerned about what content our students have access to." Leaders at School C interpreted teaching digital citizenship as a way to provide students with the skills needed to safely navigate a digital world.

Ongoing events. Leaders at School C expressed the ongoing nature of making sense of digital citizenship. For example, Principal C shared "we did a lot of the groundwork, and grunt work for everybody else. There was a lot of meetings, collaborations, discussion and a lot of oops moments and decisions made that we learned what not to do." His comments illustrated the continuous nature of sensemaking.

ITS C suggested that "we probably need something a little more formal" when assessing how his school addressed digital citizenship. He went on to note that "we do the best we can with what we have but we know there is more work to do. We don't know everything, but we are moving in the right direction."

Assistant Principal C's comments also exemplified the ongoing nature of sensemaking:

This goes beyond the building. We have to look at community partners and parents and have not just a meeting but realize this is an ongoing thing that might even have to happen in the digital room. Ironically, it's this ongoing conversation about what are we doing now? It's three steps for me, where we are, where we're going, and the step in between is what we do next. So, here's where you are now, here's where we want to go. So, here's what you go do next. And you got to keep thinking in those terms to continue your work towards making things better and better and safer and safer and, and, and more and more useful as far as operating in the digital world.

He recognized that addressing digital citizenship at School C is challenging and that he does not have all of the answers. He also expressed that it would take a combined effort to successfully address digital citizenship.

Plausibility. The degree to which the elements of digital citizenship add value and relevance to the overall mission of School C aids school leaders at School C in making sense of how digital citizenship fits into school operations. Weick (1995) described this as plausible or the act of forming an interpretation that is reasonable over one that is accurate. For example, Assistant Principal C noted the “It’s super important that we address it because if you lose a student to stress or other psychological barriers, you’ve lost the ability for them to learn.” He further suggested that if schools do not address the isolation and depression that can be caused by technology use, it could be a “matter of life and death” This illustrates the act of developing a rationale that would be reasonable to most without providing scientific proof.

Principal C also sees relevance in the social studies curriculum already being taught by noting,

The social studies department needs to take a responsibility for addressing digital citizenship because digital citizenship is citizenship, right? That’s the key word. Citizenship. And that’s what when I taught world geography, US history, government, you always brought in debates and the compare and contrast of, you know, what’s healthy, what’s not right, what was, what is. But I also think, I don’t think we need to create a whole new curriculum.

In the same vein he drew comparisons to similarities in between past and present challenges when he noted that “Nothing has changed. It’s just, you know, cracked computer screens are the water damaged cover of the textbook 20 years ago” (Principal

C). Nevertheless, ITS C noted the value in addressing elements of digital citizenship as some new issues have emerged:

I think we probably need something a little more formal than we have because I know it's a problem. But right now, we address the problems when we see them, and we will even use the morning announcements to try to prevent future misconduct from occurring.

Leaders at School C indicated that while some challenges are timeless, they see the value in taking preventative measures to educate students on how to be good digital citizens as those characteristics are both valuable and relevant to the school's mission. In short, promoting good digital citizenship makes sense for schools.

Enactment. According to Weick (1988), when people act, they bring structures and events into existence and set them into action. Leaders at School C described several examples of enactment while sharing how they addressed digital citizenship in their schools. These structures and events included setting expectations, infusing curriculum, leveraging community, and seizing teachable moments. Methods implemented by School C leaders to address digital citizenship are described in further detail in a subsequent section dedicated to answering the research question: How do school leaders in a technology-rich, 1:1, Southeastern United States school district, address digital citizenship?

Leaders at School C also crafted a structure for distributed leadership, recognizing that addressing digital citizenship required the use of multiple informal leaders. For example, when questioned about who is most responsible for leading a digital citizenship initiative at School C, Principal C admitted that as the leader of his building, he is ultimately responsible. However, he admitted that beyond the vision, he relied heavily on those that knew more about the topic. Assistant Principal C echoed a similar sentiment:

The textbook answer is anything that has a focus in the building, rests on the shoulders of the principal. The school will run, but the things that are being prioritized and get the most attention will be done better. However, the real answer is everyone. Because we all play a role in getting this important work done.

Moreover, ITS C suggested

I don't think it can really go down to one person. It's hard. I think the principal is the leader of the school and certainly sets that tone to where it fits and how big of a priority it becomes. I think in our school division right now, we have many players involved.

School C Leaders shared that leaders both formal and informal play roles in overseeing the 1:1 initiative at School C and the degree to which digital citizenship is addressed.

School D

Through semi-structured interviews conducted with school leaders at School D, qualitative data was collected and coded using the seven properties of sensemaking as noted by Weick (1995). All seven properties were present in the data including identity, social context, retrospect, salient cues, ongoing event, plausibility, and enactment.

Identity. An individual's perception of the role they play influences their actions (Weick, 1995). Leaders at School D referred to their own personal experiences when discussing their understanding of digital citizenship. For example, LMS D2 shared:

I'm just watching my own children who are in their 20s and going, oh! They know it now. They really had no clue what they were doing. It scares me to find out the things they were doing. I'm like, really? You were doing what? Oh, I should have been so much better at teaching them about these things. And I think we need to make sure we are doing it with our students.

She added that she has witnessed adults not practicing good digital citizenship because they did not know any better:

Even adults have issues trying to decide where the lines are between the things they should be doing and the things they shouldn't. For example, we don't have that book in the library, so let's use a PDF version of that book for our students. No! That's a problem. That's a copyright issue. It's not having knowledge of digital rights responsibilities. We need that not just for students, but for staff as well.

LMS D1 also mentioned her own children:

I can't help but I think being in the school, the first place that my mind goes is with my own kids. It's not only knowing how to use the technology, how to use it, in an appropriate manner, both in educational setting and an especially I think anymore outside of the educational setting.

Both leaders expressed that their personal experiences gave them valuable insight when weighing the significance and understanding School D's role with regards to digital citizenship.

Principal D referenced his experience with a previous program at School D centered around personalized learning and technology. He noted that while the program provided some benefits, its heavy reliance on technology raised concerns about his teachers' and students' preparedness to learn effectively without addressing pedagogy and the social norms associated with teaching and learning in a virtual landscape. Further, he noted that parents were concerned about an "overdependence" on electronic programs.

Social context. Leaders at School D noted that school policy plays an essential role when making sense of how digital citizenship is applicable in their role and setting. As school leaders, a major role is to uphold and model school policies. Principal D shared "I believe that almost all of the elements, etiquette, the rights and responsibilities security, and access are all, things that we have in place in our policy structures and in our expectations for our students and staff." Further, he noted that those expectations and responsibilities are shared at the beginning of the school year. He added "From an

administrator's standpoint, we are providing the structure and support through feedback and enforcement." Principal D also noted that they often find themselves reacting to students who have broken policies such as attempting to access an inappropriate website.

Leaders at School D also expressed that they often have to navigate the degree to which they were responsible for instilling elements of good digital citizenship in their students. That is, the presence of others in the social context influence their actions. For example, Principal D noted that "some of these elements are not something that our kids are doing in school." For example, Principal D proposed

You can't put the blame on the schools for cell phones. That is a prerogative that the parent takes in terms of providing access and there has to be guidelines. Yet often, the school gets involved with misuse of such devices.

He added that when students are using social media outside of school hours, "they are not technically within our realm of responsibility." LMS D1 noted:

I don't necessarily think that it would solely be the school's responsibility for any of it. It needs to come from everywhere. But I do think that because of the fact that here we are issuing the kids these Chromebooks, that we are expecting them to use on a daily basis for multiple reasons. I really do think that taking the time to discuss the majority of these concepts with them on a rather regular basis is important.

LMS D2 suggested that sometimes the roles are complex to navigate as schools act in loco parentis. She shared "are we overstepping our bounds there? Sometimes, but at the same time it doesn't hurt for some general things."

Retrospect. Leaders at School D shared several reflections on how they made sense of digital citizenship at their school through the lens of assumptions. They noted that said assumptions inhibited their ability to immediately address digital citizenship in their school. For example, Principal D admitted that "we kind of take for granted that

kids know because it is already ingrained in our social norms.” LMS D2 echoed a similar sentiment:

We assume a lot about this generation of kids. I think we assume that these kids know what they're doing because they grew up with technology, and they really don't. They really have no idea. And, I think we have done them a disservice by assuming that.

Leaders at School D suggested that because many assume students know how to use technology properly, it is not always made a priority above other important initiatives.

This assumption was recognized by Principal D based on his previous experiences.

However, after reflecting he came to realize that the assumption did not match what he observed in his own school. This is an example of and interplay between identity and retrospect.

Principal D also noted that he has reflected upon the experiences of his stakeholders. From this reflection he shared that “often we seem to be reacting to issues with regards to inappropriate websites of things like that rather than taking a preventive approach” (Principal D). LMS D1 added “we really need to be looking at the bigger picture versus a specific incident.” She suggested that a reactive approach is better than no approach at all but would prefer to take more preventative measures to address digital citizenship. Nevertheless, she argued that “it cannot be just solely they school’s responsibility. It needs to come from everywhere.” Further, she reflected on the school’s ability to take on this challenge on their own and realized it would take consistent reinforcement. LMS D1’s reflection on digital citizenship at her school illustrated a train of thought reflecting on her own experiences and developing new understanding based on said experiences.

Salient cues. Leaders at School D reported that they kept the safety and wellbeing of students at the forefront of their decision-making with regards to technology and digital citizenship. This sentiment demonstrates what the leaders at School D have determined to be important. When asked about which of Ribble's (2011) Nine Elements of Digital Citizenship were relevant to the function of School D, Principal D responded "I think we are always concerned about safety when it comes to students and their technology. Certainly, learning first, but I think health and wellness it is right up there." He added that his library media specialists (LMS) always address digital security and safety at the beginning of the school year. Additionally, Principal D noted that he occasionally worked with parents who were concerned about the amount of time their students were exposed to technology.

LMS D1 expressed that she experienced anxiety when thinking about all of the consequences her students might incur when being careless with technology:

Some of the things that we've dealt with in the classroom over the years, just being responsible, like what they posted online, it just kind of kills me a little inside because I just have to remind them. I'm just like, guys, this never goes away. This is with you forever. The decisions that you make today online are not going away anytime soon, and it can be devastating for them.

LMS D2 added that she felt a responsibility to "take better care of" students and ensure they are "better prepared" for what they will experience in their lives with regards to technology use.

Ongoing events. Leaders at School D suggested that they are still making sense of how digital citizenship should be addressed at their school. For example, LMS D1 shared "I really do think that taking the time to discuss the majority of these (digital

citizenship) concepts with them on a rather regular basis is necessary, but we just really haven't figured out how to do that with any consistency."

LMS D2 noted "I think even adults have issues trying to decide where the fine lines are, the things they should be doing and the things they shouldn't as well, you know we don't have a book for our students." Her thinking illustrates the idea that many are still trying to make sense of what digital citizenship is and how or if it should be infused in the schools. She added that leaders at School D are still trying to figure out when and how to fit it in.

Principal D shared that "we've used our division's social media policy. However, I think that there's a lot of revisiting going on in terms of how to best educate our students on appropriate use of Chromebooks and other technology." He added "we've definitely come a long way, but we know there is still work to do." His words demonstrate the mindset that neither he, nor his school district leadership have all aspects for addressing digital citizenship figured out. However, they understand its' an ongoing process.

Plausibility. School D leaders noted that value and relevance are often considered when making sense of how elements of digital citizenship are applicable to the school setting. As Weick (1995) described, individuals prefer an interpretation that is reasonable over one that is accurate. For example, Principal D offered that "communication and citizenship is always something that we focus on with our students." He added that his "emphasis would be on digital literacy, where you're using learning about the use of technology and how it can assist and support our students and enhance instruction." He

also shared that elements of digital citizenship can “better engage our kids in the digital world that they live in,” which Principal D believes is key to a school’s success.

LMS D2 suggested that digital citizenship is relevant because “we are all living it. You cannot find one person in this building by at this point in the day has not accessed the Internet.” She added that teachers have many opportunities to embed it in their lessons because it is relevant to students and the curriculum being taught. She added that as educators “we feel an obligation and responsibility to help students better understand how to navigate this new digital world because it will serve them well to have these types of skills” (LMS D2). However, LMS D2 also noted that digital citizenship is not always seen “as a priority because it doesn’t necessarily fit in with the primary mission of the building.” That is, elements of digital citizenship are not necessarily measured in a continuous improvement plan, as they typically focus more on test scores in core subject areas. LMS D2 noted that elements of digital citizenship are relevant to the school districts strategic plan, focusing on preparing students to be future-ready by developing communication and collaboration skills.

Enactment. As people act, they bring structures and events into existence and set them into action (Weick, 1995). Leaders at School D described several examples of enactment while sharing how they addressed digital citizenship in their schools. These structures and events included setting expectations, using filtering software, infusing curriculum, leveraging specialists, and seizing teachable moments. Methods implemented by School D leaders to address digital citizenship are described in further detail in a subsequent section dedicated to answering the research question: How do school leaders

in a technology-rich, 1:1, Southeastern United States school district, address digital citizenship?

Leaders at School D also enacted a distributed leadership structure to address digital citizenship. For example, when questioned about who is most responsible for leading a digital citizenship initiative at School D, Principal D shared that relies on his technology team including LMS D1 and LMS D2 to review expectations and to ensure students know how to properly use the device. LMS D1 added:

I think in reality it comes down to admin working with librarians and its, those are, those are the best ways the librarians and the ITS will be the experts with administrators going, this is where we need this, this is where it can fit in.

Principal D also noted that he relies heavily upon input from his staff to make decisions about addressing elements of digital citizenship:

I think the input that we get from the staff is the critical. They are the ones that see it on the front lines and classrooms, and in the trenches. Usually it comes through the principals advisory committee. It can also come through our grade level meetings and professional learning communities when there are issues that need to be addressed. And, I seek input from my administrative team. I seek their input and feedback on how we can address these issues before making any decisions.

School D leaders agreed that when making sense of how digital citizenship impacts their school, a structure of shared leadership is helpful.

Cross-Case Analysis

In each case, properties of sensemaking as described by Weick (1995) were present. These properties included enactment, identity, ongoing, retrospective, plausibility, cues, and social context. Elementary School A and Elementary School B cases were cross analyzed with Secondary School C and Secondary School D using a method labeled by Yin (2014) as pattern matching by which an empirically based pattern,

in this case the seven properties of sensemaking as identified by Weick (1995), is compared across cases to identify similarities and differences in emerged patterns.

Personal experiences shaped a leaders sensemaking. Weick et al. (2005) suggested that an individual's perception of what role they play amongst the group influences what they will enact and how they will interpret events. This sense of identity was evident across all school leaders interviewed as a part of this study. School leaders reflected upon their own personal experience, and their role within the school when sharing their responses about the relevance of each element of digital citizenship, their knowledge of said elements, how they chose to address it in their school, and challenges and a successes they experienced when implementing digital citizenship initiatives in their school.

Leaders at Elementary School A and Elementary School B mentioned the need to teach young students how to be good digital citizens because they were young and may not know any better. Further, they saw a relevant connection between the social behaviors already being addressed at the elementary level. Students are introduced to the norms and procedural rules associated with attending school in the early grades such as being kind to each other, waiting your turn, sharing, standing in line, and raising your hand. These behaviors are comparable to those associated with being a good citizen. With the introduction of 1:1 computer technology in first grade, elementary school teachers are more naturally addressing how students should behave when using a device. Further elementary school leaders see themselves as nurturers.

Conversely, leaders at Secondary School C and Secondary School D assumed that most digital citizenship elements had been addressed by either the elementary school or

family structures. Moreover, leaders at School C and School D expressed challenges in navigating their role and responsibility when addressing digital citizenship at their schools because often the lines of jurisdiction are blurred between parents and educators when addressing matters that involve values and morals. Further, leaders at Secondary School C and School D saw the primary function of their organizations to be more heavily focused on teaching academic curriculum to include the four core subjects. Nevertheless, they did note that given feasible time and structure, there was value in addressing digital citizenship at the secondary level.

Social and political context influenced leaders' sensemaking. Weick (1995) posited that sensemaking is a social activity and thus the outcome incorporates the influence from the presence of others both actual and implied. Leaders from both the elementary and secondary cases relied heavily upon acceptable use policies, code of student conduct, and school board policy when defining their involvement with digital citizenship. They viewed their social context as a school where students should behave in an acceptable fashion as outlined by policy that had been created with input from stakeholders ultimately representing the norms and values of society. Further, parents and teachers expect rules to be followed and if they are broken, for consequences to be administered. Within this social context, leaders made sense of digital citizenship through the lens of upholding order by enforcing policies.

Leaders at Elementary School A and School B noted that typical disciplinary action for infractions related to digital citizenship involved conferencing with the student and their parents. In more severe cases, elementary leaders revoked the student's access to computer technology for period of time. Generally, leaders saw most offenses as an

opportunity for teachable moments. Moreover, they reported administering less severe consequences because the students they are interacting with were younger. School leaders at in the elementary cases also appeared to be more proactive in addressing elements of digital citizenship with students prior to the students breaking a rule compared to the Secondary School cases.

Leaders at Secondary School C and School D reported addressing student misconduct related to the use of computer technology by often assigning disciplinary action in a reactive manner. While in the elementary cases, leaders had a mindset that students were just learning how to operate computer technology, secondary leaders more often assumed that older students had more experience with technology and should know how to behave appropriately in a digital environment. Thus, leaders at School C and School D often assigned more serious consequences and often applied the same punishment with no special consideration given to whether technology was involved. For example, if a student was disrupting class because their cellular phone rang during a lecture, they would receive the same consequence as a student who made a loud noise. If a student sent an inappropriate message via text message, that student would receive the same consequence as one who shared the inappropriate message orally.

Leaders at both the elementary and Secondary School cases were influenced by the presence of parents and thus the perceived expectations as a result. While leaders at both levels referenced their implied responsibility for supervision, leaders at Elementary School A and School B felt more responsibility as caretakers than leaders at Secondary School C and School D. This can be explained by the age difference of students attending elementary school compared to middle and high school. Secondary students have more

autonomy throughout the school day while elementary school students need more attentive supervision. Therefore, parent expectations of leaders are different given the grade levels.

Reflection progressed leaders sensemaking. Weick (1995) noted that individuals make meaning of experiences by reflecting on the event. Interview questions posed to each school leader in this study were designed to evoke reflection thereby causing the school leaders to participate in the sensemaking process during the interview process. Further, leaders at both the elementary and secondary levels shared their past reflections on making sense of digital citizenship.

Leaders at Elementary School A and School B reflected more upon specific examples of lessons they implemented and strategies they used to address digital citizenship. Leaders at Secondary School C and School D did not have specific programs to reflect upon and therefore thought about ways they had addressed negative behavior associated with technology use. Therefore, the majority of the examples they reflected upon were reactive in nature and often dictated by misconduct or upholding policy.

In reflection, leaders in all four cases reaffirmed the need to address digital citizenship in their school. However, secondary leaders appeared to be more influenced to do something they had not yet attempted as a result of discussing the topic during the interview process. Conversely, leaders in the elementary school cases reflected more upon the obstacles and challenges that have hindered their current strategies to address digital citizenship.

Students' digital safety resonated with school leaders. During sensemaking, individuals seek out more noticeable or important signals to interpret what has occurred

rather than attempting to understand all of the information (Weick, 1995). The overwhelming salient cue that resonated with school leaders at both grade levels was safety. Specifically, digital security, digital health and wellness, and digital rights and responsibilities relate to safety. While both elementary and Secondary School leaders concurred that safety was their main priority, the types of issues they addressed related to safety were different.

Leaders at Elementary School A and School B were concerned with what harmful content their students may be able to access. As a leader, they assumed responsibility for protecting students from harm much like they would do prior to the introduction of technology. Leaders also assumed responsibility for protecting health and wellness by ensuring students were not exposed to an excessive amount of screen time that may harm their eyes or cognitive abilities.

Leaders at Secondary School C and School D also interpreted safety as a salient cue. However, their concerns were more drawn toward their experiences with misconduct that had already taken place rather than prevention. These behaviors included cyberbullying and inappropriate use of social media. As a result, leaders at the secondary schools became more concerned about the ill effects on a student's digital footprint. Additionally, secondary school leaders often noted the disruption these behaviors cause to the instructional process. Nevertheless, secondary school leaders described a more reactive approach to said behaviors.

Another salient cue that school leaders at both levels found relevant was the academic aspect of digital citizenship. Digital communication and digital literacy support the academic mission. Elementary School A and School B recalled delivering lessons

dedicated to identifying legitimate sources of information and understanding the principles behind copyrighting. Secondary school leaders discussed addressing plagiarism and using trusted sources when conducting research. However, admittedly, secondary school leaders noted that there was not a curriculum dedicated to digital communication or digital literacy. In most cases, the issues were discussed because they wanted to prevent students from plagiarizing on an assignment or the discussion was brought about because someone had already done so. Some instruction was provided to students when visiting the library in preparation for a large research assignment.

Leaders' sensemaking of digital citizenship was an ongoing process. Weick (1995) described sensemaking as an ongoing process that continues to influence or be influenced by context. As is with Weick's retrospect property, the semi-structured interview conducted with school leaders about digital citizenship at their own school acted as a context that influenced further sensemaking to take place, thus illustrating the property that sensemaking is continuous. This was evident when leaders at Elementary School A and School B considered Ribble's (2011) *Nine Elements of Digital Citizenship* during the interview process. Initially, the elementary school leaders did not see the relevance for teaching the younger grades about digital commerce. However, as they reflected and discussed, they realized that many elementary school students purchase applications for their I-pad or make in-game purchases on their video games purchases. They also realized that some had even spent large amounts of money without their parent's permission. After reflecting upon these experiences, they acknowledged the relevance of teaching digital commerce to younger students.

Secondary school leaders recognized the obstacles impeding a dedicated digital citizenship program at the secondary level. As they discussed the relevance and importance to teach students how to be a good digital citizen, they began to brainstorm ideas for how to include it. Through this ongoing process of reflection and thought, leaders at School C and School D provided suggestions for addressing it in their schools. For example, Principal C proposed infusing the concepts into the social studies curriculum. Leaders at School D proposed a collective approach where all teachers would agree to address the aspects of good digital citizenship as they relate to their own curriculum and assigned tasks.

While both levels communicated challenges to implementing a digital citizenship plan. There responses indicated that there is a will to address digital citizenship in the elementary and secondary schools However, the initiative appears to have progressed further at the elementary school level.

Leaders found relevance in the elements of digital citizenship . Weick (1995) suggested that individuals prefer an interpretation that is reasonable or probable over one that is accurate. School leaders from all four cases, were able to see value and relevance in many of the elements of digital citizenship. As previously mentioned, safety and academic connections were made at both levels.

Leaders at Elementary School A and School B described digital commerce, and digital law as having minimal relevance in their setting. This illustrates how leaders made assumptions of what was entailed in digital commerce and digital law and decided that those elements did not relate to what was currently being taught to elementary school aged students. However, through retrospect and ongoing thought, some school leaders at

the elementary school level recognized the value of digital commerce. Others noted that they addressed copyrighting principles which are related to digital law.

In addition to safety and academics, leaders at Secondary School C and School D also noted the desire and mission to prepare students to be future-ready. That is, to have the skills and knowledge necessary to be productive in a society that is everchanging. Leaders at the secondary schools made generalized connections by noting that students are entering a world where the majority of people have access to technology and therefore schools should prepare students for living in such a world. Leaders provided yet another plausible explanation for why digital citizenship was relevant to their own school mission in addition to safety and academics. However, leaders at Secondary School C and School D also felt it to be plausible that students were exposed to many elements of digital citizenship in earlier grades or at home. This assumption was based on the amount of time students had access to digital technology prior to entering secondary schools, and the nature of teaching students right from wrong and other appropriate behaviors.

Leaders made sense of digital citizenship by implementing strategies. Weick (1988) noted posited that when people act, they bring structures and events into existence and set them into action. As school leaders began to implement a 1:1 computer technology initiative through their model program, the need to address issues relates to digital citizenship both formally and informally became necessary. This is an example of a structure that was set into action by people acting. Through semi-structured interviews leaders in all four cases shared their experiences in addressing digital citizenship at their school. Leaders at Elementary School A and School B shared strategies to include assigning consequences, supplying curated lessons, establishing culture, setting

expectations, using filtering software, leveraging specialist, infusing curriculum, modeling, and using teachable moments. Leaders at Secondary School C and School D shared strategies to include assigning consequences, setting expectations, using filtering software, infusing curriculum, leveraging specialists, leveraging community, and taking advantage of teachable moments.

Conclusion

In general, the most significant difference between elementary school cases and secondary cases was the approach. Elementary school leaders shared strategies that designed to teach students how to be good digital citizens prior to misconduct. Secondary school leaders tended to address poor digital citizenship after misconduct had already occurred thus cueing them to provide more further guidance on how to be a good digital citizen.

A more detailed analysis of how school leaders enacted by addressing digital citizenship is included in the subsequent section that answers the research question: How do school leaders in a technology-rich, 1:1, Southeastern United States school district, address digital citizenship?

How Leaders Address Digital Citizenship

The following section contains findings collected from semi-structured interviews conducted with school leaders for each of the four cases as they relate to how school leaders address digital citizenship in their schools. the cross-case analysis includes a comparison of the elementary sites, a comparison of the secondary sites, and a comparison of the two levels.

School A

Through semi-structured interviews conducted with school leaders at School A, several themes related to how they addressed digital citizenship emerged. Themes included consequences, curated lessons, culture, expectations, infused curriculum, modeling, and teachable moments.

Leaders assigned consequences to address digital misconduct. Leaders at School A shared that they assigned consequences to students who exhibited poor digital citizenship when the action was in direct violation of the acceptable use policy or the student code of conduct. Principal A and ITS A recalled an incident where a fourth-grade student circumvented the filtering system to access pornographic images. She removed the student's access to the device and explained "this is not appropriate. This is a privilege not a right." The student was required to complete his work on paper for the remainder of the year. Principal A noted:

I felt very strongly that as school leaders we had a responsibility for the acceptable use and code of conduct and to remove a device. And, I think there's a little bit of hesitancy because it is, it seems to be such a division initiative and a push to use technology. But I still felt like there had to be an opportunity that you make the mistake in elementary school and you suffer and go, I don't want that to happen again. Don't do it on your school device. Not that I want you to do it anywhere, but just don't do it on your school device.

She also shared that when a child makes a bad choice, they have to be accountable for their actions:

Even at 10, if we're going to put the device in their hand, we have to hold them accountable. But then my second reaction always was, we're not teaching them the right way, what are we doing in kindergarten to teach them what it means to be a good digital citizen?

While consequences are important to Principal A, she also suggested that teaching must accompany any sort of disciplinary action.

ITS A recalled a similar incident where a student was saving and sharing inappropriate pictures in his Google drive. Principal A was notified and removed his access to the device for the remainder of the quarter. Additionally, he was removed from the coding club. ITS A noted that consequences are given on a “case by case basis.” Administrators considered the severity of the misconduct and previous disciplinary infractions. She added “I want it to be a lesson, so they don’t do it again. I don’t want them to just be punished” further supporting the position of Principal A to include teaching in conjunction with discipline. Additionally, ITS A shared that often when addressing student misconduct associated with the misuse of technology, incidents are handled similarly to infractions outside of the digital realm. For example, if a student sent an inappropriate message to another student using a computer, they would receive similar consequences as a student that communicated an inappropriate message orally.

Teachers used curated lessons to teach digital citizenship concepts. Leaders at School A used curated lessons from several online repositories to address digital citizenship. ITS A noted that leaders from each of the model schools would meet periodically to share lessons and resources related to technology use and digital citizenship. She mentioned specifically that lessons from Common Sense Media were used:

We did common sense media. We did the lower grades, the younger, you know, the little lessons. We did the silly song with the monsters, and then for the older grades we did the slideshows with obviously the older videos and we made activities to go with them all so that there was, you know, a follow up. But I did not pre-assess because I figured everybody needed it. And even if they heard it last year, they need to hear it again. Just like hearing new rules or the same rules in second grade as there were in first grade.

Principal A noted that at the beginning of the model program they addressed basic information with students including how to use, store, and hold the device. She shared that they transitioned into digital citizenship conversations towards the second year of the model program.

Leaders developed a culture to promote digital citizenship elements. Leaders at School A communicated that they attempt to address elements of digital citizenship by infusing them in their culture. For example, ITS A noted “We compare it to the same behavior that we would already be teaching kids not to be doing.” She went on to share that “it just so happens that technology is involved in some of those decision.” She shared that there is a creed to treat others with respect and to be kind, further reinforcing a positive culture with elements of good digital citizenship. Principal A echoed similar thoughts:

I feel like there's a lot of the same emotions I have when it's a face to face interaction with students. So, for example, anytime there was ever anything that was unkind, like where somebody was picking on somebody else. That's a visceral response in me. I mean our culture is such that we don't stand for that. When they come to my office, it is my job to ensure they buy in to who we are as a school.

Additionally, she noted that it is crucial to continually reinforce culture in addition to providing consequences.

Leaders set expectations for responsible technology use. Leaders at School A reported that they set expectations to address elements of digital citizenship. Principal A shared that she relies heavily on the student code of conduct and the acceptable use policy put in place by the School Board. She added “it's really talking to them about what we expect from them up front” (Principal A). She also shared that expectations include

both policies related to the use of technology and demonstrating proper etiquette when using a device.

ITS A shared “We do a lot of digital citizenship at the beginning of the year so that students know what we expect when they are using their device.” She noted that in School A, they “spend the first couple of weeks drilling the rules, routines and procedures” (ITS A). According to leaders at School A, expectations are grounded in policy and can be used to set the tone for proper behavior.

Leaders infused elements of digital citizenship into the curriculum. Leaders at School A noted that they have infused elements of digital citizenship into existing curriculum. For instance, ITS A shared several opportunities to infuse the elements of digital citizenship into their existing lessons:

Every time an English teacher gives a report or an assignment, she reminds you not to plagiarize. She reminds you to cite your sources. You know, elementary school teachers need to be reminding kids when they have a discussion board on Schoology, remember to keep your comments positive. When you should post, when you're allowed to post your pictures on Schoology, you know, make sure you're posting appropriate pictures, you know, all of those things need to be constant reminders from, from all of us.

She also noted that the school counselor is able to reinforce good digital citizenship in her lessons. Principal A added “we have to make it relevant to what we are teaching if we don't want it to appear to be one more thing,” noting that infusing into the existing curriculum is an important strategy for both teachers and students.

Leaders modeled good digital citizenship. Leaders at School A acknowledged that they use modeling as a strategy to address digital citizenship in their school.

Principal A noted, “I feel like if you're going to do it, it has to start with you. And, some

of that then is also being very mindful of what I post on Twitter. You are modeling behavior for others.” ITS A shared that modeling for teachers is also important:

As an ambassador for technology, I try to help get the word out by making myself available and modeling the importance of some of these elements because if it is going to get through to the students it is ultimately going to be through their teachers.

Both leaders noted that they can only control what happens during the school day and ultimately, parents also serve as role models for appropriate technology use.

Leaders seized opportunities to teach about digital citizenship. Leaders at School A discussed the benefits of using teachable moments to educate students about elements of digital citizenship. Principal A shared a story about students discovering each other’s passwords because the root was the same for each student to include the school mascot and the year. A student was able to discern a fellow student’s password, log-in to his computer and make changes to his work. Principal A reflected that her staff realized the importance of assigning diverse passwords, but also took the opportunity to teach students about protecting their digital information.

Principal A also noted the importance of not only holding students accountable with consequences, but also having a conversation with the student:

The child making the bad choice that you have to be accountable for their actions and it isn't just, Oh well they're young. No, they have to be accountable. Even at 10, if we're going to put the device in their hand, we have to hold them accountable. But then my second reaction always was, we're not teaching them the right, what are we doing in kindergarten to teach them what it means to be a good digital citizen. We have to have that conversation and use it as a teachable moment.

She added that the filtering software allows her and her staff to monitor what students are searching on the Internet and provide interventions when appropriate:

While I don't really want to be in the business of policing students, it leads me to being able to have a conversation, because when they leave us at 18, that's real world and police and it's like, it's a different level of accountability and responsibilities. I feel very much like we have an opportunity to teach as much as we can before they leave us.

Principal A also recalled instances when she took an opportunity to teach parents about elements of digital citizenship:

The phone rings in class and the student says, "It's my dad." And you're so stunned by that, that you let him answer because you just don't even know what else to say. And he comes back and he says, "I'm so sorry." My dad never calls me on this. And it's like, you're a third grader. What's the response? Do you get mad? No, you call the parent and say, please remember that Johnny's watch rings during the school day. And he got up and answered it and while it was very cute and funny. It's an interrupted instruction.

She noted that she took opportunities to discuss the importance of proper technology use with the parent teacher association to include cell phones and also screen time health concerns.

Additionally, Principal A asked a friend with prior military experience in tracking digital footprints to present to her staff and parents. She had the friend search her own data and was able to produce information gathered from general Internet searches that yielded personal data:

She would go in and she would find all the examples where you lived, and she did it for me and it was like places where I didn't think I would have existed showed up. And I'm like, that's 25 years ago. It had connected me to siblings and cousins and like, that was scary. But I showed it to say, this is me and what might be out there for you or your kids? What are you protecting?

She shared that parents walked away from that presentation with a newfound appreciation of digital security.

ITS A shared that many of her teachable moments focus on comparing appropriate behavior in face-to-face situations with similar situations online:

When I think about our decision-making process as far as taking actions, we are often comparing it to the same behavior that we would already be teaching kids not to be doing. So, it just happens to be the technologies involved in some of those decisions, but they could be making similar decisions.

She shared that when someone types something inappropriate in a shared document, she asks them if they would say that comment aloud. She suggested that “often students do not automatically make the connection between the real and virtual worlds.” Using teachable moments, in her opinion, help to articulate that relationship.

School B

Through semi-structured interviews conducted with school leaders at School A, several themes related to how they addressed digital citizenship were discovered. Themes included expectations, filtering software, leveraging specialists, and teachable moments.

Leaders set expectations for responsible technology use. Leaders at School B shared that they set expectations at the beginning of the school year and reference policy to uphold said expectations. For example, ITS B noted:

I offer, my services to come into classes and talk about digital citizenship. I'll take the technology support technician with me and we talk about not just the citizenship piece, but also how to care of equipment. We do this at the beginning of the year.

She added that some teachers “provide a spiel on what to do and what not to do” (ITS B).

In addition to classroom visits, ITS B noted that she runs information through school-wide announcements and runs a digital citizenship board that works to provide the expectations of good digital citizenship.

Principal B admitted that at the beginning of the model program there were some miscues. However, she noted that “kids are aware of the expectations now, and we are

bringing school expectations into computer use as well.” She also shared that school board policy is the foundation of communicating expectations to students:

We use the code of student conduct to make any decisions, but we also keep in mind any previous conversations or experiences that the child has had. Additionally, my guidance counselor will scroll through and bring anything that might need to be addressed to my attention.

Both leaders agreed that setting expectations and adhering to policy are primary ways they currently address elements of digital citizenship.

Leaders leveraged filtering software to address digital citizenship. ITS B noted that Securly, a filtering software application is used to address elements of digital citizenship at School B. She shared that when a student’s search history shows potential misconduct, the staff are able to address the student fairly quickly. She also suggested that the filtering software can be used as a preventative measure:

Kids know about securely and that we have the opportunity to view what they see. The guidance counselor will do kind of random spot checks and securely to see if there's anything that needs to be addressed, and we just handle it.

Principal B shared an instance of discovering inappropriate searches while reviewing the Securly report:

We’ve run a list of what the kids were looking up. And, some of those things are not appropriate. One little boy had downloaded a movie character that had guns. So, we talked to him about that and that it was not appropriate for school even though it was a Marvel character.

She noted that the search was probably an “innocent mistake” but would not have been able to address the behavior without the filtering software report (Principal B).

Leaders leveraged specialists to lead digital citizenship initiatives. Leaders at School B indicated that leveraging the expertise of technology specialists was necessary when addressing digital citizenship in their school. When asked who if anyone is most

responsible for fostering digital citizenship in your school, ITS B responded that she is often the responsible. She noted that she often volunteers her services to come into classrooms and talk about digital citizenship. While she admitted that School B does not have a dedicated course or curriculum, she stated “As an ITS, I just get in there where I can” (ITS B).

Principal B echoed this sentiment when she shared “I rely heavily on our ITS and LMS to carry forward initiative around technology. Digital citizenship obviously falls under that realm.” She suggested that their level of expertise in the field makes them an asset. However, Principal B advocated for a team approach, as she noted warned that the responsibility cannot fall solely on specialists.

Leaders seized opportunities to teach about digital citizenship. Leaders at School B recalled the use of teachable moments to address digital citizenship at their school, noting that often times the opportunity to have a conversation about what appropriate behavior looks like is crucial. Principal B explained, “It’s more of a teaching opportunity and I’m not even really disappointed because they’re kids.” After a student was sent to the office for accessing inappropriate photos online, ITS B noted that in addition to a disciplinary consequence:

We just go in there and be bad cop. Don't do this again and we can see everything you're doing. And kind of try and scare them, I guess more so, and explain to them why what they did was wrong and why they shouldn't do it and why they should be good digital citizens.

She recalled another teachable moment while conducting a Padlet activity with second graders. Students were typing digital notes and organizing them on a virtual board. Some students typed random text and words that did not make sense. She used the incident as

an opportunity to remind students about communicating appropriately and provided students with examples of proper behavior.

School C

Semi-structured interviews with school leaders revealed several themes related to how digital citizenship is addressed at School C. Themes included expectations, infused curriculum, leveraging community, and teachable moments.

Leaders set expectations for responsible technology use. School leaders at School C expressed the importance of setting clear expectations, supported by policy, when addressing digital citizenship in their school. ITS C described a freshmen orientation where he covers elements of digital citizenship with them. He noted:

We've spent a lot of times about talking about what is good and what is not good, and this is what the expectations are as a student and this is what we're expecting, and this is what it looks like. Because freshmen aren't really good sometimes. We talk about what you're allowed to do with your phone, and we talk about what you can do with your Chromebook.

Principal C reiterated that he is constantly revisiting expectations for his students:

I can't tell you how many times we say at school, you don't go anywhere, you are not supposed to go on the Internet. When we became a model school, we did a lot of explanations to students of what sites are good sites to go to, reliable, dependable, and what sites not to go to because they were not reliable.

Assistant Principal C added that often he comes into a conversation about misconduct with the expectation that students know the rules. However, he noted that “maybe you shouldn't have already known because you're 1:1 device, might be your first device.” He suggested that while expectations for conduct are set at the beginning of the year, the articulation of how those expectations transfer to the use of electronic devices may be lacking.

Leaders infused elements of digital citizenship into the curriculum. ITS C

explained that he encouraged teachers to incorporate elements of digital citizenship into their lessons when possible:

We encourage teachers to include it on things like rubrics. Um, because you know, as you're teaching this, what are you teaching them? How do you research this? What are your rules? How do you expect them to communicate?

While Principal C argued that digital citizenship should be infused into the curriculum, he also admitted that School C still has work to do in this area:

I think digital citizenship should be built in, I mean, the social studies department needs to take responsibility for digital citizenship because digital citizenship is citizenship, right? That's the key word. Citizenship. But I also think we are not there yet.

Assistant Principal C added that many of the behaviors associated with being a good digital citizen are embedded into our practices when he shared:

When we're facilitating conversations and learning collaboratively, we have to continually promote, model, address, discuss, the understanding of these rights responsibilities into the use of the devices in the content. It can't be a lesson that you do as a pull-out or for advisory. It has to be part of how we do things.

He added that the curriculum often provides us with additional teachable moments.

Leaders leveraged community members to support digital citizenship.

Involving the community and stakeholders is another strategy that leaders at School C use to address digital citizenship. Assistant Principal C noted:

It's got to be an us thing and the us goes beyond the building. This is where we look at community partners and parents and, and kind of again, have not just a moment meeting, but this ongoing thing that might even have to happen in the digital room.

Additionally, Principal C shared that he often involves his School Resource Office, a city police officer that is stationed in the school, as a source of educating students about potential laws they might be breaking with technology or vulnerabilities they may be

creating by their online behavior. However, he also noted that the school typically ends up becoming responsible for students' welfare by stating "we feed 54% of our students' lunch and breakfast. If we're, if we're feeding them, we're also going to end up being responsible for the digital citizenship."

ITS C echoed the importance of community support:

Some of the things that students who attend other schools get naturally at home, our kids are not getting, and if they're going to compete, they need that support. We're kind of partnering with some companies because if we didn't have that our students may not get it at home. Many of our parents are single parents working multiple jobs and they don't have time. So, the school has to create the community involvement elsewhere.

Leaders at School C agreed that it is important for students to be exposed to the elements of digital citizenship in multiple settings, thus highlighting the need to leverage community resources.

Leaders seized opportunities to teach about digital citizenship. Leaders at School C provided examples of using teachable moments to address elements of digital citizenship at their school. Principal C noted several conversations with students about their misuse of technology, and also involved the school resource officer to share input from the legal perspective. ITS C recalled a "valuable learning experience" when over 400 students collaborated on a Google slideshow about a teacher. The presentation contained inappropriate comments and symbols. ITS C continued:

We were able to pull them in and show them things like oh by the way, here's what you were doing at 12:23 this afternoon. And like yeah, we do know everything you're doing. And, I think those kids came back with different attitudes and once they realized that we could see everything and they were not anonymous, I think they were a little embarrassed by their actions.

Assistant Principal C shared that opportunities for teachable moments exist in the curriculum as well. He noted that "we can change the conversation based on the

opportunity it presents, and we have to view what we do for kids as parents, teachers, and administrators as this ongoing conversation about digital citizenship.”

School D

Through semi-structured interviews conducted with school leaders at School D, several themes related to how they addressed digital citizenship emerged. Themes included expectations, filtering software, infused curriculum, leveraging specialists, and teachable moments.

Leaders set expectations for responsible technology use. Leaders at School D described how they set expectations as a method for addressing elements of digital citizenship at their school. Principal D shared:

Our library media specialist opens up the school year talking about digital security and safety. And, we've tried to support that at the beginning of the year with our responsibilities and you know, not just when we assign Chromebooks, but also when we've reviewed with our students the expectations in terms of social media and electronics and things like that.

However, Principal D admitted that “beyond the routine, I don't think we've gone above and beyond in terms of educating our students about digital citizenship.” Nevertheless, he expressed that “as middle schoolers, I think that they need clear parameters and they need consequences if those are broken.” LMS D1 added that she prohibited her students from taking their Chromebooks to lunch. She explained that her rationale for this decision was based in teaching students to take a break from their device to socialize, and to take care of their device by not exposing it to food and liquid that may cause damage.

Leaders leveraged filtering software to address digital citizenship. Leaders at School D reported using filtering software to address elements of digital citizenship at their school. Principal D recalled blocking the Google Chat and Google Hangouts

features of the G Suite when students received their devices. Additionally, he shared that the filtering feature allows them to address individual students:

We take it on a case by case basis, but we're finding some of our kids are technological savvy and our circumventing our systems, and they're able to access inappropriate sites or unauthorized sites. We use a filtering software to limit and identify student access to inappropriate or unauthorized sites and we can address their behavior.

LMS D1 and LMS D2 noted that administrators at School D are typically responsible for addressing students who have accessed inappropriate sites or materials on the Internet when reported by the filtering software application.

Leaders infused elements of digital citizenship into the curriculum. Leaders at School D shared examples of infusing elements of digital citizenship into the existing curriculum at their school. LMS D2 expressed that digital citizenship is relevant, “because we are all living it.” She went on to suggest that teachers “can make it fit within your curriculum.” She explained that if the Internet is involved, she will always attempt to discuss digital citizenship.

Additionally, LMS D2 recalled an instance when she infused digital citizenship into a civics lesson. Students are required to bring in current event articles each week and she asked them to identify fake news and also bias when looking at news articles. LMS D1 shared a similar experience in an English course where she addressed plagiarism and copyright laws when conducting research. She also provided advice for using Wikipedia. LMS D1 explained “We’ve been able to collaborate and present in classrooms and been able to tie digital citizenship in.” Principal D added “I think digital literacy has become more of a routine in our school division” proposing that there is a focus on ensuring students can be critical consumers of information both in print and digital formats.

Leaders leveraged specialists to lead digital citizenship initiatives. Leaders at School D leverage specialists to address elements of digital citizenship at their school. Principal D noted that while he feels it takes a team effort to address digital citizenship properly, he relies on the instructional technology team to provide training a support. LMS D2 recalled several of the specialists being tasked with addressing digital citizenship:

We were tasked a few years ago when School D was creating a digital citizenship curriculum. We joined the ITSs and LMSs and we were using a lot of Common-Sense Media, we went to it several technology conferences, ISTE and VSTE and things like that. We pulled a lot of resources that way. We made a curriculum.

However, LMS D2 noted that the work was part of a previous model program and when the program went away the curriculum did not get used.

Leaders seized opportunities to teach about digital citizenship. Leaders at School D communicated that they used teachable moments to address elements of digital citizenship at their school. For example, LMS D1 recalled using an example of a student posting inappropriate material as a teachable moment for other students in the class. She shared “we had to kind of reign in exactly what we discussed because of confidentiality, but we took a lot of time to have very valuable discussions so that other students could learn from this student’s mistake.” She went on to share other examples of how she would show students broken Chromebooks at the beginning of the school year to demonstrate how to properly take care of their technology. She concluded “I really tried to take those moments and turn them into teachable moments for the group as a whole.”

LMS D2 expressed similar thoughts and provided similar examples noting “It might be something having to do with copyright and being aware of that. It might be having to do with the value of the website. Is this really the best website for you?” She

added that she continuously sought to reinforce elements of digital citizenship when the opportunity arose.

Cross-Case Analysis

In each case themes related to how school leaders address digital citizenship in their school emerged. Similarities and differences between Elementary School A and School B when compared to the Secondary School C and School D, will be included in this section. The cross-case analysis yielded similarities across the two levels to include the use of software, setting expectations, and infusing curriculum. Differences were present in the types of expectations, leveraging community resources, modeling, and a reactive versus proactive approach to addressing digital citizenship. Themes present in each case are illustrated in Table 4.2.

Table 4.2***Strategies used by School Leaders Addressing Digital Citizenship***

Strategies	School A	School B	School C	School D
Assigned consequences: Leaders addressed digital citizenship by assigning consequences for digital misconduct	X			
Curated lessons: Leaders leveraged premade lessons to encourage teachers to address digital citizenship	X			
Developing a supportive culture: Leaders promoted characteristics for a positive digital environment	X			
Expectations: Leaders set expectations for digital behavior	X	X	X	X
Filtering software: Leaders leveraged filtering software to prevent digital misconduct and increase safety		X		X
Infused curriculum: Leaders incorporated elements of digital citizenship with existing curriculum	X		X	X
Leveraging specialists: Leaders leveraged specialists to implement digital citizenship initiatives		X		X
Leveraging community: Leaders relied upon community stakeholders to support digital citizenship			X	
Modeling digital citizenship: Leaders exhibited characteristics of good digital citizenship for students	X			
Seizing teachable moments: Leaders seized opportunities to teach students about digital citizenship when situations arose	X	X	X	X

Elementary leaders were proactive while secondary leaders were reactive.

When comparing how leaders at Elementary School A and School B addressed digital citizenship compared with how leaders at Secondary School C and School D addressed digital citizenship, a proactive approach was prevalent in the elementary school cases while a reactive approach was more prevalent in the secondary cases. For example, Elementary School A and B reported using curated lessons specifically designed to address digital citizenship topics. Leaders at the elementary schools also reported that modeling appropriate behavior both in a face-to-face and digital setting were important for younger students. Elementary leaders also reported being intentional about fostering a culture that supports kindness, respect, and integrity in a digital setting.

Conversely, leaders at Secondary School C and School D reported addressing most incidents involving digital citizenship as a result of misconduct for not honoring the acceptable use policy, student code of conduct, or school board policy. While secondary school leaders did take advantage of teachable moments, they did not report having in preventative measures in place outside of providing students with a set of expectations prior to distributing the Chromebooks. Additionally, secondary school leaders reported distributing expectations via documents that parents were required to acknowledge with an electronic signature. Code of conduct assemblies were also held to review expectations often in a large, whole grade-level setting.

When comparing these two approaches to addressing digital citizenship, the age and readiness of students to receive this information should be considered as a possible explanation. At the elementary level, students are young and are often learning how to become socialized to the school setting. Elementary school leaders focus time and effort

into ensuring students know how to behave appropriately within the school setting and anticipate that students may experience challenges while becoming acclimated. However, secondary leaders expect that students should have experience in how to behave appropriately, thus they do not provide additional instruction on how to be good digital citizens, and their first response to misconduct is to provide disciplinary action.

Elementary school leaders modeled good digital citizenship. Elementary school leaders reported modeling behavior representative of a good digital citizen. They took time to identify the behavior they were demonstrating and also dialogued with students to ensure they understood why it was important to behave in that manner. Further, elementary school leaders noted an intentional approach to model digital citizenship for students.

Secondary school leaders did not mention an initiative at their school to model good digital citizenship for students. Additionally, secondary school leaders did not report using curated lessons or establishing a culture to support good digital citizenship. This approach is likely due to the assumption by secondary school leaders that older students have been exposed to such experiences at an early age or at home, and therefore modeling is unnecessary.

Secondary school leaders leveraged community members. Secondary school leaders noted the use of community resources to support digital citizenship for their students. Potential employers, religious organizations, school resources officers, and family were mentioned as potential resources that could support the characteristics associated with digital citizenship. Secondary leaders recognized the additional influences present in their students' lives and thus saw opportunity to reinforce said

characteristics. Further, secondary school leaders noted a significant list of responsibilities they were already responsible for with regards to preparing students for life after school. Hence, they suggested additional resources who may lighten the burden.

Elementary school leaders did not mention the use of community resources to assist in supporting digital citizenship. This is likely attributed to their sense of responsibility for teaching students how to behave appropriately in a school setting and the relevance that some elements of digital citizenship have with their established curriculum. Additionally, their students are not interacting with the community in the same manner as secondary students are with regards to being employed and participating in community service.

School leaders leveraged software to support digital citizenship. Leaders at both the elementary and secondary schools mentioned the use of software to address digital citizenship. They depended upon filtering software to prevent students from accessing inappropriate material while on a school device. Further, they leveraged reports from software to identify when a student had searched topics that raised concern. While the nature of the searched topics varied across the two levels, both elementary and secondary leaders reported using the results to have discussions with parents and students about the appropriate use of technology and good digital citizenship.

Leaders infused elements of digital citizenship into the curriculum. Leaders at both the elementary and secondary levels reported infusing elements of digital citizenship into their curriculums when relevant. However, elementary school leaders also noted the use of curated lessons. Secondary leaders provided examples to include cheating, plagiarism, and digital literacy as often instances related to these examples occurred in

the secondary setting. For example, when teachers prepare students to write a research paper, they discussed the consequences for plagiarizing and also emphasized the need to identify reliable sources. These elements are relevant to writing a quality research paper and therefore would be discussed.

Elementary schools provided similar examples in teaching students what it means to plagiarize. Further, they remind students how to make appropriate posts in the learning management system and how to be respectful of others when posting responses.

Conclusion

While sharing examples of how they addressed digital in their school, leaders in all four cases took the position that addressing digital citizenship was still a work in progress. Leaders made comments that suggested they were not satisfied about where they were, by presenting obstacles and challenges that had prevented them from moving further, but also by suggesting improvements they would like to make in the future to support digital citizenship. Additionally, leaders at both levels recognized the value that a digital citizenship initiative could have on their students.

Challenges School Leaders Experience

The following section contains findings collected from semi-structured interviews conducted with school leaders for each of the four cases as they relate to challenges school leaders experienced when attempting to implement digital citizenship programs in their schools. A cross-case analysis will include a comparison of the elementary sites, a comparison of the secondary sites, and a comparison of the two levels.

School A

Through semi-structured interviews conducted with school leaders at School A, several themes related to challenges they experience when implementing a digital citizenship program emerged. Themes included lack of knowledge, multiple perceptions, being overwhelmed, and teaching through discipline.

Inhibited digital citizenship initiatives. Leaders at School A expressed that a lack of knowledge inhibited their ability to implement a digital citizenship program at their school. Principal A noted that while staff are aware of the importance of safety and etiquette, they are not extensively familiar with Ribble's (2011) Nine Elements of Digital Citizenship. Further she recalled incidents when her own staff members practiced poor digital citizenship. She added, "There has to be a plan, and that is the first obstacle. We have to have a plan in place for any situation, and I just don't think we are knowledgeable enough yet. We are not there yet" (Principal A). Further, she noted that members of her staff saw new technology as the sole method for delivering instruction. Principal A stated "I felt like that was an obstacle because it was taking away from real citizenship, not just the digital citizenship. So, how am I a human being interacting with other human beings?" She explained that in some instances her teachers were not able to model good digital citizenship because they were not aware.

ITS A shared that she provides teachers with lessons that they can use in their own classrooms and also delivers her own lessons when invited into the classroom. However, she explained that often, she is responsible as a specialist for knowing content related to technology. Therefore, many teachers are dependent upon her for knowledge and information related to digital citizenship.

Multiple perceptions about digital citizenship. Leaders at School A reported that it can be difficult to implement a digital citizenship program when there are multiple perceptions of what should and should not be addressed. Principal A, now a director of instructional technology for the same school district, noted that when talking to principals of different schools about how to implement technology each principal may take a different approach:

A large division within so many staff members can make it difficult to support, because we all have different opinions and understandings. So, I stood in front of the 16 principals and if I polled each of them, I bet all 16 of them would feel very differently about digital citizenship and what it looks like in their school.

She added that the same is true of parents:

I have parents, like people who are teachers and parents of kids at this age group going, oh my God, lock them down. I don't want them to have access. I'll teach something else. And then some of my colleagues have different views.

Principal A provided examples involving conflicting views on cell phones use:

I remember, one kid walking down the hall, talking on the phone before the end of the day. I said, "you need to put your phone away." And he said, "I'm talking to my mom." Okay. Tell your mom that Principal A said to put your phone away cause the school day hasn't even ended and you can't have your phone. But there was this sense of righteousness, like I should be allowed to do this because my mother approves.

She noted that these types of situations make it difficult to teach students etiquette because they are getting conflicting messages from other adults who may have a different value system or perspective.

ITS A also noted that attempting to navigate the role the school should play in addressing digital citizenship can be a challenge, noting that "several examples of poor digital citizenship have taken place at home." She added, "it is difficult to know if that is a parent thing or a school function." Nevertheless, leaders at School A expressed that

there appears to be some common ground with parents and schools about what types of issues should be addressed related to digital citizenship. Principal A noted that “safety and privacy are huge” with parents and educators.

Leaders overwhelmed about new initiative. Leaders at School A expressed that adding new initiatives to an already long list creates a sense of feeling overwhelmed when considering the implementation of a digital citizenship program. For example, Principal A described the first year of the 1:1 initiative at School A:

The first year we went 1:1, my instructional technology specialist and technology support technician worked a lot in the beginning on handling the device. How do we hold it? How do we take it around, right? Because there's responsibility in just having the device. And then they transitioned into some digital citizenship conversations. I don't think we hit it hard because I think we were overwhelmed by just having a 1:1.

She added that there is are typically several initiatives in a school and it can be difficult to focus on each of them appropriately.

ITS A shared that she purposely designs lessons for teachers to use if they choose to because she knows that they are overwhelmed with other tasks. She noted “If I can just share these with my teacher and give them the whole thing, they should be able to do it without having to design it all themselves.” However, she admitted that often she knows it is going to be left to her to carry out any digital citizenship initiatives.

Negative consequences for digital misconduct. Leaders at School A shared that having to address digital citizenship through disciplinary action can be a challenge as assigning consequences creates a negative association. ITS A expressed, “That consequence piece is, it's kind of an obstacle and it doesn't make it fun to address digital citizenship.” She noted that often times when it gets to the point of having to assign a consequence, parents and the student are upset making for a less than conducive

environment to teach about facets of digital citizenship. Principal A echoed similar remarks in stating “students have to be held accountable for their actions even if they are only 10, but ideally we’d like to teach them that lesson before it gets to that.” Leaders at School A suggested that often they find themselves in a reactionary approach to digital citizenship rather than one of prevention.

School B

Through semi-structured interviews conducted with school leaders at School B, two themes related to challenges they experience when implementing a digital citizenship program emerged. Themes consisted of being overwhelmed, and time.

Leaders overwhelmed about adding new initiative. Principal B reported a sense of being overwhelmed when implementing programs to address digital citizenship at School B. For example, she noted:

the pendulum is swinging back a little bit and that we're trying to really balance the use of technology with the amount of time kids are in front of a screen and not in front of the screen. Teachers have the obligation to explain that the students and what the expectations are. But I don't have an efficient way to monitor everything that students are doing. I don't have a manageable way to keep up with it all.

She shared that much of the filtering is handled at the central office level and they are typically only handling major issues to include self-harm, violence, and potential legal issues. Principal B also added that initiatives were stronger at the beginning but that other more significant initiatives have taken priority as to not overwhelm teachers.

Leaders lacked time to address digital citizenship. Related to the sense of being overwhelmed, ITS B indicated that having adequate time to implement digital citizenship initiatives at School B is a challenge. She expressed:

I wish we had more time to do more with it. The kids need to hear it more often and they don't hear it. Maybe, you know, if there was more time and there was more of me than we could do lessons know every nine weeks or every month in the different classes. And there's just not, the teachers don't have time. I have as much time as I can make, and they don't have time to let me come in. And so, time is really the biggest thing. I wish we had more time, but we don't (ITS B).

She added that they do the best they can with the time they are given but often it is not enough. Further, she indicated that because they do not have a course dedicated to digital citizenship, they have to address digital citizenship when they have the opportunity.

School C

Through semi-structured interviews conducted with school leaders at School C, several themes related to challenges they experience when implementing a digital citizenship program emerged. Themes included assumptions, lack of knowledge, multiple perceptions, being overwhelmed, and time.

Leaders assumed students informed about digital citizenship. Leaders at School C noted that assumptions create challenges when attempting to implement a digital citizenship program at School C. Assistant Principal C argued that often it is assumed that digital citizenship will naturally be taught through the use of technology when he expressed:

I think the fallacy of being a school leader is you think some things are implicit. Like if you are a teacher and you are, you're using these devices for something that the digital citizenship pieces are embedded and they're not.

ITS C expressed that “we can’t assume students know it, just because they have a phone doesn’t mean they know how to use it properly.” Principal C extended the argument when he noted:

I do think the fallacy is still that everybody has a device and every kid knows how to use the device better than adults. Right. I don't necessarily think that's the case.

They might know how to play games, but they don't know many of the elements associated with digital citizenship.

Principal C further communicated that educators assume that parents are teaching students how to properly use their devices in a safe manner and with appropriate etiquette. However, he conceded that especially at School C the burden of teaching students about digital citizenship ultimately ends up resting with the educators.

Lack of knowledge inhibited digital citizenship initiatives. Leaders at School C noted that a lack of knowledge has created a challenge in implementing digital citizenship programs at their school. Assistant Principal C shared that “a schoolwide effort is necessary to bring elements of digital citizenship to the forefront.” However, he conceded that many staff members are not aware of said elements. Principal C noted “It's very frustrating, the lack of knowledge and the lack of responsibility regarding citizenship.” Further, Principal C indicated “The concern for digital citizenship is not only with the students, it's also with staff. Staff do inappropriate things online.” He suggested that if staff are not able to display good digital citizenship then it would be a challenge to teach those principles to their students.

ITS C pointed out that they have several new teachers at School C making it even more challenging because they were not present from the beginning of the model program and are not as knowledgeable about digital citizenship. He noted,

We've really had a lot of new teachers lately. So, we've had a lot of discussions with our leadership team about that. How do you deal with the teachers who are just struggling and don't have the knowledge of how to address digital citizenship?

Recognizing that digital citizenship must be addressed through distributed leadership, leaders at School C concluded that a lack of knowledge presents a challenge to implementing a digital citizenship program.

Leaders managed multiple perceptions about digital citizenship. Leaders at School C explained that as stakeholders have multiple views about what digital citizenship is and how it should be addressed, they create challenges when implementing a digital citizenship program. Principal C illustrated this point when discussing the cell phone:

It's like the cell phone. I mean, I know using a cell phone properly is a part of digital citizenship. There's a part of me that wants to ban cell phones from schools, but there's another part of me that understands the value of a cell phone with learning.

He also pointed out that parents view cell phones as a way to keep their child safe, while schools often see them as a distraction. Thus, the approach in teaching students about proper use may be conflicted depending on the teacher's viewpoint. Assistant Principal C illustrated a similar point when discussing how his family views cell phone use at the dinner table by sharing,

So, if you are at the dinner table, should you put your phone away? Some people think that's very important and that should be a focus in education. Like we should teach kids when it's appropriate to use cell phones. But some people don't focus on it at all. Personally, my family, we don't care. We use our devices.

He suggested that a variance in the norms and values system makes it challenging to determine what and how elements should be addressed.

Leaders overwhelmed by pace of new initiative. Leaders at School C proposed that implementing a digital citizenship program felt overwhelming for staff thus making it a challenge to sustain. Principal C noted “unfortunately technology has grown so quickly, so fast, even in the six years that I've been here at School C, it's a totally different ball game, and it can be overwhelming.” Assistant Principal C echoed similar thoughts:

There are some days where the words dismay seems appropriate, like this is never going to happen. It's moving faster than we can plan because, by the time we have that conversation, the digital realm has moved on. And so, how do we get in front? We're already not in front of it. We've got to get ahead, and so we feel overwhelmed.

Further, when asked about supporting teachers with digital citizenship initiatives, ITS C explained,

I don't think it's that they don't want resources. I think sometimes we're overwhelmed, and I think the amount of technology out there, the kids have phones, they have Chromebooks. I think they just get overwhelmed sometimes teachers don't know where to start.

Leaders at School C recognized the need to address digital citizenship at their school but were consistent in their opinion that appears to be an overwhelming task.

Leaders lacked time to address digital citizenship. Leaders at School C noted that a lack of time presents a challenge when attempting to implement a digital citizenship program at their school. For example, Assistant Principal C expressed, “to plan instruction and initiatives takes conversations, and that takes time.” Nevertheless, he recognized the importance of such a program and suggested “It's a whole other category of education, and so we have to ask where you find the time to infuse all of that?” ITS C echoed “we're kind of at the mercy of teachers' time. There are so many demands on teachers' time.” He recalled instances when he would propose to come into a classroom to teach about digital citizenship. However, often teachers would decline because they “just couldn't fit it in (ITS C). Noting that time was an obstacle, leaders at School C conceded that implementing a digital citizenship program would be challenging unless they could find a way to either supplant it with other initiatives or infuse it into current curriculum.

School D

Through semi-structured interviews conducted with school leaders at School D, several themes related to challenges they experience when implementing a digital citizenship program emerged. Themes included lack of knowledge, being overwhelmed, multiple perceptions, and staff buy-in.

Staff knowledge inhibited digital citizenship initiatives. Leaders shared that a lack of knowledge created a challenge in implementing a digital citizenship program at School D. Principal D admitted that the primary focus has been on academics at School D and therefore, there is still some learning taking place with regards to digital citizenship. Additionally, LMS D2 noted, “even adults have issues trying to decide what good digital citizenship is.” She recalled copyright issues that staff members experienced when using graphic and activities that they did not have the rights to use. She suggested that it became difficult to address students when teachers were not fully aware of the elements of digital citizenship. She argued that “kid’s need to hear this from multiple people which means they need to be more familiar with it if they are going to reinforce it with our kids.” Leaders at School D agreed that a more knowledgeable staff would make for a more effective initiative to support good digital citizenship at their school.

Leaders managed multiple perceptions about digital citizenship. Principal D expressed that varying perceptions create obstacles when implementing a digital citizenship program. For example, he recalled “we have some parents who express reservations or, you know, are opposed to the 1:1 program that we have. There've been cases where parents are against their kids having access to the online world” (Principal D). He also noted that parents were concerned about the amount of time their student was

required to look at screen. While he suggested that a digital citizenship program may help address some of his parent's concerns, reconciling each parent's view about what was appropriate would be difficult to do.

Leaders overwhelmed by adding new initiative. Principal D shared that a sense of feeling overwhelmed has inhibited their ability to implement a robust digital citizenship program at his school. He noted that the pace of implementing a 1:1 initiative paired with the learning process that must take place can impede noticeable progress. He expressed that “what really stands out for me is a really quick progression, from planning to actually knowing what you are doing to securing the right resources.” Principal D admitted that “we are still working on the actual digital citizenship,” but realized the significance of its potential impact.

LMS D2 noted that with all the curriculum teachers have to cover, and an emphasis on test scores, “digital citizenship can seem like one more thing.” She added that teachers don't feel like they are able to manage that initiative when they are already overwhelmed by other tasks. LMS D1 echoed that she “knows how busy everyone is all the time.” Therefore, she often attempted to provide resources so that they did not feel as overwhelmed. Leaders at School D expressed their struggle to find a place for digital citizenship programs amongst the other important initiatives.

Leaders struggled to address digital citizenship. Leaders at School D suggested that a lack of staff buy-in created a challenge when implementing a digital citizenship program. Principal D noted that digital citizenship, while important, has not been a priority. LMS D1 expressed “it becomes very frustrating because there's so many things

that could be done that are such simple steps. But everybody needs to just jump in, and it would make it much easier.” She went on to argue:

I feel like again, between the instructional technology specialist and the library media specialist we've had such great ideas for collaboration, but there's still a lack of participation that really gets in the way. And I hate to say that because I know how busy everybody is all the time. And aside from forcing them to come, it's not going to happen.

LMS D1 also indicated that staff do not necessarily see digital citizenship as their responsibility to address. She shared “I think just because of the fact that our position we jump out as the T stands for technology. Right? So, teachers say that's all you and we will handle other things.”

ITS D2 shared that she did not think digital citizenship was not seen as a priority because “it doesn't fit in necessarily with the building priorities.” She mentioned that School D's plan for continuous improvement is focused on student progress in academic areas and therefore does not specifically address implementing digital citizenship programs as a goal. She expressed her frustration that teachers were not taking advantage of previous curriculums and resources that were gathered and created to foster good digital citizenship.

Cross-Case analysis

In each case themes related to what challenges school leaders experience when attempting to implement digital citizenship programs in their school emerged. A comparison of the similarities and difference between the elementary sites, School A and School B and the two secondary sites, School C and School D will be included in this section. Similarities amongst the two school levels included a lack of knowledge, a sense of being overwhelmed, a lack of time, and navigating multiple perceptions. Differences

amongst the two school levels included assumed knowledge, teaching through discipline, and staff buy-in. Themes present in each case are illustrated in Table 4.3.

Table 4.3

Themes Present for Challenges for School Leaders with Digital Citizenship

Theme	School A	School B	School C	School D
Leaders made assumptions about student knowledge of digital citizenship			X	
Staff lacked knowledge of digital citizenship	X		X	X
Leaders managed multiple opinions about digital citizenship	X		X	X
Leaders were overwhelmed by additional initiatives	X	X	X	X
Leaders struggled to gain staff buy-in				X
Assigning consequences created a negative connotation with digital citizenship	X			
Leacers lacked sufficient time to address digital citizenship		X	X	

Leaders assumed students informed of digital citizenship. Secondary school leaders shared that an assumption of student knowledge about digital citizenship created a challenge when attempting to implement a digital citizenship initiative. Leaders noted that many school faculty members assumed that students were aware of how to be a good digital citizen because they had been exposed to technology at a young age. Moreover, they assumed that they received such training from earlier grade levels and their parents.

Conversely, elementary school leaders did not report such assumptions. This can likely be attributed to the age and experience of the students they serve. Younger students often need continuous reinforcement and are learning how to behave in a social setting as their bodies and minds develop.

Assigning consequences for digital misconduct a negative connotation. While both elementary and secondary school leaders recalled having to address student misconduct related to technology, elementary school leaders noted that associating a negative disciplinary consequence while attempting to teach a new concept like digital citizenship hindered their cause. Elementary leaders shared that often younger students are learning how to behave and exploring boundaries. They suggested that using the misconduct as a teachable moment by demonstrating why such a behavior is discouraged is more helpful and effective.

Secondary school leaders did not report that taking disciplinary action was an obstacle to addressing digital citizenship. However, secondary leaders did admit they would prefer to address the behavior in a more preventative manner. Secondary leaders shared that often disciplinary action was accompanied by a discussion with an adult to discuss why the behavior was unacceptable, and to communicate the expectation for future behaviors.

Leaders found achieving staff support difficult. Secondary school leaders also shared that obtaining staff buy-in was a challenge. Leaders shared that staff did not see digital citizenship as a priority and in some instances their responsibility. This can be attributed to the high level of accountability at the secondary level with standardized testing, graduation rates, and the level of academic rigor for college preparation.

Elementary school leaders did not mention staff buy-in as an obstacle. This again can be attributed to the relevance between digital citizenship elements and the school curriculum. Additionally, elementary school staff assume responsibility for teaching younger students many social behaviors for the first time.

Staff lacked knowledge about digital citizenship. Leaders at both levels agreed that a lack of knowledge by adults about digital citizenship hindered their initiatives. They described several situations where adults did not behave in a manner that was consistent with being a good digital citizen. Therefore, they suggested it was difficult to have their faculty teach students about a concept they were not yet familiar with themselves. Further, it was suggested that adults are still making sense of digital citizenship.

Leaders overwhelmed about addressing digital citizenship. Leaders at both the elementary and secondary level also described a sense of being overwhelmed when considering how to address digital citizenship. Several factors were noted as contributing to this feeling. Factors included understanding and learning how to navigate new technologies, a plethora of previously assigned roles and tasks for schools prior to the introduction of new technologies, lack of time, and the complexity of how to implement a digital citizenship initiative. This sense of being overwhelmed indicates that school leaders are in the early infancy of the sensemaking process as described by Weick (1995).

Leaders lacked time to address digital citizenship. Elementary and secondary leaders in all four cases indicated a lack of time to implement digital citizenship initiatives. They cited current curriculum and initiatives combined with an overwhelmed faculty as competition for available time. While school leaders attempted to compensate

by infusing digital citizenship within the established curriculum, they admitted that their efforts are still inconsistent and require additional brainstorming and strategies to prioritize aspects of digital citizenship at their school. While school leaders at both levels recognized the importance of digital citizenship, they have not been able to justify its importance over academic goals.

Different opinions about digital citizenship. Leaders at both the elementary and secondary levels shared that there is a lack of consensus on how and what to address when implementing a digital citizenship initiative as there are multiple perceptions. This challenge illustrates a conflict of social norms and cultures within schools and communities. Digital etiquette relates to norms and values that people agree upon when communicating in a digital setting or with digital technology. While there are universal behaviors that may be agreed upon like being kind to one another, parents may have differing views on other behaviors like cellular phone etiquette. As students get older and begin to form their own identities, teaching behavior becomes more complex, thus prompting school leaders to question who is responsible for teaching students about digital citizenship. This complexity is similar to that of the character education movement in the 1980s that ended in a debate over conflicting values.

Conclusion

In comparing the challenges that emerged from the two grade levels, there were several similarities. Differences were ultimately a result of student age and functions of each level. As stated, elementary schools are often more adept at socializing students to behave in an appropriate manner in a school setting. The faculty more readily accepted the task of teaching students how to behave and providing grace when students

misbehaved. Secondary schools were focused on providing students with the academic skills needed to enter college. Standardized tests and grades garnered the majority of available time and energy. The underlying principles of digital citizenship while relevant, were not as prevalent, and did not outweigh the main academic mission of secondary schools.

Challenges also pointed to the need for further sensemaking about digital citizenship as school leaders attempt to navigate multiple perceptions about what should be taught by schools and what should be taught at home. Further, leaders need to make sense of whether it is in their best interest to take time away from their current primary functions, or if the elements of digital citizen promote their mission. As noted, there is a lack of agreement and knowledge about digital citizenship indicating the need for further sensemaking.

Successes School Leaders Experienced

The following section presents findings collected from semi-structured interviews with school leaders for each of the four cases as they relate to successes school leaders experienced when addressing digital citizenship in their schools. The cross-case analysis includes a comparison of the elementary sites and secondary sites.

School A

Leaders at School A shared strategies they considered to be successful when implementing digital citizenship programs at their school. Successful strategies included collaboration amongst leaders, prepared lessons, relationships, and relevance. Additionally, leaders at School A indicated that they have a formal program or curriculum to educate students about digital citizenship issues.

Leader success in collaborating with colleagues. Principal A shared the importance of having monthly collaborative meetings with their model school team. She explained that they were able to share ideas amongst themselves and also network with model school teams within the school district:

It was nice to have monthly meetings. And, I think that was really helpful. In the beginning when we started, we had monthly meetings and almost all of us brought six or seven staff members. And so, there was a lot of networking that we did. And we would share this is happening in my building, is it happening in yours? And then elementary principals were able to talk to middle and high school principals.

She noted that her ability to talk through decisions and challenges with others experiencing similar circumstances was invaluable. ITS A shared similar experiences as she met with other instructional technology specialists across the school district to share promising practices with regards to addressing digital citizenship.

Teachers receptive when provided prepared lessons. ITS A expressed that having prepared lessons that her teachers could use without significant preparation was helpful. She shared “I can just share these with my teacher and give them the whole thing, they should be able to do it without having to design it all themselves.” She noted that teachers were more likely to use the lessons when they did not have to spend extra time and resources to develop the lessons on their own.

Leaders successful when establishing relationships with staff. Principal A was emphatic that relationships were crucial to successfully implementing a digital citizenship program at School A. She admitted “you can't lead the whole thing yourself. I think that's building the buy in with your staff as well as the parents is key. I think the relationship piece is critical for leading any of those initiatives.” Additionally, she noted that strong relationships with colleagues is crucial in supporting collaboration.

Elements of digital citizenship addressed when relevant. Principal A noted that stakeholders must be able to see the relevance of digital citizenship before they will invest time in teaching and learning about the elements. She provided an example of demonstrating relevance by having a staff member present how easy it was to expose her own digital footprint. She shared:

She would go in and she would find all the examples where you lived, and she did it for me and it was like places where I didn't think I would have existed showed up. And I'm like, that's 25 years ago. It had connected me to siblings and cousins and like, that was scary. But I showed it to say, this is me and what might be out there for you or your kids? What are you protecting [Principal A]?

School B

Leaders at School B shared strategies they considered to be successful when implementing digital citizenship programs at their school. Successful strategies included the use of school-wide announcements, and collaboration. However, leaders at School B indicated that while they address digital citizenship, they do not have a formal program or curriculum to educate students about digital citizenship issues.

Digital citizenship promoted through daily announcements. Principal B explained that she used announcements to share tips about being a good digital citizen. She noted “we do have a digital citizenship bulletin board that students can see.” She also shared that messages about digital citizenship are communicated routinely to students on the scrolling digital announcements and the morning announcements that are shared over the public address system.

Leaders successful in collaborating with colleagues. Principal B noted that collaboration was beneficial and provided resources to address elements of digital citizenship at School B. She recalled “as model schools, we had meetings before we went

1:1 and then afterwards, we've had quarterly or meetings to collaborate." She expressed that the collaborative meetings enabled the leaders at School B to build their capacity in developing and implementing digital citizenship programs.

School C

Leaders at School C shared strategies they considered to be successful when implementing digital citizenship programs at their school. Successful strategies included encouraging a school-wide effort. Additionally, leaders at School C indicated that they have a formal program or curriculum to educate students about digital citizenship issues.

Principal C suggested that initiatives promoting digital citizenship in his school are more successful when they are accepted, supported and reinforced by each staff member. He noted that as the principal, "ultimately that's my job" (Principal C). However, he also shared that "we all have a responsibility to support this, and largely our success is dependent upon our staff's support of this initiative" (Principal C). Further, he explained that students need to experience through lessons and modeling from multiple sources if they are to truly embrace the character traits associated with good digital citizenship.

School D

Leaders at School D shared one strategy they considered to be successful when implementing digital citizenship programs at their school. They suggested that illustrating the relevance of being a good digital citizen was essential to successfully implementing a digital citizenship program at School D. Additionally, leaders at School D indicated that they have a formal program or curriculum to educate students about digital citizenship issues.

LMS D2 shared that she experienced success in implementing a digital citizenship program when she took advantage of teachable moments that were relevant to the student. She recalled asking her students to decipher between a fake and authentic news article posted about a topic they were interested in. She noted “we talk about if something seems too good to be true it probably is” (LMS D2). LMS D2 also incorporates current events that the students are responsible for bringing to school. She found that students are more willing to engage in the discussion when they were given a choice. She shared “students have to feel connected to what you are telling them otherwise it goes in one ear and out the other” (LMS D2).

Cross-Case Analysis

In each case, school leaders shared strategies they found to be successful when attempting to implement digital citizenship programs in their school. A comparison of the similarities and differences between the two elementary sites and two secondary sites will be included in this section. Making the content relevant was the sole similarity between the elementary and secondary schools. Differences between the two levels included making school-wide announcements, collaborating amongst leaders, using prepared lessons, building relationships, and encouraging a school-wide effort. Themes present in each case are illustrated in Table 4.4.

Table 4.4***Themes Present for School Leaders Experiencing Successes with Digital Citizenship***

Theme	School A	School B	School C	School D
Announcements: Leaders leveraged daily announcements to promote digital citizenship		X		
Collaboration: Leaders collaborated as a cohort	X	X		
Prepared lessons: Teachers were more likely to teach about digital citizenship when provided prepared lessons	X			
Relationships: Leaders leveraged relationships to promote digital citizenship initiatives	X			
Relevancy: Addressing digital citizenship was more likely to occur when it was relevant to current tasks	X			X
School-Wide approach: Addressing digital citizenship as a school rather than individual classes was more successful			X	

Digital citizenship relevant to students. Leaders at both the elementary and secondary schools agreed that when addressing aspects digital citizenship, students must find the information to be relevant. This approach involves relating aspects of the student’s life beyond the school setting and illustrating why it is in the best interest of the student to practice good digital citizenship. Leaders at both levels offered examples of making digital citizenship relevant to include discussing false news stories and exploring a student’s own digital footprint.

Leveraging daily announcements about digital citizenship. Elementary school leaders leveraged school-wide announcements to communicate the attributes of a good

digital citizen. This approach may be more successful in an elementary school setting as students are more likely to be attentive to the announcements than secondary students. Additionally, elementary school leaders noted that they often rely on the school announcements to communicate and model appropriate behavior. Conversely, secondary leaders are often focused on topics that do not relate to appropriate behaviors. Moreover, secondary leaders reported having an assumption that secondary students have already learned about appropriate behaviors associated with digital citizenship.

City-wide collaboration amongst leaders successful. Elementary school leaders noted that they attended city-wide meetings for leaders of each model school to collaborate with their colleagues and members of central office guiding the initiative. They shared that these meetings served as a support system and yielded several ideas for how to support the 1:1 technology initiative including digital citizenship. While it was implied that secondary leaders also attended these meetings, those involved in this study did not offer collaborative meetings as a success they experienced as a result of addressing digital citizenship.

Elementary leaders success through prepared lessons. Elementary school leaders also shared that using prepared lessons yielded success while implementing digital citizenship programs at their school. They noted that the lessons were prepared by experts in the field and that teachers did not have to invest additional time to create the lesson on their own. Further, the lessons were curated by age ensuring that students received lessons that were tailored to their interests and abilities. Secondary school leaders did not report the use of curated lessons. This may be due to the lack of an

appropriate time to teach these lessons in a secondary setting, as students attend multiple specialized courses.

Relationships produce support. Elementary school leaders reported successes when establishing relationships with faculty members prior to implementing a digital citizenship initiative. Leaders noted that they rely on others through a distributed leadership model to carry out initiatives. They require trust, understanding, and buy-in which are all fostered by strong relationships with leaders. Relationships also support the process of sensemaking as members of an organization often look to leaders to provide guidance during times of uncertainty (Meindl, Ehrlich, & Dukerich, 1985).

Secondary leaders did not discuss relationships as a successful strategy or outcome of addressing digital citizenship. However, the reactive nature of strategies implemented to address digital citizenship at the secondary level indicates that they are in the early stages of sensemaking on the topic.

Successful implementation requires all members. Secondary school leaders noted that for them to experience success in implementing a digital citizenship initiative they needed to have a school-wide effort. While elementary school leaders did not note this as a reason for their success with implementing digital citizenship, this may be due to the difference in the degree of uniformity between the two levels. The elementary school structure encompasses a smaller group of faculty and students. Further, students are with one teacher for most of their instruction. Thus, consistency is more likely achieved at the elementary level without significant effort. Conversely, the secondary school structure is comprised of several isolated courses. Students may have up to eight different teachers

during a school year. Larger faculties and larger student bodies contribute to a variance in communicating a consistent message across the entire school.

Conclusion

When school leaders were asked to share successes, they experienced when implementing digital citizenship initiatives at their schools, elementary leaders had more concrete examples of intentional strategies, while secondary leaders suggested strategies they intended to use or those that were reactive in nature. For example, elementary leaders pointed to school-wide announcements, prepared lessons, and through collaboration with additional leaders. Secondary leaders shared that it was important to make the lessons relevant and attack it in a school-wide approach. Additionally, secondary school leaders indicated that their actions towards addressing digital citizenship is reactive in nature. This illustrates that elementary school leaders are further along in the sensemaking process than secondary schools. It also suggests that secondary leaders were making sense of digital citizenship partly as a result of the interview process.

Summary

Informed by Ribble's (2011) *Nine Elements of Digital Citizenship* and Weick's (1995) *Theory of Sensemaking*, data analyses revealed several factors contributing to a school leader's sensemaking process. These included making assumptions, distributing leadership, using appropriate grade-level strategies, navigating responsibility, sharing personal experiences, focusing on safety and wellbeing of all participants, adhering to school policy, and appreciating value and relevance. These factors were present throughout the seven properties of sensemaking identified by Weick (1995).

Findings also indicated that when leaders acted, they brought structures and events into existence, thus setting them into action. These actions represented strategies that school leaders used to address digital citizenship at their schools (i.e., assigning consequences, using curated lessons, addressing culture, articulating expectations, filtering software, infusing curriculum, leveraging specialists).

Findings also revealed that school leaders experienced several challenges to full implementation of digital citizenship (e.g., assumptions, lack of knowledge, multiple perceptions, being overwhelmed, staff buy-in, teaching through discipline, lack of time). However, school leaders also reported success when employing strategies, such as utilizing multiple announcements, broad-based collaboration, reframed school culture, prepared lessons, broad-based relationships, revealed relevance, and schoolwide effort. Three district-wide documents also referenced elements of digital citizenship.

Differences existed between how elementary school leaders and secondary school leaders addressed digital citizenship and how they address the challenges faced and successes produced. Findings further indicate that the elementary schools were further along in the sensemaking process as described by Weick (1995) than the secondary schools. Nevertheless, actions described by school leaders about how they made sense of digital citizenship in their schools were consistent with those outlined in Weick's Theory of Sensemaking.

Chapter 5 includes a discussion of the findings presented in Chapter 4, including how they relate to the conceptual framework and previous research presented in preceding chapters. Chapter 5 presents an analysis of which stage in the sensemaking process each case stands. Implications for future research are also presented.

CHAPTER 5

DISCUSSION AND CONCLUSIONS

This multi-case study was conducted to explore how school leaders at technology rich schools in a Southeastern school district made sense of and addressed digital citizenship and the challenges and successes they experienced as a result. I surveyed leaders at 14 schools identified as models for 1:1 computer technology integration in for their school district. I selected two elementary schools and two secondary schools based on survey responses of the leaders. I conducted semi-structured interviews with the principal at each school and additional informal school leaders identified by the principal. I used the qualitative data collected from the interviews to support emergent themes related to four research questions that guided the study. Below, the themes are organized by research question and then by case.

This chapter includes a summary and discussion of the findings gathered from the multi-case study as they relate to the extant literature. Additionally, a revised conceptual framework is presented based on the study's findings along with implications for research and practice. The chapter concludes with suggestions for future research, limitations of the study, and the researcher's reflections.

Summary of the Study

An influx of internet computer technology has created an increase in online ethical concerns, threatening school functions. There is a gap in literature on how leaders are addressing digital citizenship in their schools. This study explored how school leaders in four different schools made sense of and addressed digital citizenship as defined by Ribble (2011) and investigated what successes and challenges school leaders experienced

while implementing digital citizenship programs in large Southeastern technology-rich school.

Findings from this study demonstrated how leaders exemplified behaviors similar to those described by Weick's (1995) Theory of Sensemaking when assessing level of digital citizenship within their schools. In addition, the school leaders in this study revealed different stages of utilizing the sensemaking process. While elementary and secondary school leaders were found to implement similar strategies to address digital citizenship in their schools, elementary school leaders implemented strategies more preventative in nature whereas secondary school leaders were more reactive. Lack of knowledge, limited time, and ineffective sensemaking inhibited school leaders' ability to implement fully digital citizenship programs. However, school leaders experienced successful implementations when they set digital citizenship as a priority, demonstrated the relevancy to current school initiatives, collaborated as colleagues, and addressed digital citizenship schoolwide rather than in isolated pockets. The major findings are described in detail below.

How Leaders Make Sense of Digital Citizenship

Leaders in this study made sense of digital citizenship by making connections by following their own personal beliefs and experiences and by observing the surrounding social and political environments, and by engaging with others within those environments. Leaders also made sense of digital citizenship through the occurrence of critical and disruptive events. A discussion of these findings is included in the subsequent sections.

Personal Beliefs and Experiences

When asked to share their understanding of digital citizenship, school leaders in this study often referred back to their own personal beliefs and experiences. According to Weick (1995), sensemaking is achieved by reconciling one's personal beliefs and experiences. However, these leaders often relied heavily upon a small collection of experiences or one punctuating event to define their understanding and beliefs about the importance of digital citizenship. Through his research, Suppo (2013) found a significant negative correlation between a leader's digital citizenship beliefs and the frequency in which digital citizenship is addressed within schools. The lack of robust digital citizenship programs discovered in the cases examined for this current study thus suggests that the school leaders working in a Southeastern district were in the infancy of understanding what digital citizenship was, how it could impact their schools, and what actions they should take. Findings from the current study are consistent with Suppo in that while school leaders shared a belief that digital citizenship was important, they did not consistently address it in their schools. This finding is significant because it suggests that while leaders may be motivated to address digital citizenship in their schools, other factors may impede them from doing that.

Social and Political Context Influences Leaders' Sensemaking

School leaders in this study shared that their understanding of digital citizenship and the role it should play within their school was influenced by several different things. Factors within the targeted schools' environments that contributed to the school leaders' sensemaking included the school's mission, the professional specializations and affiliations of staff members, and the social and political dynamics.. These are thus

examples of how the environment, or social context as Weick (1995) call its, influences sensemaking. Additionally, Spillane (1998) found that the school environment influenced how school leaders made sense of an executed a state policy for a reading reform program. Connections to Spillane’s findings were present in the current study: One principal who specialized in technology addressed digital citizenship significantly more often than the other school leaders participating in this study. Further, these school leaders described how environmental factors such as alignment with school mission, specialized staff members, and exterior influences (e.g., actively involved parent groups) influenced how the school leaders addressed digital citizenship in their schools. Thus, the environment within which these school leaders worked influenced how they understood digital citizenship and what actions they decided to take as a result.

Disruption and Critical Events Trigger Leaders’ Sensemaking

School leaders in this study were forced to make sense of digital citizenship due to critical events or disruptions within their normal operations. Perhaps the most significant event was the introduction of 1:1 computer technology in the school because its very presence influenced the behavior of both students and teachers. Additional disruptions included student misconduct and threats to their safety and security, which in many cases disrupted instruction. Weick (1995) noted that sensemaking is often prompted by a dramatic change in one’s environment. Other scholars (e.g., Boudes & Laroche, 2009; Shrivastava, 1987; Stein, 2004; Weick, 2005) supported this theory— noting that disruption causes sensemaking. Evidence that school leaders in the current study began to make sense of digital citizenship and see value in addressing it in their schools suggests that an influx of computer technology disrupted important routines

leading to a system breakdown. Shrivastava (1987) referred to such disruption as a triggering event, such as the introduction of computer technology in the current study. School leaders in the current study noted that as their students began to use computer technology more routinely, some misused the technology or were exposed to harmful content causing the leaders to react. This connection to the literature suggests that school leaders should be intentional about addressing digital citizenship, for in the absence of a proactive approach, impacts to the instructional program may occur in the form of disruption to the educational setting and jeopardizing the safety of students.

The urgency of an event often forces one to face the problem directly and make sense of what to do quickly next rather than to remain idle until additional sensemaking occurs. Through his study of the Apollo 13 Challenger disaster, Stein (2004) noted that leaders of the mission engaged in sensemaking to determine next steps in a systematic manner while also managing anxiety and fear associated with the experience. Leaders from the flight support team collected emerging fragments of information to construct a picture of what was occurring under extreme pressure and how that information, if ignored, could harm the flight crew stranded in space.

While the severity of a critical event may not have been as dramatic, school leaders in this study also exhibited anxiety and fear as they discussed their need to ensure students were safe from danger in a digital setting. Students were provided with 1:1 computer technology, thus setting into motion a series of decisions and strategies that had to be implemented. For example, school leaders engaged in the sensemaking process about digital citizenship to prevent students from being exposed to harmful materials and individuals on the Internet. That is, a critical event caused school leaders to act.

According to Boudes and Laroche (2009), when a crisis occurs, leaders can make sense of the crisis by creating a narrative account or report of what took place. This illustrates the effectiveness of reflecting on past actions. In the current study, school leaders were asked to recall their understanding of digital citizenship and how they had addressed it in their schools. Through a series of interview questions, each of them recounted a crisis event and reflected on their actions. They engaged in sensemaking through dialogue with the researcher. This consistency with current studies provides context for what causes school leaders to engage in sensemaking and highlights the importance of reflection through storytelling. Providing school leaders with the opportunity to reflect on their experiences can evoke sensemaking and therefore help them further grasp how change impacts their current situation.

When leaders are faced with a crisis that causes disruption, Weick (1990) asserts that leaders will revert to familiar scripts and habitual responses because that is what they know. Data gathered through the current study revealed that leaders often reverted to familiar policies and procedures when faced with change caused by the influx of technology. Leaders often addressed digital citizenship by applying disciplinary action and other previously established routines rather than responding reflectively about current situation. Nevertheless, Weick (1995) posited that sensemaking is an ongoing process. Therefore, it is likely that the school leaders who participated in the current study will continue to enact, select, and retain to understand more clearly the significance of digital citizenship and how to address it effectively in their schools. Further, as evidenced by the findings in this study, the school leaders in this study were in different stages or iterations of sensemaking, taking actions, and learning from their success and challenges. These

notions provide context for interpreting school leaders' actions as they continue to make sense of digital citizenship in their schools.

Interaction and Dialogue with Others Influence Leaders' Sensemaking

In this study, school leaders relied heavily on collaboration and dialogue with stakeholders to make sense of digital citizenship. Further, they described collaborative meetings with colleagues and school teams as instrumental in developing strategies to address digital citizenship. From the current body of literature, it is suggested that learning through interaction is essential when navigating the complexities of educational systems and that learning collectively allows schools to be successful under conditions of change (Fullan, 2014; Leithwood, Louis, & Anderson, 2012). Further, to create and sustain effective change, school leaders must undergo a multifaceted process that challenges their current beliefs and routines (Ganon-Shilon & Schechter, 2016). Therefore, as leaders continue to make sense of digital citizenship in their schools through reflection and collaboration with other leaders, it is likely that more formal digital citizenship programs will be developed and become more robust. Further, Crowley (2003) found evidence that dialogue in the form of talk and text was the primary mechanism for sensemaking when examining how leaders ran a nonprofit voluntary association. The interview process conducted for this study created additional opportunities for school leaders to engage in dialogue, causing them to further make sense of how digital citizenship should be addressed in their school moving forward.

Connections to Weick's (1995) Theory of Sensemaking

Behavior described by school leaders while making sense of digital citizenship in the current study was consistent with Weick's (1995) Theory of Sensemaking. The

school leaders in this study experienced an influx of computer technology as they implemented a 1:1 laptop program at their school. Subsequently, a three-stage sensemaking process was triggered to include enactment, selection, and retention. That is, school leaders noticed a change in their environment, interpreted what the change meant for their school, and stored that new understanding for future use.

Further, the seven properties Weick (1995) associated with sensemaking were also at play. There was evidence that school leaders' sensemaking was influenced by their own personal experiences, those people and structures with whom they had interacted, connections they made between the experienced change and their own personal truths, and their reflection on results from previous actions. In addition, these school leaders were at different stages and iterations of the sensemaking process since it is an ongoing process. Findings supported that some school leaders continued to further their understanding of digital citizenship through dialogue with the researcher during the interview process and through experiencing challenges associated with their lack of sensemaking about what digital citizenship entailed and how it could address negative behavior associated with the influx of computer technology in the leaders' schools.

School leaders' behavior consistent with Weick's (1995) Theory of Sensemaking is significant because it provides a suitable framework for future studies designed to explore how leaders make sense of digital citizenship. However, there is little research on how school leaders have made sense of digital citizenship or how they address it in their schools (Richardson et al., 2013; Suppo, 2013). Further, with the influx of technology into P12 schools, there are negative implications for misconduct associated with technology. Therefore, additional research needs to be conducted to expand knowledge in

this field and to assist school leaders in ways to make sense of and address digital citizenship in their schools.

Evidence that school leaders' behavior in the current study was consistent with Weick's (1995) Theory of Sensemaking is also significant because it indicates that school leaders were attempting to make sense of and address digital citizenship in their schools. That is, school leaders were trying to understand what digital citizenship is, how it impacts students, what aspects of digital citizenship to address with students, and how to address it effectively while not detracting from the current responsibilities associated with leading a school. If leaders are attempting to make sense of how digital citizenship impacts their students and have addressed digital citizenship with their students, it is likely that behaviors associated with the use of technology are affecting their daily functions and detracting from instruction. Therefore, learning how leaders are managing these disruptions will help practitioners develop effective strategies that can be used to make sense of and address digital citizenship, thus preserving instruction. Based on the major finding from this study that leaders behave consistently with those outlined in Weick's (1995) Theory of Sensemaking, I concluded that school leaders are still building on their understanding of digital citizenship, how to address it, and the potential implications for schools based on the leaders' actions.

How Leaders Address Digital Citizenship

School leaders participating in this study reported addressing digital citizenship in their schools by implementing several strategies. Generally, their strategies included using curated lessons, infusing curriculum, leveraging specialists, seizing opportunities for teachable moments, setting expectations, modeling, and enforcing school policies

with consequences. However, similarities and differences existed between the types of strategies elementary and secondary leaders implemented to address digital citizenship. Further, elementary school leaders took a more proactive approach while secondary leaders were more reactive in nature.

Similarities Existed Between Elementary and Secondary School Strategies

The elementary and secondary school leaders in this study sometimes used similar strategies and other times different ones.. Strategies implemented by only elementary school leaders included using curated lessons that could be quickly employed by teachers, modeling positive digital behavior, creating a culture that reinforces elements of effective digital citizenship, and assigning consequences to students for misusing technology at school.

Both elementary and secondary school leaders reported enforcing policy, using instances of misconduct as opportunities to conference and redirect students, infusing digital citizenship elements into current curriculum, leveraging staff such as library media and instructional technology specialists to teach digital citizenship concepts, using Internet filtering to prevent access to dangerous material, setting clear expectations for digital behavior, and leveraging community resources to address digital citizenship

It is important to note, however, that often secondary school leaders proposed strategies they would consider implementing rather than those they had implemented. Nevertheless, secondary school leaders did use school board policy to hold students accountable for misconduct, conferenced with students who exhibited poor digital behavior and explained why good digital citizenship was important, used additional staff to teach digital citizenship concepts, used Internet filtering systems to limit access to

harmful material, and set expectations at the beginning of the school year to address digital citizenship in their schools.

These findings are significant as they shows the similarities and differences between how elementary school leaders and secondary school leaders addressed digital citizenship. This information may be helpful as other school leaders consider effective strategies to implement when addressing digital citizenship in their own schools and those strategies to avoid.

Proactive elementary leaders versus reactive secondary leaders. Strategies implemented by elementary school leaders were more proactive in nature than those implemented by secondary school leaders, which were more reactive. A *proactive approach* suggests that school leaders have thought about digital citizenship and have found that addressing it will add value to their organization. A *reactive approach* indicates that school leaders have not thought deeply about the implications digital citizenship may have for their school and thus have not dedicated significant effort in addressing it.

Another reasonable explanation for these differences is that school leaders have other priorities that may have taken precedence over implementing a preventative plan to address digital citizenship. For example, leaders shared several priorities to include standardized testing, instructional strategies, discipline, and graduation rates. However, a focus on digital citizenship may actually support their initial focus. According to Benniga and colleagues (2003), school leaders sometimes hesitate to address character education for fear that would detract from their primary academic mission. This justifications were misguided because such programs typically enhanced and supported students' academic

performance (Benninga, Berkowitz, Kuehn, & Smith, 2006). Secondary school leaders in this current study shared similar concerns that addressing digital citizenship would detract from their primary academic mission. Conversely, elementary school leaders were not as concerned with hindering the academic program and saw elements of digital citizenship as part of the academic program rather than a supplement.

Connection to Extant Literature

Findings from this study contribute to the gap of literature by providing examples of strategies implemented by school leaders to address digital citizenship. Further, connections with extant research on character education, citizenship education, and digital citizenship were also made.

Character and citizenship education. Specifically, strategies implemented by school leaders in this study are supported by scholars in the field of citizenship education and character education. For example, school leaders in all four cases discussed infusing digital citizenship elements into the existing curriculum and gathering parental and community support to bolster digital citizenship. These findings are supported by research suggesting effective strategies for teaching students about citizenship and character. For example, Hahn (2005) noted that often citizenship is addressed in social studies courses, whereas Lickona and Davidson (2005) found that infusing elements of citizenship into an existing curriculum was effective. Additionally, Berkowitz's (2011) study on character education initiatives found that parents who are actively and positively involved in a school's character education initiative enhance its effectiveness. The similarities in approaches for addressing citizenship, character, and digital citizenship highlighted in this study show that practitioners looking for effective ways to address

digital citizenship in their school may be able to rely on those strategies already thought effective for addressing character and citizenship.

While consistencies between extant literature and the findings from this study have been revealed, many researchers have noted conflicting models and approaches to addressing character education (Berkowitz & Bier, 2004; Davis, 2006; Hall, 2000; Leming, 1993; Lickona, 1996; McGrath, 2018) and citizenship education (Davison, 2009; Evans, 2006; Hughes & Sears, 2008; Schugurensky & Myers, 2003; Sears, 1996a, b; Westheimer & Kahne, 2004). Further, Prestwich (2004) noted that while school leaders agreed that more should be done to address character education, there was little consensus on how to approach that mission.

The findings from this study are consistent with previous research: When examining the 4 schools serving as models for the remaining 78 schools in the district, a lack of consistent strategies in how to address digital citizenship effectively were discovered. These findings imply that an individual's identity encompasses her or his personal experiences heavily and thus influences sensemaking concerning digital citizenship and how to address it. Specifically, this finding may be directly linked to the sensemaking process of individual school leaders and their ability to share their understanding with their organizational members. In the same vein, Durlak (1998) noted that "good implementation may be dependent on securing the participation of the most eager and committed school administrators and teaching staff" (p. 13). Nevertheless, sensemaking is linked to what a leader notices, how a leader makes meaning of what is noticed, and what actions to take are determined.

Digital citizenship. Findings from this study are not consistent with Suppo's (2013) findings that digital citizenship skills were addressed less frequently at the elementary school level than at the middle and high school level. This contradiction to the current study's findings can be addressed by examining the variance in sensemaking influenced by one's identity and social context. As noted, one's personal experiences and beliefs, along with her or his interactions with other actors and structures may impact the individual's sensemaking and response to the introduction of change or disruption to the status quo. For example, in this study district leaders charged school leaders to address digital citizenship. A school leader's personal experience in witnessing poor digital citizenship may inspire them to be more passionate about addressing digital citizenship. Another explanation for this inconsistency may be that digital citizenship skills have become more salient since the completion of Suppo's study, and thus, more elementary school leaders are now addressing digital citizenship in their schools.

In examining how school leaders addressed digital citizenship, practitioners can gain valuable insights about what strategies may be effective and which strategies should be avoided. Thus, leading to potential learning opportunities for school leaders about how digital citizenship impacts their school and what aspects of digital citizenship they need to be aware of to prevent disruption to instruction.

Challenges School Leaders Experienced

School leaders in the current study expressed a desire to commit more resources towards addressing digital citizenship, but they were inhibited by significant challenges. Both elementary and secondary school leaders in this study experienced challenges that were common, such as lack of knowledge, limited time, and inaccurate sensemaking.

However, elementary school leaders were also concerned with associating a negative connotation with digital citizenship by assigning consequences when students exhibited misconduct related to technology use. Secondary leaders reported challenges faced when they were complacent about their students' awareness of digital citizenship and engages in struggles related to convincing staff members to dedicate time and resources towards addressing digital citizenship. The subsequent section includes a discussion of challenges reported by school leaders.

Teaching Digital Citizenship Through Disciplinary Action

A challenge reported by only elementary school leaders was that they did not want to create a negative connotation concerning digital citizenship by teaching through disciplinary action and thus preferred not to punish students for technology-related misconduct. This finding is supported by Berkowitz's (2011) finding that children must have opportunities to practice good character if they are to adopt positive character attributes.

Assumption of Students' Digital Citizenship Knowledge

Secondary school leaders in the current study shared challenges unique to their level, which included unfounded assumptions and lack of support by staff. These school leaders noted that often they assumed older students had been exposed to digital citizenship in previous grades or by their family members, and thus, the school leaders assumed it did not need to be addressed with the students. Findings by Spillane et al. (2006) that one's own experiences influence how one makes sense of new information provides an explanation for this stance. Relying solely on their own experiences could cause school leaders and educators to omit important curricula about digital citizenship

thus creating a challenge to addressing digital citizenship. Further, school leaders may need to convince those with contrary experiences and views.

Leaders Struggled to Achieve Staff Support

In the current study, school leaders reported a lack of staff engagement for addressing digital citizenship. Consistent with Weick's (1995) Theory of Sensemaking, school leaders needed to transfer their own sensemaking to the staff in order for digital citizenship to be effective. However, because school leaders in this study were at varying stages and iterations of sensemaking, it is plausible that a lack of sensemaking on the leaders' parts impacted the ability to transfer that understanding to staff members. A lack of understanding the scope and impact of digital citizenship by school leaders and staff impedes initiatives to address digital citizenship within the school.

Leaders Reported a Lack of Knowledge About Digital Citizenship

Elementary and secondary school leaders in the study shared similar challenges when addressing digital citizenship, such as lack of knowledge about digital citizenship, multiple perceptions about which elements of digital citizenship should be addressed by schools and how to do that, feeling overwhelmed when attempting to address digital citizenship in addition to other school initiatives, and having insufficient time to address digital citizenship. A lack of knowledge about digital citizenship amongst school leaders indicates that additional sensemaking is needed. According to several school leaders, some adults are not practicing good digital citizenship, which makes it difficult for educators to teach what one does not understand.

Leaders Noted Conflicting Visions for Addressing Digital Citizenship

Conflicting opinions about what should be taught also presented a challenge to school leaders in the study. This finding is consistent with those from two studies on character education programs that revealed teachers (Lotto & Murphy, 1990) and students (Gilmore & Murphy, 1991) operating in the same school settings can interpret very different environments. In the same vein, Howard, Berkowitz, and Schaeffer (2004) noted that character education may invade the privacy of students and families and therefore should not be included in public schools. These findings are consistent with findings from the current study that indicate school leaders have experienced the same complexities when addressing digital citizenship, and that further scrutiny may be applied towards digital citizenship programs by parents and community members.

Leaders Overwhelmed by New Initiatives

Both elementary and secondary school leaders in this study also reported a sense of being overwhelmed at work, noting that there was not enough time or opportunity for additional initiatives; thus, these school leaders and their staff members would feel overwhelmed if tasked with addressing digital citizenship. In the same vein, these school leaders referenced a lack of time to address what they perceived to be lower priorities such as digital citizenship. Nevertheless, digital citizenship typically became a priority when it impacted, or was deemed related to, other priorities, including aligning with the instructional mission (i.e., digital literacy), disrupting the instructional program, or jeopardizing the safety of students and staff.

Experiencing and Addressing Challenges Progresses Sensemaking

When examining the challenges experienced at both the elementary and secondary level, there appears to be a relationship between the sensemaking ability reported by a school leader and the number of challenges that leader experienced. As the school leaders in this study become more knowledgeable about digital citizenship and realized the associated benefits to and relevance with their current mission to prepare future ready students, they seemed to realize that addressing digital citizenship was not an additional task but rather an infusion into their primary functions. Thus, sensemaking provides a solution for increasing the prevalence of digital citizenship initiatives in schools.

These school leaders' actions when facing challenges are consistent with current research findings by Ancona (2012) who suggested that when leaders experience conditions that pose a threat or cause fear, they become more rigid. That is, leaders revert to what they know. This provides an explanation why secondary school leaders in this current study often reverted to policy as a primary way to address digital citizenship. As the introduction of 1:1 computer technology posed threats to student safety when misused, school leaders leveraged their knowledge and comfort with school policy as a lens through which to handle situations they had little experience in addressing prior.

Moreover, McLaughlin (1987) posited that leaders with systemic capacity and will to implement an innovative practice yield a more successful implementation (McLaughlin, 1987). Thus, those leaders with a better understanding of how digital citizenship connects with their overall mission and impacts their school function will likely yield success. When considering the leaders in this current study, all leaders

communicated that the majority of Ribble's (2011) Nine Elements of Digital Citizenship were important and students should learn about them. However, the leaders' actions implied that while digital citizenship is important, it does not supersede the primary academic mission. Findings from this current study suggest that if digital citizenship programs are to be successfully implemented, lack of capacity poses a larger challenge than leader motivation.

Successes School Leaders Experienced

School leaders in the current study experienced successful digital citizenship implementations when they set digital citizenship as a priority, demonstrated the relevance to current school initiatives, collaborated with colleagues, and addressed digital citizenship school-wide rather than in isolated pockets. Successful strategies varied between the elementary and secondary level. Elementary school leaders noted the use of announcements reinforced good digital citizenship by exposing students to new ideas on how to behave in a digital environment. A discussion of the successes school leaders experienced and implications for successful strategies discovered in this study follow.

Leaders Found Success When Collaborating with a Cohort of Colleagues

The school leaders found it useful to collaborate with other school leaders about their experiences and responses to digital citizenship. This finding was consistent with Gawlik's (2015) research on how charter school leaders made meaning of accountability, noting that new meanings were strengthened when individuals engaged with others while struggling with complex problems. Leaders in this current study collaborated with colleagues as a cohort of schools implementing 1:1 computer technology. This dramatic change not only presented challenges in how to leverage computer technology to enhance

instruction, but also required school leaders to make sense of how to address security, safety, and other logistical tasks. They did so by engaging in dialogue with their colleagues and stake holders as they searched for solutions.

Establishing Relationships with Faculty Members

Participants in this current study also shared that addressing digital citizenship was more effective when school leaders had relationships with their faculties. This notion is also supported by Goleman's (1995; 1998; 2000) research that suggested relationships often outweigh intelligence and motivation when effectively leading change.

Additionally, elementary school leaders reported that having prepared lessons on digital citizenship concepts to share with teachers made it easier for them deliver instruction, thus increasing the likelihood that teachers would use them. This finding is consistent with Lickona and Davidson's (2005) assessment that a meaningful and challenging academic curriculum respecting all learners, contributes to success. Further, this strategy addresses the challenge noted by both elementary and secondary leaders that a lack of time to address digital citizenship exists as reducing the planning time would make it easier for teachers to implement a lesson.

Leaders Reported Success with a Coordinated Effort

Elementary school leaders in the study experienced success with digital citizenship initiatives when all staff members were involved in the implementation process. This finding is consistent with Weick and Sutcliffe's (2007) argument that a school leader's key task is to ensure that everyone within the school culture can make sense of what they are doing, why, to what ends, and how. It also implies that the lack of successes experienced by secondary school leaders in addressing digital citizenship is

directly tied to their progress in sensemaking on the subject. It is important to note the disparity in faculty size between the elementary and secondary schools in this study, as gaining consensus amongst 30 faculty members at the elementary level may be more attainable than the 150 faculty members at the secondary schools.

Relating Digital Citizenship to School Mission Yielded Success

Both elementary and secondary school leaders shared that when strategies implemented to address digital citizenship were relevant to their overall mission of educating students, teachers were more likely to incorporate the digital citizenship practices into their lessons, and students were more receptive to learning about said practices. Further, school leaders were more likely to dedicate time and resources to the initiative. This reinforces Weick's (1995) property of salient cues and plausibility. Similarly, Fullan's (2001) framework of leadership suggested that leaders remain focused on the essential goal rather than innovating without purpose. In the same vein, Fullan noted that when leaders can make connections from the chaotic nature of change and connect it with the mission of the organization good things will happen. Fullan labeled this concept coherence making. Thus, school leaders must be able to understand how digital citizenship impacts their organization and communicate that to all members if they are to experience teacher and students buy-in. For example, a library media specialist was able to connect digital citizenship with the ill-effects of plagiarism when working with English teachers. English teachers saw the value of incorporating digital citizenship into the curriculum and the curriculum was relevant for students.

Implications for Successful Strategies

A lack of successful strategies, specifically at the secondary level indicates that these school leaders may be in the early stages of sensemaking when they have just noticed changes as a result of the influx of computer technology. Another explanation could be that they have not yet implemented significant structures to address digital citizenship, or they have not progressed through an adequate series of sensemaking iterations. If school leaders have not made sense of digital citizenship or how to address it in their schools, students may not learn important skills needed to operate in a digital age.

Nevertheless, there is promise in the responses from school leaders interviewed for this study as their responses are consistent with extant literature on successful practices for implementing character education programs. For example, Prestwich (2004) noted four effective components: (1) an engaged and aligned community, schools, and parents with similar goals, (2) continuous reminders and communication of said goals, (3) modeling exemplary behavior by adults, and (4) leading children toward appropriate behavior and recognizing and providing positive reinforcement for them when they exhibit such behavior. These components were present in the cases examined in this study. Leaders involved the community through a website that communicated their goals for students to be safe when using online platforms. They continued to support those goals through frequent announcements at the elementary school level. Teachers and school leaders modeled appropriate online behavior, praised students for emulating such behavior and conferenced with students in instances of misconduct. These findings support the current study that school leaders experienced success when they had support

from the entire school and community, were consistently reminded of the initiative, and modeled good digital citizenship for students.

Revised Conceptual Framework

This study is undergirded by Weick's (1995) Theory of Sensemaking and by and The Nine Elements of Digital Citizenship outlined by Ribble (2011). Following data analysis for this multi-case study, the original conceptual framework presented in Chapter 3 (Figure 3.1) was revised to expand upon the way leaders made sense of digital citizenship in their schools and the challenges and successes they experienced as a result. A revised conceptual framework is presented in Figure 5.1.

As a result of the influx in computer technology, school leaders were forced to make sense of if and how to address digital citizenship in their schools. When faced with the influx of computer technology, school leaders could have determined that addressing digital citizenship was not important or pertinent, and therefore selected not to offer a response. However, school leaders in all four cases examined in this study selected to address digital citizenship based on their functions to educate, protect, and instill respect in students. Therefore, I removed no response option on the updated framework. School leaders addressed digital citizenship by implementing various strategies that differed amongst the elementary and secondary levels. In addition, they also experienced varying challenges and successes, also different at the two levels.

The process of sensemaking is ongoing (Weick, 1995). Therefore, school leaders continue to enact, select, and retain information, drawing them closer to a better understanding of the phenomenon. Table 5.1 provides an example of the sensemaking process that was constructed from this study's findings. Augmentations to the conceptual

framework include the strategies implemented by school leaders, by school level, to address digital citizenship discovered in the current study. The strategies are organized into three purposes for addressing digital citizenship to including to educate, protect, and instill respect in students. Also included in the revised conceptual framework are the challenges and successes experienced by school leaders when they addressed digital citizenship in their schools.

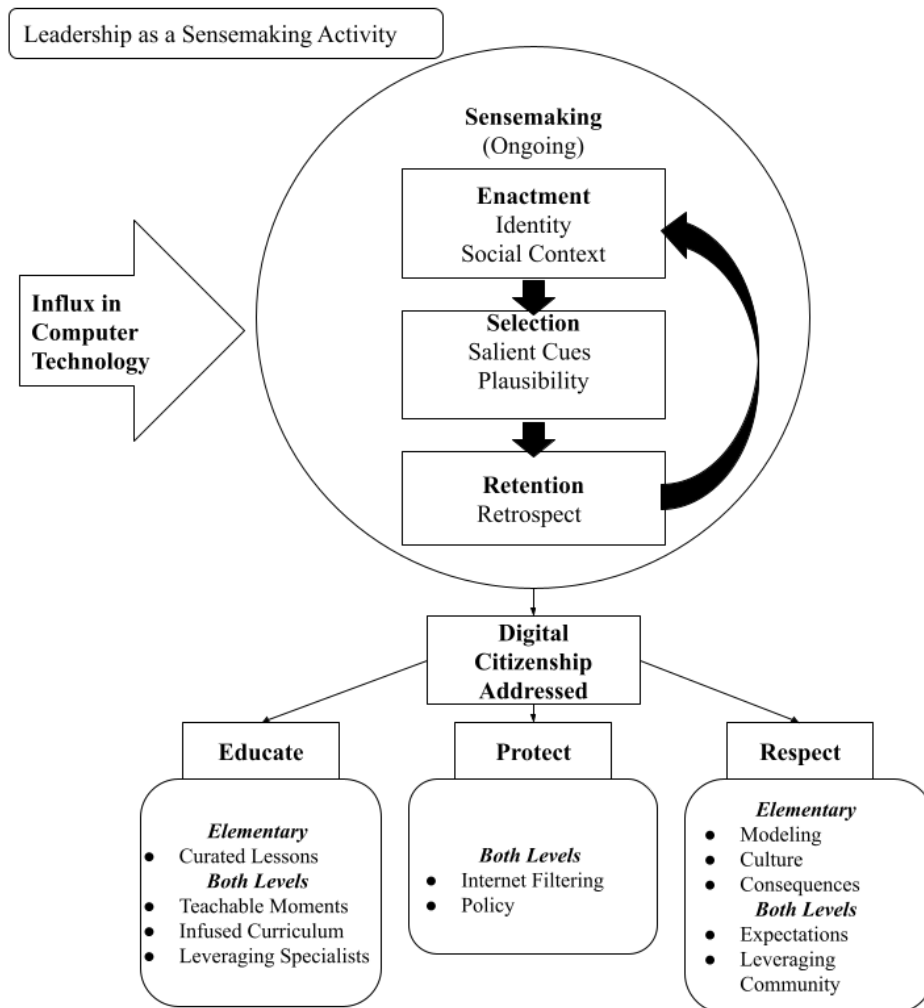


Figure 5.1. Revised Conceptual Framework.

Implications for Research and Practice

This study's findings suggest that school leaders' sensemaking behavior is consistent with Weick's (1995) Theory of Sensemaking thus extending the research in that area. However, additional research is needed to explore how school leaders influence their teachers' sensemaking process of digital citizenship. Nevertheless, Weick's research provides an appropriate theoretical framework for additional research in this field.

The properties and stages of sensemaking as proposed by Weick could be used to help teach school leaders about the sensemaking process so that they may create understanding more efficiently and focus their energy on addressing the challenges caused by changes in the school environment through job-embedded professional learning opportunities. This may reduce the number of iterations a school leader undertakes prior to creating a useful structure for addressing said change.

Algozzine et al. (2004) found that when behavior problems cause a loss of instructional time. Addressing digital citizenship in a proactive fashion may protect instructional time. Therefore, helping school leaders to make sense of more efficiently and address digital citizenship effectively can maintain or enhance the quality of instruction.

The findings from this study suggests that while school leaders believe that digital citizenship is relevant to their mission and therefore important to address, it is difficult to dedicate additional time and resources given their current responsibilities. Meeting state and federal mandates related to academic achievement including standardized test scores and graduation rates occupy most of the school leaders' attention. Findings from this study are not generalizable to other technology-rich schools. However, patterns that

emerged amongst the elementary and secondary school cases may provide insights to guide leaders and future studies in the fields of educational leadership, school technology leadership and digital citizenship.

Identity and social context are significant properties to consider when examining a school leader's sensemaking process. Therefore, qualitative methods may be a more effective methodology to examine these properties as the researcher can collect more thick rich data. However, because of the nature of these properties, it is more likely that sensemaking of and strategies for addressing digital citizenship are likely to vary as does a school leader's identity and social context.

Future Research

As noted, Weick's (1995) Theory of Sensemaking was relevant as a framework for examining leaders' behaviors when introduced to a new phenomenon. The influx of computer technology represents the introduction of a new phenomenon. However, Weick's theory also suggests that sensemaking takes place overtime and is ongoing in nature. Findings from the current study suggested that school leaders were in distinct stages of making sense of digital citizenship. Therefore, researchers with additional time and resources may consider conducting a longitudinal study which follows leaders over a longer period to monitor their progression of sensemaking.

Additionally, little is known about the sense-making process of school leaders and how they influence teachers' sensemaking processes (Black & Shircliffe, 2013; Jennings, 2010; Spillane & Anderson, 2014). The design of this current study could be expanded to explore how school leaders sensemaking of digital citizenship influences how teachers make sense of digital citizenship. A study design that incorporates teacher interviews at

schools where leaders have implemented a digital citizenship program could build knowledge of how school leaders influence teacher's sensemaking processes.

This study was conducted in four technology-rich schools located in a Southeastern school district. Researchers might consider duplicating this study in different geographic settings to include urban and rural settings and expanding the field of participants beyond the small sample size used in this study so that additional differences and patterns could be identified. Further, this study was conducted in a technology-rich setting where all students were provided with a Chromebook. This study might be conducted in school districts that are not 1:1 and do not have access to as much computer technology to see if there are differences in how school leaders address digital citizenship. Findings from this study revealed that leaders exhibited behaviors consistent with Weick's (1995) Theory of Sensemaking and that leaders found digital citizenship to be relevant and important to address with students. However, if implemented in a setting that was not technology-rich, leaders may still find strategies for addressing digital citizenship to be useful.

Additional research should also be conducted on how social context and identity influence a school leaders sensemaking and subsequent actions related to digital citizenship. Further, this study asked school leaders to reflect on their own actions. Additional research involving the collection of data from those with different roles in the organization may provide a more robust description of how leaders make sense of digital citizenship. Those roles may include teachers, students, parents, and central level administrators.

While the way school leaders made sense of and addressed digital citizenship in their schools and how they addressed it is not generalizable, further studies are merited in the fields of school technology leadership, sensemaking, and digital citizenship. Future research may provide guidance for leaders who implement digital citizenship programs in their school or for assisting stakeholders with making sense of how digital citizenship impacts preparing students to be future-ready. Research may also provide insight on how to eliminate obstacles for leaders interested in implementing digital citizenship initiatives in their schools.

Findings from this study also suggest that while school leaders found digital citizenship to be relevant and important to address with students, more pressing initiatives took priority and therefore often digital citizenship was only addressed when time allowed. Additional research should be conducted to explore the viability of successful strategies discovered in this study in different school settings. Further research should also be conducted to determine if the differences found in successful strategies implemented at the elementary and secondary schools were unique to this study or if those findings can be replicated in different geographical locations. Further research should also be conducted to explore whether school leaders in different geographical areas would experience similar challenges when attempting to make sense of and address digital citizenship. Specifically, researchers should explore how will and capacity impact a school leader's ability to implement a digital citizenship program.

Limitations

My role as a high school principal and as someone familiar with the participating school district and personnel working within it created an opportunity for access, but also

may have influenced the responses collected from the interviews. Further, school principals may have felt as though they should be knowledgeable about digital citizenship even if they were not because they did not want to appear as being uninformed in my presence as a colleague. As the researcher, I was the primary instrument of data collection and analysis and relied on my own instincts and skills to interpret results with implicit bias.

Initially, this study was designed to collect documents specific to each case for analysis. Unfortunately, the documents identified for this study were districtwide and thus did not provide specific insight for each case but rather a general umbrella under which all four schools operated. Therefore, I was unable to consider supplementary data that may have provided background information and allowed me to contextualize the interview responses data.

Additionally, the participants for this study were selected because they agreed to be interviewed. While the initial request was sent to fourteen schools, only four schools responded to both the survey and accepted the invitation to be interviewed. While all schools with the potential to be included in this study were a part of the 1:1 technology model program, the four that responded may not represent schools with the most robust digital citizenship programs. Therefore, other cases may have yielded more rich data and subsequently led to different findings that could further expand the literature and enhance leaders' practices in addressing digital citizenship. This study also contained a small population size and therefore may not be representative of the general populations of schools. Further, the number of cases included in this study was small thus impeding my ability to identify patterns across schools or school levels.

Researcher Reflection

At the conclusion of the current study, I reflected upon the research design implemented and the findings yielded. I have included a reflection of improvements to my research design and proposed suggestions for future action based on my findings.

Reflection of Design

Upon reflecting on the research design of the current study, I identified three areas for improvement. Opportunities for improvements were, including a broader base of schools, broadening the diversity of schools included, and avoiding insider bias. The identified improvements should be considered when attempting to replicate this study.

The current study included two elementary schools and two secondary schools. The four schools were selected from a cadre of fourteen schools. Identifying the cases and associated leaders to participate in interviews from a small group limited my ability to be selective in which cases might yield more robust data. I was limited to the school leaders who responded to the initial survey and agreed to participate in the interview process. A larger base of schools would have allowed me to be more selective and potentially identify schools with unique characteristics that were more ideal for my study.

The current study focused on schools in one district that were piloting a 1:1 computer technology initiative. Including a broader diversity of schools from different geographic regions, social and political contexts, and with varying degrees of technological resources would enhance the ability to explore Weick's (1995) Theory of Sensemaking, as he posited that one makes sense of a phenomenon based on one's identity, experience, and social context. Further, four cases were identified for the current study. However, the cases were all members of the same school district. A broader

diversity of schools would allow for a more robust analysis across multiple cases with diverse attributes.

As a principal of a technology-rich school in the district where the study took place, insider bias was present. My role inhibited me from including my own school in the study and thus eliminating a potentially valuable case from which to collect data. While my role provided me with additional context that an outside researcher may not possess, it also likely blinded me from additional phenomena within the multiple cases selected for the current study.

Addressing the aforementioned improvements would enhance future replications of this study. Additionally, upon the completion of data collection for this study, schools closed unexpectedly due to the COVID-19 pandemic. A large portion of students are attending classes virtually. While my data was representative of leader's experience with digital citizenship at the time of collection, I believe their more recent experiences with students that were without Internet access, Zoom-bombers (Young, 2020), and other online behaviors exhibited by students during daily classes has evoked additional sensemaking processes for school leaders. A post- pandemic version of the current study may yield different results.

Reflection of Findings

Digital citizenship is essentially citizenship in a digital community. However upon reflection of the findings from the current study, it is evident that school leaders require additional knowledge to address digital citizenship more effectively as supported by the reactionary approach secondary school leaders demonstrated. Moreover, both elementary and secondary school leaders lacked real action in the areas of digital

citizenship that contribute to fostering a positive digital culture. For example, leaders at both levels addressed those elements of digital citizenship that were easily measured (i.e., digital access, digital law, digital security), while neglecting those not based in policy (i.e., digital health and wellness, digital etiquette, digital communication). Additionally, school leaders lacked technical knowledge and background of acceptable use policies, filtering mechanisms, and federal legislation (i.e., COPPA, CIPA), as the policies were often interpreted at the district level. While it is plausible that leaders were continuing to make sense of digital citizenship as they encountered new experiences, often haphazardly, a more intentional approach to understanding digital citizenship is necessary.

School technology leaders, indoctrinated in the ISTE-A standards, possess the knowledge necessary to address such complexities. Such knowledge allows school technology leaders to uphold the acceptable use policies, filtering mechanisms, and legislation. Further, a more informed school leader will have a sense of the philosophies undergirding the infrastructure designed to create a safe, secure, and positive environment for children. For example, ISTE (2018) standards for education leaders addressed the need to advocate for equity and citizenship, model digital citizenship by critically evaluating online resources, engage in civil discourse online, and contribute to positive social change through the use of digital tools. Such skills and knowledge would help school leaders avoid the reactionary nature of their decisions and foster a more proactive approach to addressing digital citizenship, creating a continuum across the elementary and secondary school levels with regards to addressing digital citizenship effectively.

As a school technology leader, and principal of an innovative school. I implore school leaders to expand their professional learning networks and seek additional experts in the field of school technology. While a cohort was formed with schools piloting the 1:1 computer technology program, a more intentional shift towards fostering positive digital communities is needed in addition to the current focus on effective instructional practices with computer technology. Further, preservice programs should incorporate the standards currently offered by ISTE for education leaders, as issues related to digital citizenship continue to impact school operations and perhaps more importantly, our society.

Conclusion

Ribble (2015) posed the question “Why should anyone—administrators, teachers, parents, students—even be concerned with such a thing as a ‘digital society?’” (p. 7). Amid the COVID-19 pandemic, where schools all over the world have shifted to a virtual model of instruction, it has become evident that students must learn to navigate in a digital world. Digital access, literacy, and etiquette are more relevant now than ever. And yet, researchers have made the case for similar programs for centuries as programs have yielded improved social competence and literacy (Miller et al., 2005), that can be carried beyond schooling years (Berkowitz & Bier, 2007). Yet, with the ever-growing list of initiatives that school leaders must manage, their capacity to effectively implement a digital citizenship program is limited. Nevertheless, leaders see the value and necessity to educate their students about how to responsibly use technology, and have attempted to address this need whenever, and wherever they are able. Further work must be done to remove barriers for leaders and to bolster promising practices if producing responsible

digital citizens is truly to become a priority. Otherwise, schools will continue to support digital citizenship as they are able and in some cases as an afterthought. Unfortunately, by that time, the damage may have already been done.

Appendix A

Consent Form for Survey

You are invited to participate in a web-based online survey on how leaders perceive their role in fostering digital citizenship within their school. This is a research project being conducted by Ryan Schubart, a student at the University of Kentucky. It should take approximately 10 minutes to complete.

PARTICIPATION

Your participation in this survey is voluntary. You may refuse to take part in the research or exit the survey at any time without penalty. You are free to decline to answer any question you do not wish to answer for any reason.

BENEFITS

You will receive no direct benefits from participating in this research study. However, your responses may help us learn more about the extent to how leaders incorporate digital citizenship in their school and the extent to which they feel it is their responsibility to do so.

RISKS

There are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life.

CONFIDENTIALITY

Your survey answers will be sent to a link at qualtrics.com where data will be stored in a password protected electronic format. Qualtrics does not collect identifying information such as your name, email address, or IP address. Therefore, your responses will remain anonymous. No one other than the researcher, will be able to identify you or your answers, and no one will know whether you participated in the study.

At the end of the survey you will be asked if you are interested in participating in an additional interview via email. However, no names or identifying information would be included in any publications or presentations based on these data, and your responses to this survey will remain confidential.

CONTACT

If you have questions at any time about the study or the procedures, you may contact my research supervisor, Dr. Jayson Richardson via email at Jayson.Richardson@uky.edu.

If you feel you have not been treated according to the descriptions in this form, or that your rights as a participant in research have not been honored during this project, or you have any questions, concerns, or complaints that you wish to address to someone other than the investigator, you may contact the University of Kentucky Institutional Review Board at 315 Kinkead Hall, Lexington, KY, or email hbullo@uky.edu.

ELECTRONIC CONSENT: Please select your choice below. You may print a copy of this consent form for your records. Clicking on the “Agree” button indicates that

- You have read the above information
- You voluntarily agree to participate
- You are 18 years of age or older

Agree

Disagree

Appendix B

Survey

1. Please select the school to which you are assigned: (Drop-down Menu)

2. Please select the role that best describes your job.
 - a. Principal
 - b. Assistant Principal
 - c. Teacher
 - d. Instructional Technology Specialist
 - e. Technology Support Technician
 - f. Library Media Specialist
 - g. Other _____

3. Please select the choice below that best describes your years of service in your current school.
 - a. 1-3 Years
 - b. 4-6 Years
 - c. 7-10 Years
 - d. 11-15 Years
 - e. More than 15 years

4. Does your school have a formal program or curriculum to educate students about digital citizenship issues? If so, share a link or describe what is included in the program and how it works.

5. Are there any other ways your school addresses issues of digital citizenship? If so, describe those methods.

6. After reviewing the definitions below, arrange the Nine Elements of Digital Citizenship from most important to least important with regards to addressing the topic with students in school.

Definitions of the Nine Elements of Digital Citizenship

- **Digital access** is defined as the equitable distribution of technology and online resources.
- **Digital Commerce** is defined as the electronic buying and selling of goods and focuses on the tools and safeguards in place to assist those buying, selling, banking, or using money in any way in the digital space.
- **Digital Communication** is defined as the electronic exchange of information.

- **Digital Literacy** the use of information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills.
- **Digital Etiquette** is defined as the electronic standards of conduct or procedure.
- **Digital Law** is defined as the electronic responsibility for actions and deeds and includes the creation of rules and policy that address issues related to the online world.
- **Digital Rights and Responsibilities** are defined as those requirements and freedoms extended to everyone in a digital world.
- **Digital Health and Wellness** is defined as the physical and psychological well-being in a digital technology world.
- **Digital Security** is defined as the electronic precautions to guarantee safety.

Arrange in order from most important to least important:

- Digital access**
- Digital Commerce**
- Digital Communication**
- Digital Literacy**
- Digital Etiquette**
- Digital Law**
- Digital Rights and Responsibilities**
- Digital Health and Wellness**
- Digital Security**

7. **Digital Access** is defined as full electronic participation in society. How would you describe your current level of knowledge regarding **Digital Access**?

1	2	3	4	5
None	Some	Average	Good	Very Good

8. To what extent do you believe the statement that it is your responsibility to ensure full electronic participation in society?

1	2	3	4	5
Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly Agree

9. **Digital commerce** is defined as the electronic buying and selling of goods. How would you describe your level of knowledge regarding **Digital Commerce**?

1	2	3	4	5
None	Some	Average	Good	Very Good

10. To what extent do you believe the statement that it is your responsibility to educate students about buying and selling goods electronically?

1	2	3	4	5
Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly Agree

11. **Digital Communication** is defined as the electronic exchange of information. How would you describe your level of knowledge regarding **Digital Communication**?

1	2	3	4	5
None	Some	Average	Good	Very Good

12. To what extent do you believe the statement that it is your responsibility to educate students on the proper use of digital communication to include email, cell phones, texting, and social networking technologies?

1	2	3	4	5
Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly Agree

13. **Digital Literacy** is defined as the use of information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills. How would you describe your level of knowledge regarding **Digital Literacy**?

1	2	3	4	5
None	Some	Average	Good	Very Good

14. To what extent do you believe the statement that it is your responsibility to teach students how to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills?

1	2	3	4	5
Not at all responsible	Slightly responsible	Somewhat responsible	Mostly responsible	Completely responsible

15. **Digital Etiquette** is defined as the electronic standards of conduct or procedure. How would you describe your level of knowledge regarding **Digital Etiquette**?

1	2	3	4	5
None	Some	Average	Good	Very Good

16. To what extent do you believe the statement that it is your responsibility to ensure that students are aware of the standards of conduct and procedure when they are using technology?

1	2	3	4	5
Not at all responsible	Slightly responsible	Somewhat responsible	Mostly responsible	Completely responsible

17. **Digital Law** is defined as the electronic responsibility for actions and deeds. How would you describe your level of knowledge regarding **Digital Law**?

1	2	3	4	5
None	Some	Average	Good	Very Good

18. To what extent do you believe the statement that it is your responsibility to educate students about their responsibility for actions and deeds when they use technology?

1	2	3	4	5
Not at all responsible	Slightly responsible	Somewhat responsible	Mostly responsible	Completely responsible

19. **Digital Rights and Responsibilities** are defined as those requirements and freedoms extended to everyone in a digital world. How would you describe your level of knowledge regarding **Rights and Responsibilities**?

1	2	3	4	5
None	Some	Average	Good	Very Good

20. To what extent do you believe the statement that it is your responsibility to make students aware of their rights and responsibilities when using digital technologies?

1	2	3	4	5
Not at all responsible	Slightly responsible	Somewhat responsible	Mostly responsible	Completely responsible

21. **Digital Health and Wellness** is defined as the physical and psychological well-being in a digital technology world. How would you describe your level of knowledge regarding **Health and Wellness**?

1	2	3	4	5
None	Some	Average	Good	Very Good

22. To what extent do you believe the statement that it is your responsibility to make students aware of the physical dangers that can accompany the use of digital technology?

1	2	3	4	5
Not at all responsible	Slightly responsible	Somewhat responsible	Mostly responsible	Completely responsible

23. **Digital Security** is defined as the electronic precautions to guarantee safety. How would you describe your level of knowledge regarding **Security**?

1	2	3	4	5
None	Some	Average	Good	Very Good

24. To what extent do you believe the statement that it is your responsibility to teach students about how to protect themselves and their equipment from harm?

1	2	3	4	5
Not at all responsible	Slightly responsible	Somewhat responsible	Mostly responsible	Completely responsible

25. Would you be willing to participate in a follow-up interview should your school be selected to participate in this study?

- Yes
 No

Appendix C

Interview Questions

1. Please tell me about your position within the school system and describe the duties your job entails. How long have you served in this role associated with the Digital Model School Program?
2. Describe your previous experience with technology leadership including any training or professional development in which you may have participated.
3. How would you define the term digital citizenship in your own words?
4. How would you describe your level of knowledge regarding digital citizenship? (provide a list of the 9 elements of digital citizenship to clarify what the term digital citizenship means to the researcher.)
5. Can you provide me with any examples that you may have encountered related to digital citizenship in your school? What emotions do you experience when thinking about those examples? Why do you think you are experiencing those emotions?
6. What actions if any have you taken to address issues related to digital citizenship in your school? Can you walk me through your decision-making process for taking those actions?
7. In your initial survey response, you ranked the order of importance with regards to which of the nine elements should be addressed with students at your school. Can you explain why you ranked them in the order you did?
8. Which elements if any do you feel are not relevant to the scope of what you or your school staff feel need to be addressed with students in a school setting? Explain your reasoning.
9. Which of the Nine Elements of Digital Citizenship, if any, do you or your school staff feel are important to address in a school setting with students? Describe how you arrived at that conclusion.
10. Describe for me your familiarity with the Children's Internet Protection Act (CIPA). What influence if any has your knowledge of CIPA impacted your decision-making process in addressing/not addressing digital citizenship in your school?
11. Who, if anyone, do feel is most responsible for fostering digital citizenship in your organization? Explain your reasoning.
12. What obstacles, if any, have you encountered when you or your staff have attempted to address digital citizenship in your school? How did encountering those obstacles make you feel about addressing digital citizenship in your school?

13. What, if any information, resources, or support have you sought out, or relied upon to determine the need for addressing digital citizenship in your school? Can you explain your thought process in choosing to or not to seek information, resources or support?

Appendix D

Definitions of the Nine Elements of Digital Citizenship

1. **Digital access** is defined as full electronic participation in society.
2. **Digital Commerce** is defined as the electronic buying and selling of goods.
3. **Digital Communication** is defined as the electronic exchange of information.
4. **Digital Literacy** is defined as the process of teaching and learning about technology and the use of technology.
5. **Digital Etiquette** is defined as the electronic standards of conduct or procedure.
6. **Digital Law** is defined as the electronic responsibility for actions and deeds.
7. **Digital Rights and Responsibilities** are defined as those requirements and freedoms extended to everyone in a digital world.
8. **Digital Health and Wellness** is defined as the physical and psychological well-being in a digital technology world.
9. **Digital Security** is defined as the electronic precautions to guarantee safety.

Appendix E

Themes Present for School Leader Sensemaking

Themes Present for School Leader Sensemaking

Theme	School A	School B	School C	School D
Leaders assumed students had knowledge of digital citizenship			X	X
Leaders depended upon other staff members to help address digital citizenship	X	X	X	X
Leaders considered whether specific elements were appropriate to address with specific grade-levels	X	X		
Leaders struggled to define the degree of responsibility for addressing digital citizenship.			X	X
Leaders relied upon personal experiences to make sense of digital citizenship	X	X	X	X
Leaders viewed digital citizenship through the lense of safety and wellbeing of their students	X	X	X	X
Leaders made sense of digital citizenship by finding areas that aligned with school policy	X	X	X	X
Leaders addressed digital citizenship when they saw value and relevance to the current mission	X	X	X	X

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